



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
**Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada**
Room 100,
167 Lombard Ave.
Winnipeg
Manitoba
R3B 0T6
Bid Fax: (204) 983-0338

**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 Detached Storage Garage | |
| Solicitation No. - N° de l'invitation ET025-172216/A | Date 2017-01-03 |
| Client Reference No. - N° de référence du client PWGSC ET025-172216 | |
| GETS Reference No. - N° de référence de SEAG PW-\$PWZ-102-10104 | |
| File No. - N° de dossier PWZ-6-39228 (102) | CCC No./N° CCC - FMS No./N° VME |
| Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2017-01-19 | Time Zone Fuseau horaire Central Standard Time CST |
| 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: Wiebe, Dallas | Buyer Id - Id de l'acheteur pwz102 |
| Telephone No. - N° de téléphone (204) 899-5257 () | FAX No. - N° de FAX (204) 983-7796 |
| Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF PUBLIC WORKS AND GOVERNMENT SERVICES CANADA 100-167 LOMBARD AVE WINNIPEG Manitoba R3B0T6 Canada | |

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

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

Issuing Office - Bureau de distribution

Public Works and Government Services Canada - Western
Region
Room 100,
167 Lombard Ave.
Winnipeg
Manitoba
R3B 0T6

| | |
|--|--|
| 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 |

IMPORTANT NOTICE TO BIDDERS

Important changes have been introduced, refer to the Special Instructions to Bidders SI01 paragraph 3 for requirements related to the Code of Conduct for Procurement.

SUPPORT THE USE OF APPRENTICES

Through Canada's Economic Action Plan 2013, the Government of Canada proposes to support the employment of apprentices in federal construction and maintenance projects. Refer to [SI05](#).

INTEGRITY PROVISIONS - BID

Changes have been made to the Integrity Provisions - Bid as of 2016-04-04. See GI01, Integrity Provision-Bid of R2710T of the General Instructions for more information.

LISTING of SUBCONTRACTORS

As per GI07 of R2710T you should provide using Annex C at Bid closing a list of Subcontractors that have 20% or more of the tendered price value.

PWGSC UPDATE ON ASBESTOS USE

Effective April 1, 2016, all Public Works and Government Services Canada (PWGSC) contracts for new construction and major rehabilitation will prohibit the use of asbestos-containing materials. Further information can be found at <http://www.tpsgc-pwgsc.gc.ca/comm/vedette-features/2016-04-19-00-eng.html>

ADDITION OF PERFORMANCE EVALUATION-CONTRACT

Take note of the additional paragraph to be included in clause R2810D identified in [SC05](#).

ADDITION OF TERMINOLOGY

Take note of the additional paragraph to be included in clause R2810D identified in [SC06](#).

SPECIAL INSTRUCTIONS TO BIDDERS (SI)

- SI01** Integrity Provisions – Declaration of Convicted Offences
- SI02** Opening of Bids
- SI03** Insufficient Funding
- SI04** Web Sites
- SI05** Support the use of Apprentices
- SI06** Site Visit
- SI07** Limitation of Submissions
- SI08** Health & Safety Requirement

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INSTRUCTIONS TO BIDDERS

GLOSSARY OF TERMS

- IB01** BID DOCUMENTS
- IB02** INTEGRITY PROVISIONS - BID
- IB03** CONFLICT OF INTEREST - UNFAIR ADVANTAGE
- IB04** COMPLETION OF BID
- IB05** IDENTITY OF LEGAL CAPACITY OF THE BIDDER
- IB06** SUBMISSION OF BID
- IB07** REVISION OF BIDS
- IB08** CAPITAL DEVELOPMENT AND REDEVELOPMENT CHARGES
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SUBMISSION REQUIREMENTS AND EVALUATION (SRE's)

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SECTION 2: SELECTION

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SECTION 4: MANDATORY SUBMISSION REQUIREMENTS

Solicitation No. - N° de l'invitation
ET025-172216/A
Client Ref. No. - N° de réf. du client
PWGSC-ET025-172216/A

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
pwz102
CCC No./N° CCC - FMS No./N° VME

ANNEX A - BID PRICE FORM

APPENDIX 1 - INTEGRITY PROVISIONS – LIST OF NAMES

APPENDIX 2 – DEPARTMENTAL REPRESENTATIVE'S AUTHORITY

APPENDIX 3 - VOLUNTARY CERTIFICATION TO SUPPORT THE USE OF APPRENTICES

ANNEX B - TERMS AND CONDITIONS

ANNEX C - VOLUNTARY REPORT FOR APPRENTICES EMPLOYED DURING THE CONTRACT

ANNEX D - TERMS OF REFERENCE

ANNEX E - CERTIFICATE OF INSURANCE FORM

ANNEX F – GENERAL PROCEDURES & STANDARDS

SPECIAL INSTRUCTIONS TO BIDDERS (SI)

SI01 INTEGRITY PROVISIONS – DECLARATION OF CONVICTED OFFENCES (2016-04-04)

In accordance with the [Ineligibility and Suspension Policy \(http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html\)](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html), the Proponent must provide **with its bid, as applicable**, to be given further consideration in the procurement process, the required documentation as per Instructions to Bidders (IB02), Integrity Provisions – Bid, section 3b.

SI02 OPENING OF BIDS

1. There will be no public opening at bid closing time.

SI03 INSUFFICIENT FUNDING

In the event that the lowest compliant bid exceeds the amount of funding allocated for the Work, Canada in its sole discretion may

- a. cancel the solicitation; or
- b. obtain additional funding and award the Contract to the Bidder submitting the lowest compliant bid; and/or
- c. negotiate a reduction in the bid price and/or scope of work of not more than 15% with the Bidder submitting the lowest compliant bid. Should an agreement satisfactory to Canada not be reached, Canada shall exercise option (a) or (b).

SI04 WEB SITES

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

Treasury Board Appendix L, Acceptable Bonding Companies <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494§ion=text#appL>

Buy and Sell <https://www.achatsetventes-buyandsell.gc.ca>

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

Contractor Performance Evaluation Report (Form PWGSC-TPSGC 2913) <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/2913.pdf>

Bid Bond (form PWGSC-TPSGC 504) <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/504.pdf>

Performance Bond (form PWGSC-TPSGC 505) <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/505.pdf>

Labour and Material Payment Bond (form PWGSC-TPSGC 506) <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/506.pdf>

Certificate of Insurance (form PWGSC-TPSGC 357) <http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/357.pdf>

Standard Acquisition Clauses and Conditions (SACC) Manual
<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

Schedules of Wage Rates for Federal Construction Contracts
http://www.rhdcc-hrsdc.gc.ca/eng/labour/employment_standards/contracts/schedule/index.shtml

PWGSC, Industrial Security Services [Http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html](http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html)

PWGSC, Code of Conduct and Certifications
[Http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/index-eng.html](http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/index-eng.html)

Construction and Consultant Services Contract Administration Forms Real Property Contracting
<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

Declaration Form
<http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html>

SI05 PUBLIC WORKS AND GOVERNMENT SERVICES CANADA APPRENTICE PROCUREMENT INITIATIVE

1. To encourage employers to participate in apprenticeship training, Contractors bidding on construction and maintenance contracts by Public Works and Government Services Canada (PWGSC) are being asked to sign a voluntary certification, signaling their commitment to hire and train apprentices.
2. Canada is facing skills shortages across various sectors and regions, especially in the skilled trades. Equipping Canadians with skills and training is a shared responsibility. In Economic Action Plan (EAP) 2013, the Government of Canada made a commitment to support the use of apprentices in federal construction and maintenance contracts. Contractors have an important role in supporting apprentices through hiring and training and are encouraged to certify that they are providing opportunities to apprentices as part of doing business with the Government of Canada.
3. Through the Economic Action Plan 2013 and support for training programs, the Government of Canada is encouraging apprenticeships and careers in the skilled trades. In addition, the government offers a tax credit to employers to encourage them to hire apprentices. Information on this tax measure administered by the Canada Revenue Agency can be found at: www.cra-arc.gc.ca. Employers are also encouraged to find out what additional information and supports are available from their respective provincial or territorial jurisdiction.
4. Signed certifications (Appendix 3) will be used to better understand contractor use of apprentices on Government of Canada maintenance and construction contracts and may inform future policy and program development.
5. The Contractor hereby certifies the following:

In order to help meet demand for skilled trades people, the Contractor agrees to use, and require its subcontractors to use, reasonable commercial efforts to hire and train registered apprentices, to strive to fully utilize allowable apprenticeship ratios * and to respect any hiring requirements prescribed by provincial or territorial statutes.

The Contractor hereby consents to this information being collected and held by PWGSC, and Employment and Social Development Canada to support work to gather data on the hiring and training of apprentices in federal construction and maintenance contracts.

To support this initiative, a voluntary certification signaling the Contractor's commitment to hire and train apprentices is available at Appendix 3.

If you accept fill out and sign Appendix 3

** The journeyman-apprentice ratio is defined as the number of qualified/certified journeymen that an employer must employ in a designated trade or occupation in order to be eligible to register an apprentice as determined by provincial/territorial (P/T) legislation, regulation, policy directive or by law issued by the responsible authority or agency.*

SI06 SITE VISIT (OPTIONAL)

There will be a site visit on Wednesday January 11, 2017 at 9:30am (CST). Interested bidders are to meet at the Site Office of the PWGSC Works Maintenance yard Compound

SI07 LIMITATION OF SUBMISSIONS

- 1) While there is no requirement for firms to participate in this procurement in joint venture, they may elect to do so if they see fit. However, only one submission per bidder will be accepted, whether it is submitted by a firm as an individual Bidder or by that firm as part of a joint venture Bidder. If more than one submission is received from a firm acting either individually or in joint venture, all such submissions shall be rejected and no further consideration shall be given to the firm or to any proposed joint venture of which the firm forms part.
- 2) A joint venture is defined as an association of two or more parties which combine their money, property, knowledge, skills, time or other resources in a joint business enterprise agreeing to share the profits and the losses and each having some degree of control over the enterprise.
- 3) An arrangement whereby Canada contracts directly with a Contractor who may retain sub-contractors to perform portions of the work is not a joint venture arrangement. A sub-contractor may be proposed as part of the Construction Management Team by more than one Bidder.
- 4) Notwithstanding paragraph 3. above, in order to avoid any conflict of interest, or any perception of conflict of interest, no firm acting as an individual Bidder or as part of a joint venture Bidder, shall be proposed as a member of another Bidder's Team, either as a sub-contractor or as part of another joint venture Bidder. Failure to comply with this limitation will result in all submissions so involved being rejected.
- 5) Any joint venture must be in full compliance with the requirements of any provincial or territorial law pertaining thereto in the Province or Territory in which the project is located.

SI08 MANDATORY HEALTH AND SAFETY

WCB AND SAFETY PROGRAM - for Work in the province of Manitoba

1. The recommended Bidder shall provide to the Contracting Authority, prior to Contract award:
 - 1.1 a Workers Compensation Board *Experience and Industry Rating Statement - Manitoba*, or equivalent documentation from another jurisdiction;
 - 1.2 a Workers Compensation Board letter of good standing, also listing covered Directors, Principals, Proprietor(s) or Partners who will be or who are anticipated to be present on the work site(s), or equivalent documentation from another jurisdiction; and
 - 1.3 a Certificate of Recognition (COR) or Registered Safety Plan (RSP). A health and safety policy and program, as required by other provincial/territorial Occupational Health and Safety Acts, will be acceptable in lieu of a COR or RSP.
2. The recommended Bidder shall deliver all of the above documents to the Contracting Authority on or before the date stated (usually 3-5 days after notification) by the Contracting Authority. Failure to comply with the request may result in the bid being declared non-compliant.

Exemption to Generic Safety Programs (*Manitoba only*) - Contractors having five (5) or less employees do not require a written program. However, evidence of a system to manage health and safety remains a requirement.

Introduction

Public Works and Government Services Canada (PWGSC) is inviting qualified Design-Build (D-B) bidders to deliver a Detached Storage Garage at the St. Andrews Lock and Dam in St. Andrews, MB.

The objective of this RFP is to retain an individual or Joint Venture to provide the complete design-build work for the Detached Storage Garage at the St. Andrews Lock and Dam in St. Andrews, MB. Utilizing a D-B service delivery methodology, a full range of professional consultant and contractor services will be required during both the design and construction phase of the project. The work consists of but is not limited to the design and construction of a Detached Storage Garage as more fully described in the Terms of Reference.

This is a single phase selection process. This RFP Document sets out the project requirement, i.e., the particulars of the project itself and the broad scope of services required from the Contractor.

Based upon their analysis of the project requirements and the capability/capacity of their firm, the bidders formulate bids for the service, including their price.

The bidders describe their capabilities and proposed services in the "*Technical Portion*" of the submission (Envelope One). The "*Price Portion*" includes the proposed price and bid security which is submitted in a sealed envelope (envelope two).

The Technical Portion of competitive bids are evaluated, without knowledge of the price, by the Technical Evaluation Board. Evaluation is based on a set of pre-established criteria, components and weight factors. Numerical technical scores are awarded at the completion of the technical evaluation.

Price envelopes are then opened for the technically qualified proposals. The responsive submission with the lowest price will be recommended for award of the contract.

IMPORTANT NOTICE: The new measures of the Integrity Provisions – Bid are contained in the solicitation document.

INSTRUCTIONS TO BIDDERS (2013-06-27)

Glossary of Terms:

1. In this Request for Proposal (RFP), the following words or phrases have the corresponding meaning.

Bidder Team: The team consisting of the prime Contractor, prime consultant, specialists and other firms or Subcontractors, including the Bidder, proposed by the Bidder to perform or furnish all the Services, Documents, Labour, Material and Plant for the execution of the Work.

Key Personnel: Staff of the Contractor, Subcontractors and specialists proposed to be assigned to this project.

Technical Rating: A rating assigned to the technical component of a proposal in the selection procedure.

Bidder: The entity (or in the case of a joint venture, the entities) submitting a bid. The successful Bidder will be the Contractor upon award of Contract.

Evaluation Board: The board established to evaluate and rate proposals. Board members represent a broad cross-section of professional qualifications and experience.

Applicable Taxes : means the Goods and Services Tax (GST), the Harmonized Sales Tax (HST), and any provincial tax, by law, payable by Canada such as, the Quebec Sales Tax (QST) as of April 1, 2013.

NOTE: Where "Proposal" appears in this bid solicitation and the resulting contract, this means "Bid" in the context of the Terms, Conditions and Instructions.

IB01 BID DOCUMENTS

1) The following are the bid documents:

- (a) Request for Proposals - Page 1;
- (b) Instructions to Bidders;
- (c) Clauses and Conditions identified in Contract documents;
- (d) Submission Requirements and Evaluation;
- (e) Price Form;
- (f) Terms of Reference; and
- (g) any amendments prior to solicitation closing

Submission of a bid constitutes acknowledgment that the Bidder has read and agrees to be bound by these documents.

IB02 INTEGRITY PROVISIONS – BID (2016-04-04)

1. The *Ineligibility and Suspension Policy* (the “Policy”) in effect on the date the Bid Solicitation is issued, and all related Directives in effect on that date, are incorporated by reference into, and form a binding part of the bid solicitation. The Bidder must comply with the Policy and Directives, which can be found at [Ineligibility and Suspension Policy](#).
2. Under the Policy, charges and convictions of certain offences against a Bidder, its affiliates or first tier subcontractors, and other circumstances, will or may result in a determination by Public Works and Government Services Canada (PWGSC) that the Bidder is ineligible to enter, or is suspended from entering into a contract with Canada. The list of ineligible and suspended Suppliers is contained in PWGSC’s Integrity Database. The Policy describes how enquiries can be made regarding the ineligibility or suspension of Suppliers
3. In addition to all other information required in the bid solicitation, the Proponent must provide the following:
 - a. by the time stated in the Policy, all information required by the Policy described under the heading “Information to be Provided when Bidding, Contracting or Entering into a Real Property Agreement”; and
 - b. with its bid, a complete list of all foreign criminal charges and convictions pertaining to itself, its affiliates and its proposed first tier subcontractors that, to the best of its knowledge and belief, may be similar to one of the listed offences in the Policy. The list of foreign criminal charges and convictions must be submitted using an Integrity Declaration Form, which can be found at [Declaration form for procurement](#)
4. Subject to subsection 5, by submitting a bid in response to this bid solicitation, the Bidder certifies that:
 - a. it has read and understands the [Ineligibility and Suspension Policy](#);
 - b. it understands that certain domestic and foreign criminal charges and convictions, and other circumstances, as described in the Policy, will or may result in a determination of ineligibility or suspension under the Policy;

- c. it is aware that Canada may request additional information, certifications, and validations from the Proponent or a third party for purposes of making a determination of ineligibility or suspension;
 - d. it has provided with its bid a complete list of all foreign criminal charges and convictions pertaining to itself, its affiliates and its proposed first tier subcontractors that, to the best of its knowledge and belief, may be similar to one of the listed offences in the Policy;
 - e. none of the domestic criminal offences, and other circumstances, described in the Policy that will or may result in a determination of ineligibility or suspension, apply to it, its affiliates and its proposed first tier subcontractors; and
 - f. it is not aware of a determination of ineligibility or suspension issued by PWGSC that applies to it.
5. Where a Bidder is unable to provide any of the certifications required by subsection 4, it must submit with its bid a completed Integrity Declaration Form, which can be found at [Declaration form for procurement](#) .
 6. Canada will declare non-responsive any bid in respect of which the information requested is incomplete or inaccurate, or in respect of which the information contained in a certification or declaration is found by Canada to be false or misleading in any respect. If Canada establishes after award of the Contract that the Bidder provided a false or misleading certification or declaration, Canada may terminate the Contract for default. Pursuant to the Policy, Canada may also determine the Bidder to be ineligible for award of a contract for providing a false or misleading certification or declaration.

IB03 CONFLICT OF INTEREST - UNFAIR ADVANTAGE

1. In order to protect the integrity of the procurement process, bidders are advised that Canada may reject a bid in the following circumstances:
 - a. if the Bidder, any of its subcontractors, any of their respective employees or former employees was involved in any manner in the preparation of the bid solicitation or in any situation of conflict of interest or appearance of conflict of interest;
 - b. if the Bidder, any of its subcontractors, any of their respective employees or former employees had access to information related to the bid solicitation that was not available to other bidders and that would, in Canada's opinion, give or appear to give the Bidder an unfair advantage.
2. The experience acquired by a bidder who is providing or has provided the goods and services described in the bid solicitation (or similar goods or services) will not, in itself, be considered by Canada as conferring an unfair advantage or creating a conflict of interest. This bidder remains however subject to the criteria established above.
3. Where Canada intends to reject a bid under this section, the Contracting Authority will inform the Bidder and provide the Bidder an opportunity to make representations before making a final decision. Bidders who are in doubt about a particular situation should contact the Contracting Authority before bid closing. By submitting a bid, the Bidder represents that it does not consider itself to be in conflict of interest nor to have an unfair advantage. The Bidder acknowledges that it is within Canada's sole discretion to determine whether a conflict of interest, unfair advantage or an appearance of conflict of interest or unfair advantage exists.

IB04 COMPLETION OF BID

1. The bid shall:
 - a) be submitted on the bid Form provided through the Government Electronic Tendering Service (GETS) or on a clear and legible reproduced copy of said Bid Form; the reproduced copy must be identical in every respect to the Bid Form provided through GETS;
 - b) not be delivered to the Bid Receiving Unit by means of facsimile transmission; facsimile copies of bids are not acceptable;

- c) be based on the bid documents listed above;
 - d) be correctly completed in all respects;
 - e) be signed by a duly authorized representative of the Bidder; and
 - f) be accompanied by
 - i) the bid security as specified herein; and
 - ii) any other document or documents specified elsewhere in the solicitation where it is stipulated that said documents are to accompany the bid.
2. Any alteration to the preprinted or pre-typed sections of the Bid Form, or any condition or qualification placed upon the bid shall be direct cause for disqualification. Alterations, corrections, changes or erasures made to statements or figures entered on the Bid Form by the Bidder shall be initialed by the person or persons signing the bid. Initials shall be original(s). Alterations, corrections, changes or erasures that are not initialed shall be deemed void and without effect.
3. Unless otherwise noted elsewhere in the Bid Documents, facsimile copies of bids are not acceptable.

IB05 IDENTITY OR LEGAL CAPACITY OF THE BIDDER

1. In order to confirm the authority of the person or persons signing the bid or to establish the legal capacity under which the Bidder proposes to enter into Contract, any Bidder who carries on business in other than its own personal name shall, if requested by Canada, provide satisfactory proof of
 - (a) such signing authority; and
 - (b) the legal capacity under which it carries on business;prior to contract award. Proof of signing authority may be in the form of a certified copy of a resolution naming the signatory(ies) that is (are) authorized to sign this bid on behalf of the corporation or partnership. Proof of legal capacity may be in the form of a copy of the articles of incorporation or the registration of the business name of a sole proprietor or partnership

IB06 SUBMISSION OF BID (2014-03-01)

1. Bids are submitted following a "two envelope" procedure, in which bidders submit the "technical" components of their bid in one envelope and the proposed price, including bid security, in a second envelope. The Bid shall be addressed and submitted to the office designated on the Front Page of the "Request for Proposals" for the receipt of bids. The bid must be received on or before the date and time set for solicitation closing.
2. Unless otherwise specified in the Special Instructions to Bidders
 - a. the bid shall be in Canadian currency;
 - b. the requirement does not offer exchange rate fluctuation risk mitigation. Requests for exchange rate fluctuation risk mitigation will not be considered. All bids including such provision will render the bid non-responsive.
3. Prior to submitting the bid, the Bidder shall ensure that the following information is clearly printed or typed in the appropriate spaces on the face of the bid return envelope:
 - a. Solicitation Number
 - b. Description/Location
 - c. Name of Bidder
 - d. Closing Time/Date

4. Timely and correct delivery of bids is the sole responsibility of the Bidder.

- * To be considered responsive, a bid must meet all of the mandatory requirements set out in the RFP. No further consideration in the selection procedure will be given to a Bidder submitting a non-responsive bid.

IB07 REVISION OF BIDS

A bid submitted in accordance with these instructions may be revised by letter or facsimile provided the revision is received at the office designated for the receipt of bids, on or before the date and time set for the closing of bid. The facsimile must be on the Bidder's letterhead or bear a signature that identifies the Bidder. A revision to a unit price bid must clearly identify the change(s) in the unit price(s) and the specific item(s) to which each change applies. **Facsimile # (204) 983-0338**

IB08 CAPITAL DEVELOPMENT AND REDEVELOPMENT CHARGES

For the purposes of GC1.8 of the General Conditions, only fees or charges directly related to the processing and issue of building permits shall be included. Bidders shall not include any monies in the bid amount for special municipal development, redevelopment or other fees or charges which a municipal authority may seek as a prerequisite to the issuance of building permits.

IB09 PRICE

1. Unless specified otherwise elsewhere in the bid documents:
 - (a) the bid price shall be in Canadian currency, and
 - (b) the bid price shall not include any amount for the Goods and Services Tax (GST) or the Harmonized Sales Tax (HST) as may be applicable, and
 - (c) exchange rate fluctuation protection is not offered, and
 - (d) any request for exchange rate fluctuation protection will not be considered, and will render the bid non-responsive.

IB10 LICENSING REQUIREMENTS

1. Bidder Team members and Key Personnel shall be, or be 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 or Territory in which the project is located.
2. By virtue of submission of a bid, the Bidder certifies that the Bidder's team and Key Personnel are in compliance with the requirements of paragraph 1. The Bidder's Bidder Team acknowledges that Canada reserves the right to verify any information in this regard and that false or erroneous certification may result in the bid being declared non-responsive.

IB11 COMPOSITION OF TEAM

1. By submitting a bid, the Bidder represents and warrants that the entities and persons proposed in the bid to perform the required services will be the entities and persons that will perform the services in the fulfillment of the project under any contractual arrangement arising from submission of the bid. If the Bidder has proposed any person in fulfillment of the project who is not an employee of the Bidder, the Bidder warrants that it has written permission from such person (or the employer of such person) to propose the services of such person in relation to the services to be performed

IB12 LISTING OF SUBCONTRACTOR AND SUPPLIERS

1. Notwithstanding any list of Subcontractors which the Bidder may be required to submit as part of the bid, the Bidder submitting the recommended bid shall, within 48 hours of receipt of a notice thereof, submit the names of Subcontractors and suppliers for the part or parts of the work listed in the said notice. Once named, the successful Contractor may not substitute one Subcontractor for another without written approval from Canada

IB13 FINANCIAL STATEMENTS

1. In order to confirm a Bidder's financial capability to perform the subject requirement, the Contracting Authority reserves the right to have access, during the bid evaluation, to current Bidder financial information. If requested, the financial information to be provided shall include, but not be limited to, the Bidder's most recent audited financial statements or financial statements certified by the Bidder's chief financial officer.
2. Should the Bidder provide the requested information to Canada in confidence while indicating that the disclosed information is confidential, then Canada will treat the information in a confidential manner as provided in the Access to Information Act.
3. In the event that a bid is found to be non-compliant on the basis that the Bidder is considered NOT to be financially capable of performing the subject requirement, official notification shall be provided to the Bidder.

IB14 LANGUAGE OF THE BID AND CONTRACT DOCUMENTS

1. The Contract documents shall be in the same official language (English or French) as the language of the bid submitted.

IB15 REJECTION OF BID (2014-09-25)

1. Canada may accept any bid, whether it is the lowest or not, or may reject any or all bids.
2. Without limiting the generality of paragraph 1) of GI11, Canada may reject a bid if any of the following circumstances is present:
 - a. the Bidder's bidding privileges are suspended or are in the process of being suspended;
 - b. the bidding privileges of any employee or subcontractor included as part of the bid are suspended or are in the process of being suspended, which suspension or pending suspension would render that employee or subcontractor ineligible to bid on the Work, or the portion of the Work the employee or subcontractor is to perform;
 - c. the Bidder is bankrupt, or where for whatever reason, its activities are rendered inoperable for an extended period;
 - d. evidence, satisfactory to Canada, of fraud, bribery, fraudulent misrepresentation or failure to comply with any law protecting individuals against any manner of discrimination, has been received with respect to the Bidder, any of its employees or any subcontractor included as part of its bid;
 - e. evidence satisfactory to Canada that based on past conduct or behavior, the Bidder, a subcontractor or a person who is to perform the Work is unsuitable or has conducted himself/herself improperly;
 - f. with respect to current or prior transactions with Canada
 - i. Canada has exercised, or intends to exercise, the contractual remedy of taking the work out of the contractor's hands with respect to a contract with the Bidder, any of its employees or any subcontractor included as part of its bid; or
 - ii. Canada determines that the Bidder's performance on other contracts is sufficiently poor to jeopardize the successful completion of the requirement being bid on.

3. In assessing the Bidder's performance on other contracts pursuant to subparagraph 2)(f)(ii) of GI11, Canada may consider, but not be limited to, such matters as:
 - a. the quality of workmanship in performing the Work;
 - b. the timeliness of completion of the Work;
 - c. the overall management of the Work and its effect on the level of effort demanded of the department and its representative; and
 - d. the completeness and effectiveness of the Contractor's safety program during the performance of the Work.
4. Without limiting the generality of paragraphs 1), 2) and 3) of GI11, Canada may reject any bid based on an unfavourable assessment of the
 - a. adequacy of the bid price to permit the work to be carried out and, in the case of a bid providing prices per unit, whether each such price reasonably reflects the cost of performing the part of the work to which that price applies;
 - b. Bidder's ability to provide the necessary management structure, skilled personnel, experience and equipment to perform competently the work under the Contract; and
 - c. Bidder's performance on other contracts.
5. Where Canada intends to reject a bid pursuant to a provision of paragraphs 1), 2), 3) or 4) of GI11, other than subparagraph 2)(a) of GI11, the contracting Authority will inform the Bidder and provide the Bidder ten (10) days within which to make representations, before making a final decision on the bid rejection.
6. Canada may waive informalities and minor irregularities in bids received if Canada determines that the variation of the bid from the exact requirements set out in the Bid Documents can be corrected or waived without being prejudicial to other Bidders.

IB16 ENQUIRIES DURING THE SOLICITATION PERIOD

1. Enquiries regarding the bid must be submitted in writing to the Contracting Officer named on the front page of the Request for Proposal as early as possible within the bidding period. Enquiries should be received no later than 5 calendar days prior to the date set for bid closing to allow sufficient time to provide a response. Enquiries received after that time may not result in an answer being provided.
2. To ensure consistency and quality of the information provided to bidders, the Contracting Officer will examine the content of the enquiry and will decide whether or not to issue an amendment to the Bid Documents.
3. All enquiries and other communications sent throughout the bidding period are to be directed ONLY to the Contracting Officer named on the front page of the Request for Proposal. Failure to comply with this requirement may result in the bid being declared non-responsive.

IB17 BID SECURITY REQUIREMENTS (2014-06-26)

1. The Bidder shall submit bid security with the bid in the form of a bid bond or a security deposit in an amount that is equal to not less than 10 percent of the bid amount. Applicable Taxes shall not be included when calculating the amount of any bid security that may be required. The maximum amount of bid security required with any bid is \$2,000,000.
2. A bid bond (form [PWGSC-TPSGC 504](#)) shall be in an approved form, properly completed, with original signatures and sealed by the approved bonding company whose bonds are acceptable to Canada either at the time of solicitation closing or as identified in Treasury Board Appendix L, [Acceptable Bonding Companies](#)
3. A security deposit shall be an original, properly completed, signed where required and be either
 - a. a bill of exchange, bank draft or money order made payable to the Receiver General for Canada and certified by an approved financial institution or drawn by an approved financial institution on itself; or
 - b. bonds of, or unconditionally guaranteed as to principal and interest by, the Government of Canada.

4. For the purposes of subparagraph 3. a. of IB17
 - a. a bill of exchange is an unconditional order in writing signed by the Bidder and addressed to an approved financial institution, requiring the said institution to pay, on demand, at a fixed or determinable future time a sum certain of money to, or to the order of, the Receiver General for Canada;
 - b. if a bill of exchange, bank draft or money order is certified by or drawn on an institution or corporation other than a chartered bank, it must be accompanied by proof that the said institution or corporation meets at least one of the criteria described in subparagraph 4.c. of IB17, either by letter or by a stamped certification on the bill of exchange, bank draft or money; and
 - c. An approved financial institution is
 - i. a corporation or institution that is a member of the Canadian Payments Association as defined in the [Canadian Payments Act](#);
 - ii. a corporation that accepts deposits that are insured, to the maximum permitted by law, by the Canada Deposit Insurance Corporation or the "Autorité des marchés financiers";
 - iii. a corporation that accepts deposits from the public if repayment of the deposit is guaranteed by Her Majesty the Queen in right of a province;
 - iv. a corporation, association or federation incorporated or organized as a credit union or co-operative credit society that conforms to the requirements of a credit union which are more particularly described in paragraph 137(6) of the [Income Tax Act](#); or
 - v. Canada Post Corporation.
5. Bonds referred to in subparagraph 3. b. of IB17 shall be provided on the basis of their market value current at the date of solicitation closing, and shall be
 - a. payable to bearer;
 - b. accompanied by a duly executed instrument of transfer of the bonds to the Receiver General for Canada in the form prescribed by the Domestic Bonds of Canada Regulations; or
 - c. registered as to principal or as to principal and interest in the name of the Receiver General for Canada pursuant to the Domestic Bonds of Canada Regulations.
6. As an alternative to a security deposit an irrevocable standby letter of credit is acceptable to Canada and the amount shall be determined in the same manner as a security deposit referred to above.
7. An irrevocable standby letter of credit referred to in paragraph 8) of IB17 shall
 - a. be an arrangement, however named or described, whereby a financial institution (the "Issuer") acting at the request and on the instructions of a customer (the "Applicant") or on its own behalf,
 - i. is to make a payment to, or to the order of, the Receiver General for Canada as the beneficiary;
 - ii. is to accept and pay bills of exchange drawn by the Receiver General for Canada;
 - iii. authorizes another financial institution to effect such payment or accept and pay such bills of exchange; or
 - iv. authorizes another financial institution to negotiate against written demand(s) for payment provided that the terms and conditions of the letter of credit are complied with;
 - b. state the face amount which may be drawn against it;
 - c. state its expiry date;
 - d. provide for sight payment to the Receiver General for Canada by way of the financial institution's draft against presentation of a written demand for payment signed by the Departmental Representative identified in the letter of credit by his/her office;

- e. provide that more than one written demand for payment may be presented subject to the sum of those demands not exceeding the face value of the letter of credit;
 - f. provide that it is subject to the International Chamber of Commerce (ICC) *Uniform Customs and Practice (UCP) for Documentary Credits, 2007 Revision*, ICC Publication No. 600, Pursuant to the ICC UCP, a credit is irrevocable even if there is no indication to that effect; and
 - g. be issued or confirmed, in either official language, by a financial institution which is a member of the Canadian Payments Association and is on the letterhead of the Issuer or Confirmer. The format is left to the discretion of the Issuer or Confirmer.
8. Bid security shall lapse or be returned as soon as practical following
- a. the solicitation closing date, for those Bidders submitting non-compliant bids; and
 - b. the administrative bid review, for those Bidders submitting compliant bids ranked fourth to last on the schedule of bids; and
 - c. the award of contract, for those Bidders submitting the second and third ranked bids; and
 - d. the receipt of contract security, for the successful Bidder; or
 - e. the cancellation of the solicitation, for all Bidders.
9. Notwithstanding the provisions of paragraph 8 of IB17 and provided more than three compliant bids have been received, if one or more of the bids ranked third to first is withdrawn or rejected for whatever reason then Canada reserves the right to hold the security of the next highest ranked compliant bid in order to retain the bid security of at least three valid and compliant bids.

IB18 CONTRACT SECURITY REQUIREMENTS

1. The successful Bidder shall be required to provide Contract security in accordance with R2890 (2014-06-26) - Contract Security listed in the Terms of Agreement - A1 Contract Documents, within 14 days after receipt of a notice in writing that the bid was accepted by Canada.

IB19 APPLICABLE TAXES (2015-02-25)

"Applicable Taxes" means the Goods and Services Tax (GST), the Harmonized Sales Tax (HST), and any provincial tax, by law, payable by Canada such as, the Quebec Sales Tax (QST) as of April 1, 2013.

IB20 COMPLIANCE WITH APPLICABLE LAWS

1. By submission of a bid, the Bidder certifies that the Bidder has the legal capacity to enter into a contract and is in possession of all valid licenses, permits, registrations, certificates, declarations, filings, or other authorizations necessary to comply with all federal, provincial and municipal laws and regulations applicable to the submission of the bid and entry into any ensuing contract for the performance of the work.
2. For the purpose of validating the certification in paragraph 20.1, a Bidder shall, if requested, provide a copy of every valid licence, permit, registration, certificate, declaration, filing or other authorization listed in the request, and shall provide such documentation within the time limit(s) set out in the request.
3. Failure to comply with the requirements of paragraph 20.2 shall result in disqualification of the bid.

IB21 PERFORMANCE EVALUATION

1. Bidders shall take note that the performance of the Contractor during and upon completion of the work shall be evaluated by Canada. The evaluation will be based on the quality of workmanship; timeliness of completion of the work; project management, contract management and management of health and

safety. Should the Contractor's performance be considered unsatisfactory, the Contractor's bidding privileges on future work may be suspended indefinitely.

The form PWGSC-TPSGC 2913

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

SELECT- Contractor Performance Evaluation report form, is used to record the performance.

IB22 BID COSTS

1. No payment will be made for costs incurred in the preparation and submission of a bid in response to the bid solicitation. Costs associated with preparing and submitting a bid, as well as any costs incurred by the Bidder associated with the evaluation of the bid, are the sole responsibility of the Bidder.

IB23 PROCUREMENT BUSINESS NUMBERS

1. Bidders are required to have a Procurement Business Number (PBN) before Contract award. Bidders may register for a PBN in the Supplier Registration Information system on the Contracts Canada Web site. For non-Internet registration, Bidders may contact the nearest Supplier Registration Agent.

IB24 BID VALIDITY PERIOD

1. Canada reserves the right to seek an extension to the bid validity period beyond the **60 days** referred to therein. Upon notification in writing from Canada, the Bidders shall have the option to either accept or reject the proposed extension.
2. If the extension referred to in 24.1 is accepted, in writing, by all those who submitted responsive bids, then Canada shall continue immediately with the evaluation of the bids and its approvals processes.
3. If the extension referred to in 24.1 is not accepted, in writing, by all those who submitted responsive bids then Canada shall, at its sole discretion, either
 - a) continue to evaluate the bids of those who have accepted the proposed extension and seek the necessary approvals; or
 - b) cancel the RFP.
4. The provisions expressed herein do not in any manner limit Canada's rights in law or under Section 15 of the Instructions to Bidders.

IB25 NOTIFICATION

1. Canada normally expects to advise unsuccessful bidders in writing within one week after entering into a contractual arrangement with the successful Bidder.

IB26 DEBRIEFING

1. A debriefing will be provided, on request, only following entry by Canada into a contractual arrangement with the successful Bidder. Should a Bidder desire a debriefing, the Bidder should contact the person identified on the front page of the RFP within 15 working days of the notification of the results of the solicitation. The debriefing will include an outline of the strengths and weaknesses of the submission, referring to the evaluation criteria. The confidentiality of information relating to other submissions will be protected. The debriefing may be provided in writing, by telephone or in person.

Submission Requirements and Evaluation (SRE's)

SECTION 1 BID FORM AND CONTENT REQUIREMENTS

Canada is seeking bids specific to this project. The bid must demonstrate an analytical and creative response to the specific nature of the project as set out in the Terms of Reference.

The bid submission itself shall comprise two parts, *Part 1 - Technical Portion* and *Part 2 - Price Portion*.

Part 1 - "Technical Portion":

should contain all the material necessary to fully represent the technical content of the bid called for in the Request for Proposal document (which includes the Terms of Reference), in a concise, comprehensive manner. It is to be organized under the technical criteria detailed in the Submission Requirements. These criteria are meant to permit a connected, logical presentation of the bid. While the Submission Requirements explanations describe in general terms the intent and the information to be included under each criterion, they are not necessarily exhaustive. Bidders are responsible for fully representing their bid.

No reference to "PRICE" is to be included in the "TECHNICAL" portion of the submission

Part 2 - "Price Portion":

Contains the bid price to perform all the proposed services. Complete one copy only of the Bid Price Form (Annex B), and enclose it together with the bid security in a separate sealed envelope clearly marked with the Bidder's

Provide **one (1) bound and signed original, four (4) bound copies and one (1) CD containing electronic copies in PDF format** of *Part 1 - Technical Portion*; and **one (1) signed original** of *Part 2 - Price Portion*, Bid Price form.

Bidders should not submit promotional materials as part of their submissions and are strongly encouraged,

- a) not to submit information that is not required by this RFP;
- b) to be succinct in their submissions;
- c) to mark each page of their submissions with page numbers.

The maximum number of pages (including text and graphics) for the Technical Portion is thirty (30) pages. Double-sided submissions are preferred. The following format should be implemented when preparing the bid.

One (1) 'page' means one side of a sheet of paper
Paper size - 8.5"x11" (metric equivalent A4)
Font size - minimum 10 pt Times New Roman or equal on all documents including charts etc.
Margin widths - minimum 12 mm
11"x17" fold-out sheets for spreadsheets, schedules, Gantt Charts, WBS, organization charts etc. will be counted as two pages.

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

- Covering letter
- Table of Contents
- Front page of the RFP
- Front page of revision(s) to the RFP

- Bid Price Form (Annex A)
- Section Dividers not containing text
- Bidder Identification, Certifications and Bid Security.

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

SECTION 2: SELECTION

2.1 General

Canada will evaluate the submissions received and such evaluation will be based on the following factors:

- a) compliance with the terms and conditions of this solicitation;
- b) the cost representing best value for a technically compliant bid to Canada for the Work;
- c) assessment of all technical documentation and information for technical compliance;

To be considered responsive, a submission must:

- a) meet all the mandatory requirements of this solicitation; and
- b) obtain the required minimum pass mark of **50%** in each category and achieve a minimum total score of **65%** of the available points for the technical criteria specified in this solicitation, which are subject to point rating. The technical rating is performed on a scale of **100** points.

Submissions not meeting (a) or (b) above will be given no further consideration. Only those responsive proposals achieving a minimum Total Technical Points rating of 65 will have their Bid Price Form envelopes opened and be eligible for further consideration.

The responsive bid with the lowest evaluated price will be recommended for award of a contract.

2.2 Financial Evaluation

The evaluated price will be as identified in "Annex A Bid Price Form" at Sub-clause 1.3

SECTION 3: TECHNICAL EVALUATION

Point Rated Criteria:

The *Part 1 - Technical Portion* part of the bid will be evaluated by the Evaluation Board under the technical criteria listed in the Evaluation Criteria Table and as further explained in the Submission Requirements.

The information will be rated from 1 to 10 for each technical criterion/element. The rating is then multiplied by the weight factor shown in the Evaluation Criteria Table to produce a weighted rating. The technical score is obtained by adding the sum of the weighted ratings.

Evaluation Criteria Table

| Technical Evaluation Criterion | Weight Factor | Rating | Technical Points Rating |
|--|---------------|-------------|-------------------------|
| 1. Design-Build Capability and Experience | | | |
| 1.1 Experience of Contractor | 1 | 0-10 | 0-10 |
| 1.2 Experience of Design Prime Consultant | 1 | 0-10 | 0-10 |
| 1.3 Team Organization and experience | 1 | 0-10 | 0-10 |
| 2. Project Delivery Management | | | |
| 2.1. Work Breakdown Structure and Schedule | 1 | 0-10 | 0-10 |
| 2.2. Management of Services and Work | 2 | 0-10 | 0-20 |
| 3. Design Proposal | | | |
| 3.1 General - Design Proposal & Presentation | 1 | 0-10 | 0-10 |
| 3.2 Design Proposal - Technical Report | | | |
| 3.2.1 Architectural | .5 | 0-10 | 0-10 |
| 3.2.2 Structural Engineering | .5 | 0-10 | 0-10 |
| 3.2.3 Electrical Engineering | .5 | 0-10 | 0-10 |
| | 10.0 | | 0-100 |

Submission Requirements

Category 1 - Design-Build Capability and Experience

1.1 Experience of Contractor

1. The Services will include Design Management work and General Contracting Work. Describe the Bidder's accomplishments, achievements and experience as the Design-Build General Contractor on two **(2) similar** type project completed in the last **eight (8) years** in terms of:

- a) How the project is relevant to the requested project
- b) Budget management
- c) Schedule management
- d) Quality Management
- e) Design Management
- f) Change Management
- g) Commissioning
- h) Site Safety and Security

Only the first project listed/submitted will receive consideration and any others will receive none as though not included.

2. Provide client contact information including phone numbers for the above project. The Evaluation Board reserves the right to contact the references

1.2 Experience of Design Prime Consultant

1. Describe the accomplishments, achievements and experience of the Design Prime Consultant on two (2) similar type project completed in the last eight (8) years in terms of:

- a) How the project is relevant to the requested project

- b) Design challenges and code compliance;
- c) Coordination of disciplines
- d) Budget management
- e) Schedule management
- f) Commissioning

Only the first project listed/submitted will receive consideration and any others will receive none as though not included.

2. Provide client contact information including phone numbers for the above project. The Evaluation Board reserves the right to contact the references.

1.3 Team Organization and Experience

Describe the team organization and experience, including at least the following information:

1. Description of overall team and structure, roles and responsibilities, reporting relationships (chart)
2. Examples of past approaches or experience which have had similar proposed team structures and processes, including any prior experience that the proposed Key Team Member have had working together
3. Identification and one page CV, including Certification or Professional Accreditation and any experience in Design-Build construction and responsibilities on past projects, for the following key team personnel:
 - a) Contractor - Project Manager
 - b) Contractor - Site Superintendent
 - c) lead Architect
 - d) lead Mechanical Engineer
 - e) lead Electrical Engineer
 - f) lead Civil Engineer

Category 2 - Project Delivery Management

2.1. Work Breakdown Structure and Schedule

1. Provide a Work Breakdown Structure (WBS) with deliverables, demonstrating how the bidder plans to execute the project.
2. Attach a Gantt Chart corresponding with the WBS showing the phases of the overall project i.e. design, construction, post-construction, sequence of main activities and deliverables (detailed schedule, design stages, resource plan, permits, inspections, regulatory compliance, commissioning, warranty etc.). Include submission review times by PWGSC/CSC.
3. Indicate the milestones of triggers to monitor scope, risk and schedule.

2.2. Management of Services and Work

1. Describe the methods/processes that the Design-Build Contractor will implement in providing the following services:
 - a) Management and Control of Scope
 - b) Schedule Management
 - c) Quality management
 - d) Project Risk management (identify risks)
 - e) Environmental Control and waste Management

- f) Design-Build Contractors decision making structure and response time.
- g) Sub-Trade management Plan
- h) Commissioning and Warranty Assurance Plan.
- i) Site Safety Management and compliance with Safety Regulations.
- j) Lines of communication and reporting relationship with stakeholders

Category 3 - Design Proposal

The Bidder should submit a design proposal which will demonstrate its understanding of the goals of the project, the functional / technical requirements and the constraints described in the Terms of Reference, and the PWGSC provided concept design.

3.1 General - Design Proposal and Design Proposal Presentation

1. The Design Proposal Drawings submitted to PWGSC should include, in an electronic format and in 4 hard copies (bounded sets in format A1), at a minimum:
 - a. a site plan (1:500);
 - b. floor plans (1:200);
 - c. elevations (north, south, east and west) (1:200);
 - d. typical wall sections (1:10), details indicating wall (cladding with anchoring method) and roof assemblies (floor and roof connections, insulation and vapour barrier details);Submit colour or black and white 279 mm x 431 mm (11" by 17") format reductions of each of the drawings for reproduction purposes and
2. A Technical Report, in accordance with Section 3.2 below, and including the following drawings (1:200) (which should be annexed to the Technical Report):
 - comprehensive schematic diagrams (single line diagram) for all mechanical systems (HVAC, plumbing, fire protection, etc.) and electrical systems (including Fire alarm);

3.2 Design Proposal - Technical Report Requirements

Bidders should submit a technical report as part of their Design Proposals which provides the information set out in this Section 3.2 (the "Technical Report"). The Bidder's Technical Report should be in a 216 mm x 279 mm format in a three ring binder and should be divided into sections as described below.

3.2.1 Architectural

The Bidder should describe the architectural concepts for the building, its design strategies and its rationale for the approach selected. The Bidders should describe, for example, performance, durability and including how the Bidder intends to address the following systems to meet the Technical Requirements, at a minimum:

- a) roof systems;
- b) wall systems (and materials);
- c) window and glazing systems;

3.2.2 Structural Engineering

The Bidder should describe the structural engineering concepts for the building and its rationale for the design of systems selected. The Bidder should describe, at a minimum, how the following systems will be addressed to meet the Technical Requirements:

- a) foundations;
- b) columns;
- c) floor and roof framing systems;
- d) lateral load resisting system; and

- e) approach to ensure compliance with the NBC seismic requirements.

3.2.3 Electrical Engineering

The Bidder should describe the electrical engineering concepts for the building and its rationale for the design of systems selected. The Bidder should describe, at a minimum, how the following systems will be addressed to meet the Technical Requirements:

- a) how the design will comply with utility requirements, including capacity and connections;
- b) electrical service and distribution;
- c) fire alarm and security systems;
- d) lighting and controls.

SECTION 4: MANDATORY SUBMISSION REQUIREMENTS

To be considered compliant, a submission must meet all of the mandatory evaluation criteria. **Submissions not meeting all of the mandatory requirements will be given no further consideration. The Bidder must:**

1. Submit the bid to the Bid Receiving Unit prior to the closing date and time indicated on the front page of the solicitation document;
2. Complete and submit signed Bid Price Form (Annex B);
3. Provide Bid Security per IB17 of the Instructions to Bidders;

SUBMISSION REQUIREMENTS - CHECKLIST

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

Proposal - one (1) original, plus four (4) bound copies, plus one (1) CD

Note: the maximum number of pages (including text and graphics) to be submitted for the Technical Portion is 30 pages

Front page of RFP - acknowledged

Bid Price Form (in a separate envelope) - completed and signed

Front page(s) of any solicitation amendment(s) - acknowledged

Bid Security included with Bid Price Form

ANNEX A: BID PRICE FORM

This Bid Price Form, duly completed, the signed front page of the RFP, and the requisite bid security shall be enclosed and sealed in an envelope provided by the Bidder, and shall be addressed and submitted to the office designated for the receipt of bids.

1.1 Project Identification

Project Name:

Project Location:

Solicitation Number :

1.2 Business Name and Address of Bidder

Name: _____

Address: _____

Phone: () _____ Fax: () _____ PBN: _____

Email: _____

1.3 Offer

The Bidder, hereby offers to Canada to perform and complete the work for the above named project in accordance with the Scope of Work, at the place and in the manner set out therein for the Total Price (to be expressed in numbers only) of:

\$ _____ excluding GST/HST

which consists of

- .1 an Amount of \$ _____ excluding GST/HST, for the design portion of the Work; +
- .2 an Amount of \$ _____ excluding GST/HST, for the construction portion of the Work.

1.4 Time Based Fee Schedule For Design Changes

The following will NOT form part of the evaluation process:

Canada intends to use the following Rates quoted for additional Design Services that may be required from time to time. Canada reserves the right to refuse or renegotiate any Rate that Canada, in its sole discretion, deems to be excessive when compared to industry norms.

Solicitation No. - N° de l'invitation
ET025-172216/A
Client Ref. No. - N° de réf. du client
PWGSC-ET025-172216/A

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
pwz102
CCC No./N° CCC - FMS No./N° VME

Principals - All inclusive hourly rate to be fixed for the duration of the Contract

| <i>Name</i> | <i>Hourly Rate</i> |
|-------------|--------------------|
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |

Hourly Rate increases for staff are to be documented to PWGSC for approval. All key personnel are to be shown.

| <i>Staff / Position</i> | <i>Hourly Rate</i> |
|-------------------------|--------------------|
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
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| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |
| | \$..... |

1.5 Team Identification

The Contractor and other members of the Design-Build Team shall be, or be 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.

Bidder (Design-Builder):

Name:

Key Individuals and provincial/territorial professional licensing status:

Key Subcontractors / Sub-consultants / Specialists:

Name:

Key Individuals and provincial/territorial professional licensing status:

Key Subcontractors / Sub-consultants / Specialists:

Name:

Key Individuals and provincial/territorial professional licensing status:

Solicitation No. - N° de l'invitation
ET025-172216/A
Client Ref. No. - N° de réf. du client
PWGSC-ET025-172216/A

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
pwz102
CCC No./N° CCC - FMS No./N° VME

Key Subcontractors / Sub-consultants / Specialists:

Name:

Key Individuals and provincial/territorial professional licensing status:

Key Subcontractors / Sub-consultants / Specialists:

Name:

Key Individuals and provincial/territorial professional licensing status:

Key Subcontractors / Sub-consultants / Specialists:

Name:

Key Individuals and provincial/territorial professional licensing status:

Key Subcontractors / Sub-consultants / Specialists:

Solicitation No. - N° de l'invitation
ET025-172216/A
Client Ref. No. - N° de réf. du client
PWGSC-ET025-172216/A

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
pwz102
CCC No./N° CCC - FMS No./N° VME

Name:

Key Individuals and provincial/territorial professional licensing status:

END OF BID PRICE FORM

APPENDIX 1 - INTEGRITY PROVISIONS

(Text copied from the Ineligibility and Suspension Policy <http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html> dated 2016-04-04)

List of names: All bidders, regardless of their status under the Policy, must submit the following information when participating in a procurement process or real property transaction:

- bidders that are corporate entities, including those bidding as joint ventures, must provide a complete list of the names of all current directors or, for a privately owned corporation, the names of the owners of the corporation;
- bidders bidding as sole proprietors, including sole proprietors bidding as joint ventures, must provide a complete list of the names of all owners; or
- bidders that are a partnership do not need to provide a list of names.

If the list of names has not been received in a procurement process or real property transaction by the time the evaluation of bids or offers is completed, or has not been received in a procurement process or real property transaction where no bid/offer will be submitted, the contracting authority will inform the bidder of a time within which to provide the information. Providing the required names is a mandatory requirement for award of a contract or real property agreement. Failure to provide the list of names within the time specified will render a bid or offer non-responsive, or the bidder otherwise disqualified for award of a contract or real property agreement.

Solicitation No. - N° de l'invitation
ET025-172216/A
Client Ref. No. - N° de réf. du client
PWGSC-ET025-172216/A

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
pwz102
CCC No./N° CCC - FMS No./N° VME

APPENDIX 2 – DEPARTMENTAL REPRESENTATIVE'S AUTHORITY

TO BE PROVIDED AT CONTRACT AWARD

| | |
|----------------------------------|--|
| Contracting Authority is: | |
| Name: | |
| Title: | |
| Department: | |
| Division: | |
| Telephone: | |
| Fax: | |
| E-mail: | |

| | |
|---------------------------------|--------|
| Technical Authority is : | |
| Name: | |
| Title: | |
| Department: | |
| Division: | |
| Telephone: | Cell : |
| Fax: | |
| E-mail: | |

APPENDIX 4 - LISTING OF SUBCONTRACTORS

- 1) In accordance with IB12 - Listing of Subcontractors and Suppliers of Instructions To Bidders, the Bidder should provide a list of Subcontractors with his Bid.
- 2) The Bidder should submit the list of Subcontractors and for any portion of the Work valued at 20% or greater of the submitted Bid Price.

| | Subcontractor | Division | Estimated value of work |
|----|---------------|----------|-------------------------|
| 1 | | | |
| 2 | | | |
| 3 | | | |
| 4 | | | |
| 5 | | | |
| 6 | | | |
| 7 | | | |
| 8 | | | |
| 9 | | | |
| 10 | | | |
| 11 | | | |
| 12 | | | |
| 13 | | | |
| 14 | | | |
| 15 | | | |

ANNEX B: TERMS AND CONDITIONS

TERMS OF AGREEMENT

- A1 Contract Documents
- A2 The Work

GENERAL CONDITIONS

GC1 GENERAL PROVISIONS (2015-07-09)

- GC1.1 Interpretation
- GC1.2 Contract Documents
- GC1.3 Status of the Contractor
- GC1.4 Rights and Remedies
- GC1.5 Time of the Essence
- GC1.6 Indemnification by Contractor
- GC1.7 Indemnification by Canada
- GC1.8 Laws, Permits and Taxes
- GC1.9 Workers' Compensation
- GC1.10 National Security
- GC1.11 Public Ceremonies and Signs
- GC1.12 Conflict of Interest
- GC1.13 International Sanctions
- GC1.14 Certification - Contingency Fees
- GC1.15 Agreements and Amendments
- GC1.16 Unsuitable Workers
- GC1.17 Assignment
- GC1.18 Rights to Intellectual Property
- GC1.19 No Bribe
- GC1.20 Succession
- GC1.21 Code of Conduct and Certifications - Contract

GC2 ADMINISTRATION OF THE CONTRACT (2015-02-25)

- GC2.1 Departmental Representative's Authority
- GC2.2 Interpretation of Contract
- GC2.3 Notices
- GC2.4 Site Meetings
- GC2.5 Review and Inspection of Work
- GC2.6 Superintendent
- GC2.7 Non-discrimination in Hiring and Employment of Labour
- GC2.8 Accounts and Audits

GC3 EXECUTION AND CONTROL OF THE WORK (2015-02-25)

- GC3.1 Progress Schedule
- GC3.2 Project Design and Role of the Designer
- GC3.3 Construction Safety
- GC3.4 Execution of the Work
- GC3.5 Material
- GC3.6 Subcontracting
- GC3.7 Construction by Other Contractors or Workers
- GC3.8 Labour and Fair wages
- GC3.9 Material, Plant and Real Property become Property of Canada
- GC3.10 Defective Work
- GC3.11 Use of the Work and Cleanup of Site
- GC3.12 Warranty and Rectification of Defects in Work

GC4 **PROTECTIVE MEASURES** - *condition incorporated by reference*

GC5 **TERMS OF PAYMENT** (2015-02-25)

- GC5.1 Interpretation
- GC5.2 Amount Payable
- GC5.3 Increased or Decreased Costs
- GC5.4 Progress Payment
- GC5.5 Substantial Performance of the Work
- GC5.6 Final Completion
- GC5.7 Payment not Binding on Canada
- GC5.8 Claims and Obligations
- GC5.9 Right of Set-off
- GC5.10 Assessments and Damages for Late Completion
- GC5.11 Delay in Making Payment
- GC5.12 Interest on Settled Claims
- GC5.13 Return of Security Deposit

GC6 **DELAYS AND CHANGES IN THE WORK** (2013-04-25)

- GC6.1 Changes in the Work
- GC6.2 Changes in Subsurface Conditions
- GC6.3 Human Remains, Archaeological Remains and Items of Historical or Scientific Interest
- GC6.4 Determination of Price
- GC6.5 Delays and Extension of Time

GC7 **DEFAULT, SUSPENSION OR TERMINATION OF CONTRACT** (2008-05-12)

- GC7.1 Taking the Work out of the Contractor's Hands
- GC7.2 Suspension of Work
- GC7.3 Termination of Contract
- GC7.4 Security Deposit - Forfeiture or Return

Conditions incorporated by reference:

GC8 **DISPUTE RESOLUTION**

GC9 **CONTRACT SECURITY**

GC10 **INSURANCE**

ALLOWABLE COSTS FOR CONTRACT CHANGES UNDER GC6.4.1

SUPPLEMENTARY CONDITIONS

- SC01 Payment for Design Changes and Revisions
- SC02 Professional Liability Insurance Requirements
- SC03 Insurance Terms
- SC04 Workplace Safety and Health
- SC05 Performance Evaluation-Contract
- SC06 Interpretation

TERMS OF AGREEMENT

A1 CONTRACT DOCUMENTS

- 1) The Contractor understands and agrees that, upon acceptance of the offer by Canada
 - (a) a binding Contract shall be formed between Canada and the Contractor; and
 - (b) the contract documents forming the Contract shall be the following:
 - (i) the Front Page and these Terms of Agreement;
 - (ii) the Request for Proposal;
 - (iii) the Terms of Reference;
 - (iv) the terms, conditions, and clauses as amended, identified as:
 - a) the General Conditions;
 - b) the Supplementary Conditions, if any;
 - c) documents incorporated by reference as follows:
 - R2840D (2008-05-12) - (GC4) Protective Measures
 - R2880D (2016-01-28) - (GC8) Dispute Resolution
 - R2890D (2014-06-26) - (GC9) Contract Security
 - R2900D (2008-05-12) - (GC10) Insurance
 - R2950D (2015-02-25) - Allowable costs for contract changes under GC6.4.1
 - (v) the submission;
 - (vi) the Construction Documents;
 - (vii) any amendment incorporated into the solicitation documents before the date of the Contract; and
 - (viii) any amendment or variation of the contract documents that is made in accordance with the General Conditions.
 - (c) The documents identified by title, number and date above are incorporated by reference and 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 Website: <http://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>
2. The Contract documents shall be in the same official language (English or French) as the language of the bid submitted.

A2 THE WORK

- 1) The Design-Builder agrees
 - (a) to complete the Work within **24 months** from the date of notification of acceptance of its proposal.

GENERAL CONDITIONS

GC1 GENERAL PROVISIONS

GC1.1 INTERPRETATION (2015-07-09)

The following is an interpretation of heading and references.

GC1.1.1 Headings and References

- 1) The headings in the contract documents form no part of the *Contract* but are inserted for convenience of reference only.
- 2) A reference made to a part of the *Contract* by means of numbers preceded by letters is a reference to the particular part of the *Contract* that is identified by that combination of letters and numbers and to any other part of the *Contract* referred to therein.
- 3) A reference to a paragraph or subparagraph followed by an identifying number is, unless specifically stated otherwise, a reference to the paragraph or subparagraph that forms part of the clause within which the reference is made.

GC1.1.2 Terminology

In the Contract, unless the context otherwise requires:

"Administrative Agreement"

is a negotiated agreement with the Minister of PWGS as provided for in the *Ineligibility and Suspension Policy*.

"Affiliate" is a person, including, but not limited to, organizations, bodies corporate, societies, companies, firms, partnerships, associations of persons, parent companies or subsidiaries, whether partly or wholly-owned, as well as individuals, directors, officers and key employees if:

- i. one controls or has the power to control the other, or
- ii. a third party has the power to control both.

"Applicable Taxes" means the Goods and Services Tax (GST), the Harmonized Sales Tax (HST), and any provincial tax, by law, payable by Canada such as, the Quebec Sales Tax (QST) as of April 1, 2013;

"Canada", "Crown" or "Her Majesty" means Her Majesty the Queen in right of Canada;

"Construction" means the performing or furnishing of all labour, Plant, Material, and other means of construction, other than Design Services, to complete the performance of the Work as required by the contract documents;

"Construction Documents" means the plans, drawings and specifications for Construction of the Work prepared by or on behalf of the Contractor and that are accepted and signed by Canada and the Contractor after the execution of the Contract;

"Contract" means the contract documents referred to as such therein and every other document specified or referred to in any of them as forming part of the contract, all as amended by agreement of the parties;

"Contract Amount" means the amount stipulated in the Contract;

"Contract Security" means any security given by the Contractor to Canada in accordance with the Contract;

"Contractor" means the person or entity contracting with Canada to provide or furnish all designs, professional services, Construction Documents, labour, Material and Plant for the execution of the Work, and includes the Contractor's authorized representative as designated in writing to the Departmental Representative;

"Certificate of Completion" means the certificate issued by Canada when the Work reaches Completion;

"Certificate of Measurement" means a certificate issued by Canada certifying the correctness of the final quantities, prices per unit and values of labour, Plant and Material performed, used and supplied by the Contractor for the construction of the part of the Work to which a Unit Price Arrangement applies;

"Certificate of Substantial Performance" means a certificate issued by Canada when the Work reaches Substantial Performance;

"Control"

means:

- a. direct control, such as where:
 - i. a person controls a body corporate if securities of the body corporate to which are attached more than 50 percent of the votes that may be cast to elect directors of the body corporate are beneficially owned by the person and the votes attached to those securities are sufficient, if exercised, to elect a majority of the directors of the body corporate;
 - ii. a person controls a corporation that is organized on a cooperative basis if the person and all of the entities controlled by the person have the right to exercise more than 50 percent of the votes that may be cast at an annual meeting or to elect the majority of the directors of the corporation;
 - iii. a person controls an unincorporated entity, other than a limited partnership, if more than 50 percent of the ownership interests, however designated, into which the entity is divided are beneficially owned by that person and the person is able to direct the business and affairs of the entity;
 - iv. the general partner of a limited partnership controls the limited partnership; and
 - v. a person controls an entity if the person has any direct or indirect influence that, if exercised, would result in control in fact of the entity.
- b. deemed control, such as where:

a person who controls an entity is deemed to control any entity that is controlled, or deemed to be controlled, by the entity
- c. indirect control, such as where:

a person is deemed to control, within the meaning of paragraph (a) or (b), an entity where the aggregate of:

 - i. any securities of the entity that are beneficially owned by that person, and
 - ii. any securities of the entity that are beneficially owned by any entity controlled by that person

is such that, if that person and all of the entities referred to in paragraph (c)(ii) that beneficially own securities of the entity were one person, that person would control the entity.

"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;

"Design Services" means the professional services for design and construction administration performed by the Designer, or consultants coordinated by the Designer, under the terms of the Contract;

"Designer" means the Architect, Professional Engineer or entity, licensed to practice in the province or territory of the Work, and forming the professional component of the Contractor to provide the Design Services and other services required under the terms of the Contract, and includes the Contractor's authorized representative as designated to Canada in writing.

"herein", "hereby", "hereof", "hereunder" and similar expressions refer to the Contract as a whole and not to any particular section or part thereof;

"Ineligibility" means a person not eligible to contract with Canada;

"Lump Sum Arrangement" means that part of the Contract that prescribes a lump sum as payment for performance of the work to which it relates;

"Material" means all commodities, articles, machinery, equipment, fixtures and things required to be furnished in accordance with the Contract for incorporation into the Work;

"person" also includes, unless there is an express stipulation in the Contract to the contrary, any partnership, proprietorship, firm, joint venture, consortium or corporation;

"Plant" means all tools, implements, machinery, vehicles, structures, equipment, articles and things, other than Material or consumed in the performance of the Contract and tools customarily provided by a tradesperson in practicing a trade, that are necessary for the Construction of the Work;

"Project" means the total design and Construction for which the Contractor is responsible, including all Design Services and the Completion of the Work;

"Project Requirements" means the statement included in the Request for Proposal detailing the technical and other requirements of Canada which are to be met by the successful Bidder, and which are to be addressed in the Bid;

"Bid" means the bid of the Contractor submitted in response to a Request for Proposal:

"Request for Proposal" means the documentation issued by Canada requesting the submission of bids and detailing the Project Requirements;

"Subcontractor" means a person or entity, other than the Designer, having a direct Contract with the Contractor, subject to GC3.6 SUBCONTRACTING, to perform a part or parts of the Work, or to supply Material worked to a special design for the Work;

"Superintendent" means the employee or representative of the Contractor who is designated by the Contractor to act pursuant to GC2.6 SUPERINTENDENT;

"Supplementary Conditions" means the part of the contract documents which amends or supplements the General Conditions;

"Supplier" means a person or entity having a direct Contract with the Contractor to supply Plant or Material not worked to a special design for the Work;

"Suspension" means a determination of temporary ineligibility by the Minister of PWGS;

"Total Estimated Cost", "Revised Estimated Cost", "Increase (Decrease)" on Page 1 of the Contract or Contract Amendment means an amount used for internal administrative purposes only that comprises the Contract Amount, or the revised Contract Amount, or the amount that would increase or decrease the Contract Amount and the Applicable Taxes as evaluated by the Contracting Authority, and does not constitute tax advice on the part of Canada;

"Unit Price Arrangement" means that part of the Contract that prescribes the product of a price per unit of measurement multiplied by a number of units of measurement for performance of the work to which it relates;

"Unit Price Table" means the table set out in the Articles of Contract;

"Work" means, subject only to any express stipulation in the Contract to the contrary, everything that is necessary to be done, furnished or delivered by the Contractor to complete the Design Services, Construction and other services required under the Contract in accordance with the contract documents; and

"Working Day" means a day other than a Saturday, Sunday, or a holiday which is observed by the construction industry in the area of the place of the Work.

GC1.1.3 Application of Certain Provisions

- 1) Any provisions of the *Contract* that are expressly stipulated to be applicable only to a *Unit Price Arrangement* are not applicable to any part of the *Work* to which a *Lump Sum Arrangement* applies.
- 2) Any provisions of the *Contract* that are expressly stipulated to be applicable only to a *Lump Sum Arrangement* are not applicable to any part of the *Work* to which a *Unit Price Arrangement* applies.

GC1.1.4 Substantial Performance

- 1) The *Work* will be considered to have reached Substantial Performance when,
 - (a) the *Work* or a substantial part thereof has passed inspection and testing and is, in the opinion of Canada, ready for use by *Canada* or is being used for the intended purposes; and
 - (b) when the *Work* is, in the opinion of Canada, capable of completion or correction at a cost of not more than
 - (i) 3% of the first \$500,000, and
 - (ii) 2% of the next \$500,000, and
 - (iii) 1% of the balanceof the value of the *Contract* at the time this cost is calculated.
- 2) Where the *Work* or a substantial part thereof is ready for use or is being used for the purposes intended and
 - (a) the remainder of the *Work* or a part thereof cannot be completed by the time specified in the *Contract*, or as amended by GC6.5 DELAYS AND EXTENSION OF TIME, for reasons beyond the control of the *Contractor*; or
 - (b) *Canada* and the *Contractor* agree not to complete a part of the *Work* within the specified time;the cost of that part of the *Work* that was either beyond the control of the *Contractor* to complete or *Canada* and the *Contractor* have agreed not to complete by the time specified, shall be deducted from the value of the *Contract* referred to in paragraph 1)(b) of GC1.1.4, and the said cost shall not form part of the cost of the work remaining to be done in determining Substantial Performance.

GC1.1.5 Completion

- 1) The *Work* shall be deemed to have reached Completion when all designs, services, labour, *Plant* and *Material* required have been performed, used or supplied, and the *Contractor* has complied with the *Contract* and all orders and directions made pursuant thereto, all to the satisfaction of Canada.

GC1.2 CONTRACT DOCUMENTS

GC1.2.1 General

- 1) The contract documents are complementary, and what is required by any one shall be as binding as if required by all.
- 2) References in the contract documents to the singular shall be considered to include the plural as the context requires.
- 3) Nothing contained in the contract documents shall create a contractual relationship between *Canada* and any *Subcontractor* or *Supplier* or the *Designer* or any consultant or their agents or employees.

GC1.2.2 Order of Precedence

- 1) In the event of any discrepancy or conflict in the contents of the following documents, such documents shall take precedence and govern in the following order:
 - a) any amendments or variation of the contract documents that is made in accordance with the General Conditions
 - b) any amendment issued prior to bid closing ,
 - c) *Supplementary Conditions*,
 - d) General Conditions,
 - e) *The Request for Proposal* ,
 - f) The duly completed Bid when accepted.

Later dates shall govern within each of the above categories of documents.

- 2) In the event of any discrepancy or conflict in the information contained in the *Construction Documents*, the following rules shall apply:
 - a) Specifications shall govern over drawings;
 - b) Dimensions shown in figures on a plan shall govern where they differ from dimensions scaled from the same drawing; and
 - c) Drawings of larger scale shall govern over those of smaller scale.

GC1.2.3 Security and Protection of Documents and Work

- 1) The Contractor shall guard and protect contract documents, drawings, information, models and copies thereof, whether supplied by Canada or the Contractor, against loss or damage from any cause.
- 2) The Contractor shall keep confidential all information provided to the Contractor by or on behalf of Canada in connection with the Work, and all information developed by the Contractor as part of the Work, and shall not disclose any such information to any person without the written permission of Canada, except that the Contractor may disclose to a subcontractor, authorized in accordance with the Contract, information necessary to the performance of a subcontract. This section does not apply to any information that
 - a) is publicly available from a source other than the Contractor; or
 - b) is or becomes known to the Contractor from a source other than Canada, except any source that is known to the Contractor to be under an obligation to Canada not to disclose the information.
- 3) When the Contract, the Work, or any information referred to in paragraph 2) is identified as TOP SECRET, SECRET, CONFIDENTIAL or PROTECTED by Canada, the Contractor shall, at all times, take all measures reasonably necessary for the safeguarding of the material so identified, including such

measures as may be further specified elsewhere in the Contract or provided, in writing, from time to time by Canada.

- 4) Without limiting the generality of paragraphs 2) and 3) of GC1.2.3, when the Contract, the Work, or any information referred to in paragraph 2) is identified as TOP SECRET, SECRET, CONFIDENTIAL or PROTECTED by Canada, Canada shall be entitled to inspect the Contractor's premises and the premises of its subcontractors or suppliers and any other person at any tier, for security purposes at any time during the term of the Contract, and the Contractor shall comply with, and ensure that any such subcontractors or suppliers comply with all written instructions issued by Canada dealing with the material so identified, including any requirement that employees of the Contractor and its subcontractors and suppliers and any other person at any tier execute and deliver declarations relating to reliability screenings, security clearances and other procedures.
- 5) The Contractor shall safeguard the Work and the Contract, the specifications, drawings and any other information provided by Canada to the Contractor, and shall be liable to Canada for any loss or damage from any causes.

GC1.2.4 Ownership and Re-use of Documents and Models

- 1) Except as may be specified elsewhere in the Contract, *Canada* relinquishes any right to ownership of copyright in any and all documents which are instruments of the services to be provided or furnished and are prepared by or on behalf of the *Contractor* or the *Designer* under the terms of the *Contract*.
- 2) After negotiation with the owner or owners of the copyright, *Canada* may re-use for another project the documents and models referred to in paragraph 1) of GC1.2.4, and shall pay the owner or owners for such re-use an appropriate fee based on current practice.
- 3) Models furnished by the *Contractor* at *Canada's* expense shall be and remain the property of *Canada*.

GC1.3 STATUS OF THE CONTRACTOR

- 1) The *Contractor* is engaged under the *contract* as an independent contractor.
- 2) The *Contractor*, *its subcontractors*, employees, designers, suppliers and any other persons at any tier are not engaged by the *Contract* as employees, servants or agents of *Canada*.
- 3) For the purposes of the *contract* the *Contractor* shall be solely responsible for any and all payments and deductions required to be made by law including those required for Canada or Quebec Pension Plans, Employment Insurance, Worker's Compensation, provincial health or insurance plans, and Income Tax.

GC1.4 RIGHTS AND REMEDIES

- 1) Except as expressly provided in the Contract, the duties and obligations imposed by the Contract and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.

GC1.5 TIME OF THE ESSENCE

- 1) Time is of the essence of the *Contract*.

GC1.6 INDEMNIFICATION BY THE CONTRACTOR

- 1) The *Contractor* shall pay all royalties and patent fees required for the performance of the *Contract* and, at the *Contractor's* expense, shall defend all claims, actions or proceedings against *Canada* charging or claiming that the services or any part thereof provided or furnished by the *Contractor* to *Canada* infringe

any patent, industrial design, copyright trademark, trade secret or other proprietary right enforceable in *Canada*.

- 2) The *Contractor* shall indemnify and save *Canada* harmless from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings by any third party, brought or prosecuted and in any manner based upon, arising out of, related to, occasioned by or attributable to the activities of the *Contractor*, the *Designer*, servants, agents, *Subcontractors* and suppliers and any other person at any tier, in performing the *Work*.
- 3) For the purposes of paragraph 2) of GC1.6, "activities" means any act improperly carried out, any omission to carry out an act and any delay in carrying out an act.

GC1.7 INDEMNIFICATION BY CANADA

- 1) Subject to the Crown Liability and Proceedings Act, the Patent Act, and any other law that affects *Canada's* rights, powers, privileges or obligations, *Canada* shall indemnify and save the *Contractor* harmless from and against all claims, demands, losses, costs, damage, actions, suits or proceedings arising out of the *Contractor's* activities under the *Contract* that are directly attributable to:
 - a) lack of or a defect in *Canada's* title to the *Work* site if owned by *Canada*, whether real or alleged; or
 - b) an infringement or an alleged infringement by the *Contractor* of any patent of invention or any other kind of intellectual property occurring while the *Contractor* was performing any act for the purposes of the *Contract* employing a model, plan or design or any other thing related to the *Work* that was supplied by *Canada* to the *Contractor*.

GC1.8 LAWS, PERMITS AND TAXES

1. The Contractor shall comply with all federal, provincial and municipal laws and regulations applicable to the performance of the *Work* or any part thereof including, without limitation, all laws concerning health and labour conditions and the protection of the environment, and shall require compliance therewith by all of its subcontractors and suppliers at any tier as if the *Work* were being performed for an owner other than *Canada*. The Contractor shall furnish evidence of compliance with such laws and regulations to *Canada* at such times as *Canada* may reasonably request.
2. Unless stipulated otherwise in the *Contract*, the Contractor shall obtain and maintain all permits, certificates, licences, registrations and authorizations required for the lawful performance of the *Work*.
3. Prior to the commencement of the *Work* at the site, the Contractor shall tender to a municipal authority an amount equal to all fees and charges that would be lawfully payable to that municipal authority in respect of building permits as if the *Work* were being performed for an owner other than *Canada*.
4. Within 10 days of making a tender pursuant to paragraph 3) of GC1.8, the Contractor shall notify *Canada* of the amount properly tendered and whether or not the municipal authority has accepted that amount.
5. If the municipal authority has not accepted the amount tendered, the Contractor shall pay that amount to *Canada* within 6 days after the time stipulated in paragraph 4) of GC1.8.
6. For the purposes of this clause, "municipal authority" means any authority that would have jurisdiction respecting permission to perform the *Work* if the owner were not *Canada*.
7. Notwithstanding the residency of the Contractor, the Contractor shall pay any applicable tax arising from or related to the performance of the *Work* under the *Contract*.
8. In accordance with the Statutory Declaration referred to in paragraph 4) of GC5.5, "Substantial Performance of the *Work*", a Contractor who has neither residence nor place of business in the province or territory in which work under the *Contract* is being performed shall provide *Canada* with proof of registration with the provincial sales tax authorities in the said province.

9. For the purpose of the payment of any Applicable Taxes or the furnishing of security for the payment of any Applicable Taxes arising from or related to the performance of the Work, and notwithstanding the provision that all Material, Plant and interest of the Contractor in all real property, licences, powers and privileges, become the property of Canada after the time of purchase in accordance with GC3.10, "Material Plant and Real Property Become Property of Canada", the Contractor shall be liable, as a user or consumer, for the payment or for the furnishing of security for the payment of any Applicable Taxes payable, at the time of the use or consumption of that Material, Plant or interest of the Contractor in accordance with the relevant legislation.
10. Federal government departments and agencies are required to pay Applicable Taxes.
11. Applicable Taxes will be paid by Canada as provided in the request for payment. It is the sole responsibility of the Contractor to charge Applicable Taxes at the correct rate in accordance with applicable legislation. The Contractor agrees to remit to appropriate tax authorities any amounts of Applicable Taxes paid or due.
12. The Contractor is not entitled to use Canada's exemptions from any tax, such as provincial sales taxes, unless otherwise specified by law. The Contractor must pay applicable provincial sales tax, ancillary taxes, and any commodity tax, on taxable goods or services used or consumed in the performance of the Contract (in accordance with applicable legislation), including for material incorporated into real property.
13. In those cases where Applicable Taxes, customs duties, and excise taxes are included in the Contract Amount, the Contract Amount will be adjusted to reflect any increase, or decrease, of Applicable Taxes, customs duties, and excise taxes that will have occurred between bid submission and contract award. However, there will be no adjustment for any change to increase the Contract Amount if public notice of the change was given before bid submission date in sufficient detail to have permitted the Contractor to calculate the effect of the change.
14. Tax Withholding of 15 Percent – Canada Revenue Agency
Pursuant to the *Income Tax Act*, 1985, c. 1 (5th Supp.) and the *Income Tax Regulations*, Canada must withhold 15 percent of the amount to be paid to the Contractor in respect of services provided in Canada if the Contractor is not a resident of Canada, unless the Contractor obtains a valid waiver from the Canada Revenue Agency. The amount withheld will be held on account for the Contractor in respect to any tax liability which may be owed to Canada.

GC1.9 WORKERS' COMPENSATION

- 1) Prior to commencing the *Work*, at the time of Substantial Performance of the *Work*, and prior to issuance of the *Certificate of Completion*, the *Contractor* shall provide evidence of compliance with workers' compensation legislation applicable to the place of the *Work*, including payments due thereunder.
- 2) At any time during the term of the *Contract*, when requested by Canada, the *Contractor* shall provide such evidence of compliance by the *Contractor*, its *Subcontractors* and any other person at any tier and any other person performing part of the *Work* who is required to comply with such legislation.

GC1.10 NATIONAL SECURITY

- 1) If *Canada* determines that the *Work* is of a class or kind that involves national security, *Canada* may order the *Contractor* to
 - a) provide *Canada* with any information concerning persons or entities employed or to be employed by the *Contractor* for purposes of the *Contract*; and
 - b) remove any person from the site of the *Work*, if in the opinion of *Canada*, that person may be a risk to the national security,and the *Contractor* shall comply with the order.

- 2) In all contracts with persons who are to be employed in the performance of the *Contract*, the *Contractor* shall make provision for the performance of any obligation that may be imposed upon the *Contractor* under paragraph 1) of GC1.10.

GC1.11 PUBLIC CEREMONIES AND SIGNS

- 1) The *Contractor* shall not permit any public ceremony in connection with the *Work* without the prior consent of *Canada*.
- 2) The *Contractor* shall not erect nor permit the erection of any sign or advertising on the *Work* or its site without the prior consent of *Canada*.

GC1.12 CONFLICT OF INTEREST

- 1) It is a term of the *Contract* that no individual, for whom the post-employment provisions of the Conflict of Interest and Post-Employment Code for Public Office Holders or the Values and Ethics Code for the Public Service apply, shall derive a direct benefit from the *Contract* unless that individual is in compliance with the applicable post-employment provisions.

GC1.13 INTERNATIONAL SANCTIONS

- 1) Persons and companies in Canada, and Canadians outside of Canada are bound by economic sanctions imposed by Canada. As a result, the Government of Canada cannot accept delivery of goods or services that originate, either directly or indirectly, from the countries or persons subject to economic sanctions. Details on existing sanctions can be found at:
[Http://www.dfait-maeci.gc.ca/trade/sanctions-en.asp](http://www.dfait-maeci.gc.ca/trade/sanctions-en.asp).
- 2) It is a condition of the Contract that the *Contractor* not supply to the Government of Canada any goods or services which are subject to economic sanctions.
- 3) By law, the *Contractor* must comply with changes to the regulations imposed during the life of the Contract. During the performance of the Contract should the imposition of sanctions against a country or person or the addition of a good or service to the list of sanctioned goods or services cause an impossibility of performance for the Contractor, the Contractor may request that the Contract be terminated in accordance with GC7.3 TERMINATION OF CONTRACT.

GC1.14 CERTIFICATION - CONTINGENCY FEES

- 1) In this clause:
 - (a) "contingency fee" means any payment or other compensation that is contingent upon or is calculated upon the basis of a degree of success in soliciting or obtaining a Government Contract or negotiating the whole or any part of its terms;
 - (b) "employee" means a person with whom the *Contractor* has an employer/employee relationship;
 - (c) "person" includes an individual or a group of individuals, a corporation, a partnership, an organization and an association and, without restricting the generality of the foregoing, includes any individual who is required to file a return with the registrar pursuant to section 5 of the Lobbying Act R.S. 1985 c.44 (4th Supplement) as the same may be amended from time to time.
- 2) The *Contractor* certifies that it has not directly or indirectly paid or agreed to pay and covenants that it will not directly or indirectly pay or agree to pay a contingency fee for the solicitation, negotiation or obtaining of the *Contract* to any person other than an employee acting in the normal course of the employee's duties.

- 3) All accounts and records pertaining to payments of fees or other compensation for the solicitation, obtaining or negotiation of the *Contract* shall be subject to the accounts and audit provisions of the *Contract*.
- 4) If the *Contractor* certifies falsely under this section or is in default of the obligations contained therein, *Canada* may either take the *Work* out of the *Contractor's* hands in accordance with the provisions of the *Contract* or recover from the *Contractor* by way of reduction to the *Contract Amount* or otherwise the full amount of the contingency fee.

GC1.15 AGREEMENTS AND AMENDMENTS

- 1) The *Contract* constitutes the entire and sole agreement between the parties with respect to the subject matter of the *Contract* and supersedes all previous negotiations, communications and other agreements, whether written or oral, relating to it, unless they are incorporated by reference in the *Contract*. There are no terms, covenants, representations, statements or conditions binding on the parties other than those contained in the *Contract*.
- 2) The failure of either party at any time to require performance by the other party of any provision hereof shall not affect the right thereafter to enforce such provision. Nor shall the waiver by either party of any breach of any covenant, term or condition hereof be taken to be a waiver of any further breach of the same covenant, term or condition.
- 3) The *Contract* may be amended only as provided for in the *Contract*.

GC1.16 UNSUITABLE WORKERS

- 1) *Canada* shall instruct the *Contractor* to remove from the site of the *Work* any person employed by the *Contractor* for purposes of the *Contract* who, in the opinion of *Canada*, is incompetent or is guilty of improper conduct, and the *Contractor* shall not permit a person who has been removed to return to the site of the *Work*.

GC1.17 ASSIGNMENT

- 1) The *Contract* shall not be assigned, in whole or in part by the contractor, without the written consent of *Canada*.
- 2) An assignment of the *Contract* without such consent shall not relieve the *Contractor* or the assignee from any obligation under the contract, or impose any liability upon *Canada*.

GC1.18 RIGHTS TO INTELLECTUAL PROPERTY

- 1) Definitions

"Background" means all Technical Output that is not Foreground and that is proprietary to or the confidential information of the *Contractor*, the *Contractor's* Subcontractors, or any other entity engaged by the *Contractor* in the performance of the Design Services;

"Foreground" means any Invention first conceived, developed or reduced to practice as part of the Design Services and all other Technical Output conceived, developed, produced or implemented as part of the Design Services;

"IP Rights" means any intellectual property rights recognized by law, including any intellectual property right protected through legislation (such as that governing copyright, patents, industrial design, or

integrated circuit topography) or arising from protection of information as a trade secret or as confidential information;

"Invention" means any new and useful art, process, machine, manufacture or composition of matter, or any new and useful improvement in any art, process, machine, manufacture or composition of matter, whether or not patentable and without limiting the foregoing the term includes any unique design and construction system;

"Technical Output" means: (i) all information of a scientific, technical, or artistic nature relating to the Design Services, whether oral or recorded in any form or medium and whether or not subject to copyright, including but not limited to any Inventions, designs, methods, reports, photographs, physical models, surveys, drawings, specifications developed for the purpose of the Project; as well as (ii) computer printouts, design notes, calculations, CADD (Computer-aided Design and Drafting) files, and other data, information and material, prepared, computed, drawn, or produced for the purpose of the Project; and (iii) operating and maintenance manuals prepared or collected for the Project; and (iv) any buildings, built works, structures and facilities constructed as, or as part of, the Project. Technical Output does not include data concerned with the administration of the contract by Canada or the Contractor, such as internal financial or management information, unless it is a deliverable under the terms of the contract.

2. Identification and Disclosure of Foreground

The Contractor shall:

- (a) promptly report and fully disclose to Canada all Foreground that could be Inventions, and shall report and fully disclose to Canada all other Foreground not later than the time of completion of the Design Services or such earlier time as Canada or the contract may require, and
- (b) for each disclosure referred to in (a), indicate the names of all Sub-Contractors / Sub-Consultants at any tier, if any, in which IP Rights to any Foreground have vested or will vest.

Before and after final payment to the Contractor, Canada shall have the right to examine all records and supporting data of the Contractor which Canada reasonably decides is pertinent to the identification of the Foreground.

3. IP Rights Vest with Contractor

Subject to paragraphs 10 and 11 and the provisions of GC 1.10 National Security, and without affecting any IP Rights or interests therein that have come into being prior to the contract or that relate to information or data supplied by Canada for the purposes of the contract, all IP Rights in the Foreground shall immediately, as soon as they come into existence, vest in and remain the property of the Contractor.

4. Ownership Rights in Deliverables

Notwithstanding the Contractor's ownership of the IP Rights in the Foreground that is a prototype, built work, building, structure, facility, model or custom or customized system or equipment together with associated manuals and other operating and maintenance documents and tools, Canada shall have unrestricted ownership rights in those deliverables, including the right to make them available for public use, whether for a fee or otherwise, and the right to sell them.

5. Licence to Foreground

Without limiting any implied licences that may otherwise vest in Canada, and in consideration of Canada's contribution to the cost of development of the Foreground, the Contractor hereby grants to Canada a non-

exclusive, perpetual, irrevocable, worldwide, fully-paid and royalty-free licence to exercise all IP Rights in the Foreground that vest in the Contractor pursuant to paragraph 3, for the purpose of:

- (a) the further development or alteration or evolution of any part of the constructed or implemented Project, including procurement of materials and components for this purpose;
- (b) the further development, modification (including additions or deletions), completion, translation, or implementation of the Foreground and any addition to it as Canada may require for the purposes of the completion, utilization and subsequent evolution of the Project;
- (c) the use, occupancy, operation, exploitation, maintenance, repair or restoration of the constructed or implemented or subsequently modified Project, including the procurement of replacement materials and components required for any such purpose; and
- (d) the publishing and transmission of reproductions of the Project or any part thereof in the form of paintings, drawings, engravings, photographs or cinematographic works, to the public, in hard copy or by any electronic or other means, except for copies in the nature of architectural drawings or plans.

6. Licence to Foreground for Other Projects

The Contractor hereby grants to Canada a non-exclusive, perpetual, worldwide, irrevocable licence to exercise all IP Rights that vest in the Contractor pursuant to paragraph 3 for the purpose of planning, designing and constructing or otherwise implementing any project other than the Project, and for any purpose set out in paragraph 5 as it relates to such other project. In the event that Canada exercises such IP Rights in an other project, and provided that Canada does not already have equivalent rights under a previous contract or otherwise, Canada agrees to pay to the Contractor reasonable compensation determined in accordance with current industry practice and having regard to Canada's contribution to the cost of development of the Foreground. The Contractor shall ensure that in any sale, assignment, transfer or licence of any of the IP Rights that vest in the Contractor under this contract, the purchaser, assignee, transferee or licensee agrees to be bound by the terms of this provision and to accept reasonable compensation as is contemplated herein. The Contractor shall also ensure that any such purchaser, assignee, transferee or licensee of the IP Rights is required to impose the same obligations on any subsequent purchaser, transferee, assignee or licensee.

7. Licence to Background

Without limiting any implied licences that may otherwise vest in Canada, the Contractor hereby grants to Canada a non-exclusive, perpetual, irrevocable, worldwide, fully-paid and royalty-free Licence to exercise such of the IP Rights in any Background incorporated into the Work or necessary for the performance of the Work as may be required

- (a) for the purposes contemplated in paragraphs 5 and 6;
- (b) for disclosure to any contractor engaged by Canada, or bidder for such a contract, to be used solely for a purpose set out in paragraphs 5 and 6; and the Contractor agrees to make any such Background available to Canada upon request.

8. Canada's Right to Disclose and Sub-license

The Contractor acknowledges that Canada may wish to award contracts, which may include a competitive process, for any of the purposes contemplated in paragraphs 5, 6 and 7. The Contractor agrees that Canada's licence in relation to the IP Rights in the Foreground and in the Background, includes the right to disclose that Foreground and Background to bidders for such contracts, and to sub-

license or otherwise authorize the use of that Foreground and Background by any contractor or consultant engaged by Canada for the purpose of carrying out such a contract.

9. Contractor's Right to Grant Licence

(a) The Contractor represents and warrants that the Contractor has, or the Contractor shall obtain without delay, the right to grant to Canada the licence to exercise the IP Rights in the Foreground and the Background as required by the contract.

(b) Where the IP Rights in any Background or Foreground are or will be owned by a Designer, the Contractor shall either obtain a licence from that Designer that permits compliance with paragraphs 5, 6 and 7 or shall arrange for the Designer to convey directly to Canada the same rights by execution of the form provided for that purpose by Canada no later than the time of disclosure to Canada of that Background and Foreground.

10. Trade Secrets and Confidential Information

The Contractor shall not use or incorporate any trade secrets or confidential information in any Foreground or Background used or created in performance of this contract.

11. Canada Supplied Information

(a) Where performance of the Design Services involves the preparation of a compilation using information supplied by Canada, then the IP Rights that shall vest under paragraph 3 shall be restricted to the IP Rights in Foreground that are capable of being exploited without the use of the information supplied by Canada. All IP Rights in any compilation, the Foreground in which cannot be exploited without the use of such Canada supplied information shall vest in Canada. The Contractor agrees that the Contractor shall not use or disclose any Canada supplied information for any purpose other than completing the performance of the Work. The Contractor shall maintain the confidentiality of such information. Unless the contract otherwise expressly provides, the Contractor shall deliver to Canada all such information together with every copy, draft, working paper and note thereof that contains such information upon the completion or termination of the contract, or at such earlier time as Canada may require.

(b) If the Contractor wishes to make use of any Canada supplied information that was supplied for purposes of the contract, for the commercial exploitation or further development of any of the Foreground, then the Contractor may make a written request for a licence to exercise the required IP Rights in that Canada supplied information, to Canada. The Contractor shall give Canada an explanation as to why such a licence is required. Should Canada agree to grant such a licence, it shall be on terms and conditions to be negotiated between the parties including payment of compensation to Canada.

12. Transfer of IP Rights

(a) If Canada takes the Work out of the Contractor's hands in accordance with GC 7 of the General Conditions, in whole or in part, or if the Contractor fails to disclose any Foreground in accordance with paragraph 2, Canada may upon reasonable notice, require the Contractor to convey to Canada all of the IP Rights in the Foreground or in the case of a failure to disclose, all the IP Rights in the Foreground not provided. The IP Rights to be conveyed shall include the IP Rights in any Foreground that have vested or are to vest in a Designer. In the case of IP Rights in Foreground which have been sold or assigned to a party other than a Designer, the Contractor shall not be obligated to convey those IP Rights to Canada, but shall pay to Canada on demand an amount equal to the consideration which the Contractor received from the sale or assignment of the IP Rights in that Foreground or, in the case of a sale or assignment was not at arm's

length, the fair market value of the IP Rights in that Foreground, in each case including the value of future royalties or licence fees.

(b) In the event of the issuance by Canada of a notice referred to in (a), the Contractor shall, at the Contractor's own expense and without delay, execute such conveyances or other documents relating to title to the IP Rights as Canada may require, and the Contractor shall, at Canada's expense, afford Canada all reasonable assistance in the preparation of applications and in the prosecution of any applications for, or any registration of, any IP Right in any jurisdiction, including without limitation the assistance of the inventor in the case of Inventions.

(c) Until the Contractor completes the performance of the Work and discloses all of the Foreground in accordance with paragraph 2, and subject to the provisions of GC 1.10 National Security, the Contractor shall not, without the prior written permission of Canada, sell, assign or otherwise transfer title to the IP Rights in any of the Foreground, or license or otherwise authorize the use of the IP Rights in any of the Foreground by any person.

(d) In any sale, assignment, transfer or licence of IP Rights in Foreground by the Contractor except a sale or licence for end use of a product based on Foreground, the Contractor shall impose on the other party all of its obligations to Canada in relation to the IP Rights in the Foreground and any restrictions set out in the contract on the use or disposition of the IP Rights in the Foreground (and, if applicable, the Foreground itself), including the obligation to impose the same obligations and restrictions on any subsequent transferee, assignee or licensee. The Contractor shall promptly notify Canada of the name, address and other pertinent information in regard to any transferee, assignee or licensee.

GC1.19 NO BRIBE

- 1) The Contractor represents and covenants that no bribe, gift, benefit, nor other inducement has been nor shall be paid, given, promised or offered directly or indirectly to any official or employee of Canada or to a member of the family of such a person, with a view to influencing the entry into the Contract or the administration of the Contract.

GC1.20 SUCCESSION

- 1) The Contract shall inure to the benefit of and be binding upon the parties hereto and their lawful heirs, executors, administrators, successors and, subject to GC1.17, "Assignment", permitted assigns.

GC1.21 Integrity Provisions – Contract (2015-07-03)

1. Statement
 - a. The Contractor must comply with the [Code of Conduct for Procurement](#) and must comply with the terms set out in these Integrity Provisions.
 - b. The Contractor confirms that it understands that convictions of certain offences, a false declaration in its bid, a false declaration under the Contract or failing to maintain up-to-date information requested may lead to a termination for default. If the Contractor or any of its Affiliates fail to remain free and clear of any convictions and any conditional or absolute discharges specified in these Integrity Provisions during the contract period, Canada may, following a notice period, terminate for default. The Contractor understands that a termination for default will not restrict Canada's right to exercise any other remedies that may be available against the Contractor and agrees to immediately return any advance payments.
2. List of Names
The Contractor must immediately inform Canada in writing of any changes affecting the list of names of directors and owners during the contract period.

3. Information Verification

The Contractor certifies that it is aware, and its Affiliates are aware, that Canada may verify at any time during the contract period, the information provided by the Contractor, including the information relating to the acts or convictions and any conditional or absolute discharges specified in these Integrity Provisions. Canada may request additional information, validations from a qualified third party, consent forms and other evidentiary elements proving identity and eligibility to contract with Canada.

4. Lobbying Act

The Contractor certifies that neither it nor its Affiliates have directly or indirectly, paid or agreed to pay, and will not, directly or indirectly, pay a contingency fee to any individual for the solicitation, negotiation or obtaining of the Contract if the payment of the fee would require the individual to file a return under section 5 of the [Lobbying Act](#).

5. Canadian Offences Resulting in Legal Incapacity

- a. The Contractor has certified that neither it nor any of its Affiliates have been convicted of or have pleaded guilty to an offence under any of the following provisions, which result in legal incapacity under section 750(3) of the [Criminal Code](#), and for which they have not been pardoned or received a record of discharge under the Canadian Pardons subsection:
 - i. paragraph 80(1)(d) (*False entry, certificate or return*), subsection 80(2) (*Fraud against Her Majesty*) or section 154.01 (*Fraud against Her Majesty*) of the [Financial Administration Act](#), or
 - ii. section 121 (*Frauds on the government and Contractor subscribing to election fund*), section 124 (*Selling or Purchasing Office*), section 380 (*Fraud*) for fraud committed against Her Majesty or section 418 (*Selling defective stores to Her Majesty*) of the [Criminal Code](#), or
- b. the Contractor has not been convicted of or pleaded guilty to the offences described in paragraph (a) and has certified that it has not directed, influenced, authorized, assented to, acquiesced in or participated in the commission or omission of the acts or offences that would render that Affiliate ineligible to be awarded a contract under (a).

6. Canadian Offences

The Contractor has certified that:

- a. it and its Affiliates have not, in the last three years, from the date of contract award, been convicted of or pleaded guilty to an offence under any of the following provisions for which it would be ineligible for contract award under these Integrity Provisions and for which they have not been pardoned or received a record of discharge under the Canadian Pardons subsection:
 - i. section 119 (*Bribery of judicial officers, etc*), section 120 (*Bribery of officers*), section 346 (*Extortion*), sections 366 to 368 (*Forgery and other offences resembling forgery*), section 382 (*Fraudulent manipulation of stock exchange transactions*), section 382.1 (*Prohibited insider trading*), section 397 (*Falsification of books and documents*), section 422 (*Criminal breach of contract*), section 426 (*Secret commissions*), section 462.31 (*Laundering proceeds of crime*) or sections 467.11 to 467.13 (*Participation in activities of criminal organization*) of the [Criminal Code](#), or
 - ii. section 45 (*Conspiracies, agreements or arrangements between competitors*), section 46 (*Foreign directives*), section 47 (*Bid rigging*), section 49 (*Agreements or arrangements of federal financial institutions*), section 52 (*False or misleading representation*), section 53 (*Deceptive notice of winning a prize*) of the [Competition Act](#), or
 - iii. section 239 (*False or deceptive statements*) of the [Income Tax Act](#), or
 - iv. section 327 (*False or deceptive statements*) of the [Excise Tax Act](#), or
 - v. section 3 (*Bribing a foreign public official*), section 4 (*Accounting*), or section 5 (*Offence committed outside Canada*) of the [Corruption of Foreign Public Officials Act](#), or

- vi. section 5 (*Trafficking in substance*), section 6 (*Importing and exporting*), or section 7 (*Production of substance*) of the *Controlled Drugs and Substance Act*, or
- b. the Contractor has not been convicted of or pleaded guilty to the offences described in paragraph (a) and has certified that it has not directed, influenced, authorized, assented to, acquiesced in or participated in the commission or omission of the acts or offences that would make that Affiliate ineligible for contract award.

7. Foreign Offences

The Contractor has certified that:

- a. it and its Affiliates have not, in the last three years, from the date of contract award, been convicted of or pleaded guilty to an offence in a jurisdiction other than Canada of having committed an act or omission that would, in Canada's opinion, be similar to an offence referenced in the Canadian Offences Resulting in Legal Incapacity and the Canadian Offences subsections and for which it would be ineligible for contract award under these Integrity Provisions and for which they have not been pardoned or received a record of discharge under the Foreign Pardons subsection:
 - i. the court before which the Contractor or the Affiliate of the Contractor appeared acted within the court's jurisdiction;
 - ii. the Contractor or the Affiliate of the Contractor appeared during the court's proceedings or submitted to the court's jurisdiction;
 - iii. the court's decision was not obtained by fraud; and
 - iv. the Contractor or the Affiliate of the Contractor was entitled to present to the court every defence that the Contractor or the Affiliate of the Contractor would have been entitled to present had the proceeding been tried in Canada; or
- b. it has not been convicted of or pleaded guilty to the offences described in paragraph (a) and has certified that it has not directed, influenced, authorized, assented to, acquiesced in or participated in the commission or omission of the acts or offences that would render that Affiliate ineligible to be awarded a contract under (a).

8. Ineligibility to Contract with Canada

- a. The Contractor confirms that it understands that if after contract award they have been convicted of certain offences, as described in the Canadian Offences Resulting in Legal Incapacity, the Canadian Offences and the Foreign Offences subsections, they will be ineligible to contract with Canada. If, after contract award, a Contractor becomes ineligible for contract award, Canada may, following a notice period, declare the Contractor to be ineligible and, to the extent that a contract has been awarded:
 - i. terminate the contract for default; or
 - ii. require the Contractor to enter into an Administrative Agreement with the Minister of PWGS on such terms and conditions as are necessary to safeguard the integrity of the procurement process.
- b. The Contractor confirms that it understands that where its Affiliate has been convicted of certain offences, as described in the Canadian Offences Resulting in Legal Incapacity, the Canadian Offences and the Foreign Offences subsections, the Affiliate is ineligible to contract with Canada. If, after contract award, an Affiliate of a Contractor becomes ineligible to contract with Canada, Canada may, following a notice period, declare the Contractor to be ineligible and, to the extent that a contract has been concluded:
 - i. terminate the contract for default if, in the opinion of Canada, there is evidence that the Contractor directed, influenced, authorized, assented to, acquiesced in or participated in

- a. been granted an absolute discharge in respect of the offence, or has been granted a conditional discharge in respect of the offence and those conditions have been satisfied;
- b. been granted a pardon under Her Majesty's royal prerogative of mercy;
- c. been granted a pardon under section 748 of the [Criminal Code](#);
- d. received a record of suspension ordered under the [Criminal Records Act](#); and
- e. been granted a pardon under the [Criminal Records Act](#), as that Act read immediately before the day section 165 of the [Safe Streets and Communities Act](#) comes into force.

12. Foreign Pardons

A determination of ineligibility to contract with Canada will not be made or maintained, as the case may be, by the Minister of PWGS in respect of matters referenced in the Foreign Offences subsection and with respect to an offence or act that gave rise or will give rise to a determination of ineligibility, if the Contractor or its Affiliate, has at any time, benefited from foreign measures that are similar to Canadian pardons at the sole discretion of Canada, conditional discharges, absolute discharges, record of suspensions, or restoration of legal capacities by the Governor in Council.

13. Period of Ineligibility for Breaching Administrative Agreements

The Contractor confirms that it understands that where it has concluded an Administrative Agreement and that it has breached any of its terms and conditions, the Minister of PWGS will lengthen the period of ineligibility for a period to be determined by the Minister of PWGS.

14. Obligations on Subcontractors

The Contractor confirms that it understands that to the extent that it relies on a subcontractor(s) to perform the Contract, the Contractor will not enter into a subcontract with a company that has been convicted of or pleaded guilty or an Affiliate of the company has been convicted of or pleaded guilty, as the case may be, to any of the offences referenced in the Canadian Offences Resulting in Legal Incapacity, the Canadian Offences and the Foreign Offences subsections for which no pardon or equivalent has been received under the Canadian Pardons and Foreign Pardons subsections, without the prior written approval of the Minister of PWGS. Where the Contractor has entered into a contract with an ineligible subcontractor and for which no prior written approval has been received by Canada, the Minister of PWGS will declare the Contractor to be ineligible to contract with Canada for a period of five years.

GC2 ADMINISTRATION OF THE CONTRACT

GC2.1 DEPARTMENTAL REPRESENTATIVES AUTHORITY (2015-02-25)

"Technical Authority" shall be recognized as the Departmental representative and designated at time of award of contract and shall perform the following:

- a. is responsible for all matters concerning the technical content of the work under the contract;
- b. authorized to issue notices, instructions, and changes within the scope of the Work, relevant to the contract.
- c. accept on behalf of Canada any notice, order or other communication from the contractor relating to the Work
- d. within a reasonable time, review and respond to submissions made by the Contractor in accordance with the requirements of the Contract

The technical authority has no authority to authorize changes to the Contract terms and conditions of the Contract.

"Contracting Authority" shall be recognized as the authority delegated by the Minister of PWGSC to enter into contracts, amend the contracts and is responsible for all matters concerning and interpretation of the terms and conditions of the Contract.

The contracting authority is responsible for the management of the Contract and any changes to the Contract terms and conditions must be authorized in writing by the Contracting Authority.

GC2.2 INTERPRETATION OF CONTRACT

1) If, at any time before Canada has issued a Certificate of Completion, any question arises between the parties about whether anything has been done as required by the Contract or about what the Contractor is required by the Contract to do, and in particular but without limiting the generality of the foregoing, about

(a) the meaning of anything in the Terms of Reference;

(b) the meaning to be given to the Terms of Reference in case of any error therein, omission therefrom, or obscurity or discrepancy in their wording or intention;

(c) whether or not the quality or quantity of any Material or workmanship supplied or proposed to be supplied by the Contractor meets the requirements of the Contract;

(d) whether or not the labour, Plant or Material performed, used and supplied by the Contractor for performing the Work and carrying out the Contract are adequate to ensure that the Work shall be performed in accordance with the Contract and that the Contract shall be carried out in accordance with its terms;

(e) what quantity of any of the Work has been completed by the Contractor; or

(f) the timing and scheduling of the various phases of the performance of the Work as specified in the Contract;

the question shall be decided, subject to the provisions of GC8, "Dispute Resolution", by Canada.

2) The Contractor shall perform the Work in accordance with any decisions of Canada that are made under paragraph 1) of GC2.2 and in accordance with any consequential directions given by Canada.

3) If the Contractor fails to comply with any instruction or direction issued by Canada pursuant to the Contract, Canada may employ such methods as Canada deems advisable to do what the Contractor failed to do, and the Contractor shall, on demand, pay Canada an amount that is equal to the aggregate of all costs, expenses and damages incurred or sustained by Canada by reason of the Contractor's failure to comply with such instruction or direction, including the cost of any methods employed by Canada in doing what the Contractor failed to do.

GC2.3 NOTICES

1) Subject to paragraph 3) of GC2.3, any notice, order or other communication may be given in any manner, and if required to be in writing, shall be addressed to the party to whom it is intended at the address in the Contract or at the last address of which the sender has received written notice in accordance with this section.

2) Any notice, order or other communication given in writing in accordance with paragraph 1) of GC2.3 shall be deemed to have been received by either party

(a) if delivered personally, on the day that it was delivered;

(b) if forwarded by mail, on the earlier of the day it was received or the sixth day after it was mailed; and

(c) if forwarded by facsimile or electronic mail, 24 hours after it was transmitted.

3. A notice given under GC7.1, "Taking the Work out of the Contractor's Hands", GC7.2, "Suspension of Work" and GC7.3, "Termination of Contract", shall be given in writing and, if delivered personally, shall be delivered, if the Contractor is a sole proprietor, to the Contractor or, if the Contractor is a partnership or corporation, to an officer thereof.

GC2.4 SITE MEETINGS (2015-02-25)

1. In consultation with Canada, the Contractor shall arrange site meetings at regular intervals, with all involved parties who are to attend, in order to ensure, among other things, the proper co-ordination of the Work.

GC2.5 REVIEW AND INSPECTION OF WORK

- 1) Canada shall review the Work to determine if it is proceeding in conformity with the Contract and to record the necessary data to make an assessment of the value of Work completed. Canada shall measure and record the quantities of labour, Plant and Material performed, used or supplied by the Contractor in performing the Work or any part thereof that is subject to a Unit Price Arrangement and, on request, shall inform the Contractor of those measurements, and permit the Contractor to inspect any records pertaining thereto.
- 2) Canada shall reject Work or Material which in Canada's opinion does not conform to the requirements of the Contract, and shall require inspection or testing of Work, whether or not such Work is fabricated, installed, or completed. If such Work is not in accordance with the requirements of the Contract, the Contractor shall correct the Work and shall pay Canada, on demand, all reasonable costs and expenses that were incurred by Canada in having the examination performed.
- 3) The Contractor shall provide Canada with access to the Work and its site at all times, and at all times shall provide sufficient, safe, and proper facilities for the review and inspection of the Work by persons authorized by Canada and any representatives of those authorities having jurisdiction. If parts of the Work are in preparation at locations other than the site of the Work, Canada shall be given access to such Work whenever it is in progress.
- 4) The Contractor shall furnish Canada with such information respecting the performance of the Contract as Canada may require, and render every possible assistance to enable Canada to verify that the Work is performed in accordance with the Contract, carry out any other duties and exercise any powers in accordance with the Contract.
- 5) If Work is designated for tests, inspections, or approvals in the Contract or by Canada's instructions, or by laws or ordinances of the place of the Work, the Contractor shall give Canada reasonable notice of when such Work shall be ready for review and inspection. The Contractor shall arrange for and shall give Canada reasonable notice of the date and time of inspections, tests or approvals.
- 6) If the Contractor covers, or permits to be covered, Work that has been designated for tests, inspections or approvals before such tests, inspections or approvals are made, completed or given, the Contractor shall, if so directed by Canada, uncover such Work, have the inspections, tests or approvals satisfactorily made, completed or given and make good the covering of the Work at the Contractor's expense.

GC2.6 SUPERINTENDENT

- 1) Prior to commencing the Work, the Contractor shall designate a Superintendent and shall notify Canada of the name, address and telephone number of the Superintendent. The Contractor shall keep the Superintendent at the Work site during working hours until the Work has reached completion.

- 2) The Superintendent shall be in full charge of the operations of the Contractor during the performance of the Work and shall be authorized to accept on behalf of the Contractor any notice, order or other communication given to the Superintendent or the Contractor relating to the Work.
- 3) Upon request of Canada, the Contractor shall remove any Superintendent who, in the opinion of Canada, is incompetent or has been guilty of improper conduct, and shall forthwith designate another Superintendent who is acceptable to Canada.
- 4) The Contractor shall not substitute a Superintendent without the written consent of Canada. If a Superintendent is substituted without such consent, Canada shall be entitled to refuse to issue any documentation or certification relating to progress payments, Substantial Performance or Completion of the Work until the Superintendent has returned to the Work site or another Superintendent who is acceptable to Canada has been substituted.

GC2.7 NON-DISCRIMINATION IN HIRING AND EMPLOYMENT OF LABOUR

- 1) For the purposes of this clause, "persons" include the Contractor, its subcontractors and suppliers at any tier and their respective employees, agents, licensees or invitees and any other individual involved in the performance of the Work or granted access to the Work site. A "person" includes any partnership, proprietorship, firm, joint venture, consortium and corporation.
- 2) Without restricting the provisions of paragraph 3) of GC2.6, " Superintendent", the Contractor shall not refuse to employ and shall not discriminate in any manner against any person because
 - (a) of that person's race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, disability, conviction for which a pardon has been granted, or family status;
 - (b) of the race, national or ethnic origin, colour, religion, age, sex, sexual orientation, marital status, disability, conviction for which a pardon has been granted, or family status of any person having a relationship or association with that person, or
 - (c) a complaint has been made or information has been given in respect of that person relating to an alleged failure by the Contractor to comply with subparagraph (a) or (b).
- 3) Within two working days immediately following receipt of a written complaint pursuant to paragraph 2) of GC2.7, the Contractor shall
 - (a) cause to have issued a written direction to the person or persons named by the complainant to cease all actions that form the basis of the complaint;
 - (b) forward a copy of the complaint to Canada by registered mail or courier service; and
 - (c) when the Labour Conditions are applicable under the circumstances of the complaint, forward a copy of the complaint to HRSDC - Labour to the attention of the appropriate Director as described in the Labour Conditions ("HRSDC - Labour" means the labour component of the federal Department of Human Resources and Social Development).
- 4) Within 24 hours immediately following receipt of a direction from Canada to do so, the Contractor shall cause to have removed from the site of the Work and from the performance of Work under the Contract, any person or persons whom Canada believes to be in breach of the provisions of paragraph 2) of GC2.7.
- 5) No later than 30 days after receipt of the direction referred to in paragraph 4) of GC2.7, the Contractor shall cause the necessary action to be commenced to remedy the breach described in the direction.

- 6) If a direction is issued pursuant to paragraph 4) of GC2.7, Canada may withhold from monies that are due and payable to the Contractor or setoff pursuant to GC5.9, "Right of Setoff", whichever is applicable, an amount representing the sum of the costs and payment referred to in paragraph 8) of GC2.7.
- 7) If the Contractor fails to proceed in accordance with paragraph 5) of GC2.7, Canada shall take the necessary action to have the breach remedied, and shall determine all supplementary costs incurred by Canada as a result.
- 8) Canada may make a payment directly to the complainant from monies that are due and payable to the Contractor upon receipt from the complainant of
 - (a) a written award issued pursuant to the federal Commercial Arbitration Act, R.S. 1985, c. 17 (2nd Supp.);
 - (b) a written award issued pursuant to the Canadian Human Rights Act, R.S. 1985, c. H-6;
 - (c) a written award issued pursuant to provincial or territorial human rights legislation; or
 - (d) a judgment issued by a court of competent jurisdiction.
- 9) If Canada is of the opinion that the Contractor has breached any of the provisions of this clause, Canada may take the Work out of the Contractor's hands pursuant to GC7.1, "Taking the Work out of the Contractor's Hands".
- 10) Subject to paragraph 7) of GC3.6, "Subcontracting", the Contractor shall ensure that the provisions of this clause are included in all agreements and contracts entered into as a consequence of the Work.

GC2.8 ACCOUNTS AND AUDITS

- 1) The Contractor shall, in addition to the requirements expressed in paragraph 6) of GC3.4, "Execution of the Work", maintain full records of the Contractor's estimated and actual cost of the Work together with all tender calls, quotations, contracts, correspondence, invoices, receipts and vouchers relating thereto, and shall make them available on request to audit and inspection by Canada and the Deputy Receiver General for Canada or by persons designated to act on behalf of either or both of them.
- 2) The Contractor shall allow any of the persons referred to in paragraph 1) of GC2.8 to make copies of and take extracts from any of the records and material, and shall furnish such persons or entities with any information those persons or entities may require from time to time in connection with such records and material.
- 3) The Contractor shall maintain and keep the records intact until the expiration of two years after the date that a Certificate of Completion has been issued or until the expiration of such other period of time as Canada may direct.
- 4) The Contractor shall cause all subcontractors at any tier and all other persons directly or indirectly controlled by or affiliated with the Contractor and all persons directly or indirectly having control of the Contractor to comply with the requirements of this clause as if they were the Contractor.

GC3 EXECUTION AND CONTROL OF THE WORK

GC3.1 PROGRESS SCHEDULE (2015-02-25)

The *Contractor* shall:

- a. prepare and submit to Canada, prior to the submission of the Contractor's first progress claim, a progress schedule in accordance with the requirements set out in the Contract;
- b. monitor the progress of the Work relative to the schedule and update the schedule as stipulated by the contract documents;
- c. advise Canada of any revisions to the schedule required as the result of any extension of time for completion of the Contract that was approved by Canada; and
- d. prepare and submit to Canada, at the time of issuance of a Certificate of Substantial Performance, an update of any schedule clearly showing a detailed timetable that is acceptable to Canada for the completion of any unfinished Work and the correction of all listed defects.

GC3.2 PROJECT DESIGN AND ROLE OF THE DESIGNER

- 1) The *Contractor* shall report promptly to *Canada* any error, inconsistency, or omission the *Contractor* may discover when reviewing the contract documents provided by *Canada*. In making a review, the *Contractor* does not assume any responsibility to *Canada* or *Canada* for the accuracy of the review. The *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the contract documents prepared by or on behalf of *Canada* which the *Contractor* did not discover.
- 2) The *Contractor* shall employ or otherwise engage the architects, professional engineers and other consultants required to provide the *Design Services* to be performed by the *Designer* under the *Contract*.
- 3) The *Contractor* shall perform or furnish all necessary architectural services and structural, electrical, mechanical and other engineering services, and shall complete the design of the *Work* and prepare *Construction Documents* to permit the *Construction* and completion of the *Work*, all in accordance with the *Contract*.
- 4) The *Contractor* shall provide the co-ordination required to integrate all parts of the *Design Services*, and shall review with *Canada* reasonable alternative approaches to completion of the design of the *Work*.
- 5) During the progress of the *Work*, the *Contractor* shall provide or furnish *Canada* with design development documents and other submissions in furtherance of and in compliance with the *Request for Proposal* and *Proposal* and any qualification in the *Proposal* expressly accepted by *Canada*. The documents and submissions shall be submitted for review and acceptance in orderly sequence and sufficiently in advance so as to cause no delay in the *Work*.
- 6) *Canada* shall promptly review all documents and submissions referred to in paragraph 5) for conformity with the *Proposal* and *Request for Proposal*. It is understood and agreed that *Canada* can require the *Contractor*, at no additional expense to *Canada*, to have changes made to ensure that the *Work* shall be completed in accordance with the *Contract*.
- 7) *Canada* may issue additional instructions to the *Contractor* by means of plans, drawings or otherwise, as *Canada* may deem necessary for the performance of the *Work*. All such additional instructions shall be consistent with the *Contract*. The *Contractor* shall perform the *Work* in conformity with the additional instructions, and the *Contractor* shall not perform any such work without such additional instructions. In giving additional instructions, *Canada* may make minor changes to the *Work*, not inconsistent with the *Contract*, for which the *Contractor* shall not be entitled to claim any extra compensation from *Canada*.
- 8) Based on the accepted design development documents and other submissions, the *Contractor* shall furnish *Canada* with plans, drawings and specifications setting forth in detail the requirements for *Construction* of the *Work*. Once reviewed, accepted and signed by *Canada* and the *Contractor*, the plans, drawings and specifications shall be the *Construction Documents* for the purposes of the *Contract* and shall be part of the contract documents.

- 9) The *Contractor* shall cause the *Designer* to
- (a) review the design, when required, with those public authorities having jurisdiction in order that the necessary consents, approvals, licences and permits referred to in GC1.8 LAWS, PERMITS AND TAXES may be applied for and obtained;
 - (b) on an ongoing basis, provide any required assurances to those authorities respecting conformance of the *Work* with the design approved for the issuance of any building permit;
 - (c) review the *Work* at intervals appropriate to the progress of *Construction* to determine and verify that the *Work* is proceeding in conformance with the Contract;
 - (d) estimate and certify the amounts owing to the *Contractor* from time to time in accordance with the provisions of GC5 TERMS OF PAYMENT and provide such estimates in writing to the *Departmental Representative*;
 - (e) prior to the issuance of a *Certificate of Substantial Performance*, review the *Work* and provide Canada with a written declaration describing those parts of the *Work* that, in the *Designer's* professional opinion, are completed in conformance with the Contract, and listing those parts of the *Work* that, in the designer's professional opinion, are not completed in conformance with the Contract;
 - (f) prior to issuance of a *Certificate of Completion*, review the *Work* and provide Canada with
 - (i) a written declaration attesting to the completeness of the *Work*, and
 - (ii) if the *Work* or a portion of the *Work* is subject to a *Unit Price Arrangement*, a certificate of measurement of the final quantities of the *Work*.

GC3.3 CONSTRUCTION SAFETY

- 1) Subject to GC3.7, "Construction by Other Contractors or Workers", the Contractor shall be solely responsible for construction safety at the place of the *Work* and for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the *Work*. In any emergency, the Contractor shall either stop the *Work*, make changes or order extra work to ensure the safety of life and the protection of the *Work* and neighbouring property.
- 2) Prior to commencing the *Work*, the Contractor shall notify the authorities having jurisdiction for construction safety at the site of the *Work* with respect to the intended commencement of the *Work*, and shall provide such authority with whatever additional information may be required by that authority.

GC3.4 EXECUTION OF THE WORK

- 1) It is acknowledged and agreed by the *Contractor* that any information contained in the *Request for Proposal* regarding soil conditions at the site of the *Work* was provided for information purposes only and that the *Contractor* is required to undertake its own geotechnical investigations for the purpose of determining the soil conditions and obtaining other information which may be required for foundation design or construction methodology purposes. The *Contractor* shall not be entitled to any additional compensation, and shall not have any claim against *Canada*, as a result of any difference between the actual soil conditions encountered by the *Contractor* at the site of the *Work*, and any information relating to soil conditions contained in the *Request for Proposal*.
- 2) The *Contractor* shall provide or furnish, and pay for, all professional services, *Design Services*, labour, *Plant*, *Material*, tools, construction machinery and equipment, water, heat, light, power, transportation,

and other facilities and services necessary for the performance of the *Work* in accordance with the *Contract*.

- 3) Subject to paragraph 4), the *Contractor* shall have complete care, custody and control of the *Work* and shall direct and supervise the *Work* so as to ensure compliance with the *Contract*. The *Contractor* shall be responsible for construction means, methods, techniques, sequences and procedures and for coordinating the various parts of the *Work*, and shall ensure that all necessary safety precautions and protection are maintained throughout the *Work*. In any emergency, the *Contractor* shall either stop the *Work*, make changes or order extra work to ensure the safety of life and the protection of the *Work* and neighboring property.
- 4) When requested in writing by Canada, the *Contractor* shall make appropriate alterations in the method, *Plant* or work force at any time Canada considers the *Contractor's* actions to be unsafe, or damaging to either the *Work*, existing facilities, persons at the site of the work or the environment.
- 5) The *Contractor* shall have sole responsibility for the design, erection, operation, maintenance and removal of temporary structural and other temporary facilities and for the construction methods required in their use. The *Contractor* shall engage and pay for registered professional engineering personnel, skilled in the appropriate discipline to perform these functions where required by law or by the *Contract*, and in all cases when such temporary facilities and their method of construction are of such a nature that professional engineering skill is required to produce safe and satisfactory results.
- 6) The *Contractor* shall keep at least one copy of current contract documents, submittals, reports, and records of meetings at the place of the *Work*, in good order and available to *Canada*.
- 7) Except for any part of the *Work* that is necessarily performed away from or off the site of the *Work*, the *Contractor* shall confine *Plant*, storage of *Material*, and operations of employees to limits indicated by laws, ordinances, permits or the contract documents.

GC3.5 MATERIAL

- 1) Unless otherwise specified in the *Contract*, all *Material* incorporated in the *Work* shall be new.
- 2) Subject to paragraph 3) of GC3.5, if a specified reused, refurbished, or recycled item of *Material* is not available, the *Contractor* shall apply to *Canada* to substitute a similar item for the one specified.
- 3) If *Canada* agrees that the *Contractor's* application for substitution of a reused, refurbished, or recycled item is warranted, and that the substitute item is of acceptable quality and value to that specified and is suitable for the intended purpose, *Canada* may approve the substitution, subject to the following:
 - (a) the request for substitution shall be made in writing to *Canada* and shall be substantiated by information in the form of the manufacturer's literature, samples and other data which may be required by *Canada*;
 - (b) the *Contractor* shall make the request for substitution in a manner that shall not negatively affect the progress schedule of the *Contract* and well in advance of the time the item of *Material* must be ordered;
 - (c) substitution of *Material* shall be permitted only with the prior written approval of *Canada*, and any substituted items that are supplied or installed without such approval shall be removed from the site of the *Work* at the expense of the *Contractor*, and specified items installed at no additional cost to *Canada*; and

- (d) the *Contractor* shall be responsible for all additional expenses incurred by *Canada*, the *Contractor*, its designers, subcontractors and suppliers at any tier due to the *Contractor's* use of the substitute.

GC3.6 SUBCONTRACTING

- 1) Subject to the provisions of this clause, the *Contractor* may subcontract any part of the *Work but not the whole of the work*.
- 2) The *Contractor* shall notify *Canada* in writing of the *Contractor's* intention to subcontract.
- 3) A notification referred to in paragraph 2) of GC3.6 shall identify the part of the *Work*, and the *Subcontractor* with whom the *Contractor* intends to subcontract.
- 4) *Canada* may for reasonable cause, object to the intended subcontracting by notifying the *Contractor* in writing within six (6) days of receipt by *Canada* of a notification referred to in paragraph 2) of GC3.6.
- 5) If *Canada* objects to a subcontracting, the *Contractor* shall not enter into the intended subcontract.
- 6) The *Contractor* shall not change nor permit to be changed the *Designer*, a *Subcontractor* engaged by the *Contractor* in accordance with this clause, or a person or entity named in the *Contractor's Proposal* and accepted by *Canada* as part of the *Contractor's Proposal*, without the written consent of *Canada*.
- 7) The *Contractor* shall ensure that all the terms and conditions of the *Contract* that are of general application shall be incorporated in every other contract issued as a consequence of the *Contract*, at whatever tier, except those contracts issued solely to *Suppliers* at any tier for the supply of *Plant* or *Material*.
- 8) Neither a subcontracting nor *Canada's* consent to a subcontracting shall be construed to relieve the *Contractor* from any obligation under the *Contract* or to impose any liability upon *Canada*.

GC3.7 CONSTRUCTION BY OTHER CONTRACTORS OR WORKERS

- 1) *Canada* reserves the right to send other contractors or workers, with or without *Plant* and *Material*, onto the site of the *Work*.
- 2) When other contractors or workers are sent on to the site of the *Work*, *Canada* shall:
 - (a) to the extent it is possible, enter into separate contracts with the other contractors under conditions of *Contract* that are compatible with the conditions of the *Contract*;
 - (b) ensure that the insurance coverage provided by the other contractors is co-ordinated with the insurance coverage of the *Contractor* as it affects the *Work*; and
 - (c) take all reasonable precautions to avoid labour disputes or other disputes arising from the work of the other contractors or workers.
- 3) When other contractors or workers are sent on to the site of the *Work*, the *Contractor* shall:
 - (a) co-operate with them in the carrying out of their duties and obligations;
 - (b) co-ordinate and schedule the *Work* with the work of the other contractors and workers;
 - (c) participate with other contractors and workers in reviewing their construction schedules when directed to do so;

- (d) where part of the *Work* is affected by or depends upon for its proper execution the work of other contractors or workers, promptly report to *Canada* in writing and prior to proceeding with that part of the *Work*, any apparent deficiencies in such work. Failure by the *Contractor* to so report shall invalidate any claims against *Canada* by reason of the deficiencies in the work of other contractors or workers except those deficiencies not then reasonably discoverable; and
 - (e) when designated as being responsible for construction safety at the place of the work in accordance with the applicable provincial or territorial laws, carry out its duties in that role and in accordance with those laws.
- 4) If, when entering into the *Contract*, the *Contractor* could not have reasonably foreseen nor anticipated the sending of other contractors or workers on to the site of the *Work* and provided the *Contractor*.
- (a) incurs extra expense in complying with the requirements of paragraph 3) of GC3.7, and
 - (b) gives *Canada* written notice of a claim for that extra expense within thirty (30) days of the date that the other contractors or workers were sent onto the site of the *Work*

Canada shall pay the *Contractor* the cost of the extra labour, *Plant* and *Material* that was necessarily incurred, calculated in accordance with GC6.4 DETERMINATION OF PRICE.

GC3.8 LABOUR

1. To the extent to which they are available, consistent with proper economy and the expeditious carrying out of the *Work*, the *Contractor* shall, in the performance of the *Work*, employ a reasonable number of persons who have been on active service with the Armed Forces of *Canada* and have been honourably discharged therefrom.
2. The *Contractor* shall maintain good order and discipline among the *Contractor's* employees and workers engaged in the *Work* and shall not employ on the site of the *Work* anyone not skilled in the tasks assigned.

GC3.9 MATERIAL, PLANT AND REAL PROPERTY BECOME PROPERTY OF CANADA

- 1) Subject to paragraph 9) of GC1.8 LAWS PERMITS AND TAXES, all *Material* and *Plant* and the interest of the *Contractor* in all real property, licences, powers and privileges purchased, used or consumed by the *Contractor* for the *Construction* of the *Work* shall immediately after the time of their purchase, use or consumption be the property of *Canada* for the purposes of the *Work* and they shall continue to be the property of *Canada*
 - (a) in the case of *Material*, until *Canada* indicates that the materials shall not be required for the *Work*, and
 - (b) in the case of *Plant*, real property, licences, powers and privileges, until *Canada* indicates that the interest vested in *Canada* therein is no longer required for the purposes of the *Work*.
- 2) *Material* or *Plant* that is the property of *Canada* by virtue of paragraph 1) of GC3.9 shall not be taken away from the site of the *Work* nor used or disposed of except for the purposes of the *Work* without the written consent of the *Canada*.
- 3) *Canada* is not liable for loss of nor damage from any cause to the *Material* or *Plant* referred to in paragraph 1) of GC3.9, and the *Contractor* is liable for such loss or damage notwithstanding that the *Material* or *Plant* is the property of *Canada*.

GC3.10 DEFECTIVE WORK

- 1) The *Contractor* shall promptly remove from the site of the *Work* and replace or re-execute defective *Work* whether or not the defective *Work* has been incorporated in the *Work* and whether or not the defect is the result of poor workmanship, use of defective *Material*, or damage through carelessness or other act or omission of the *Contractor*.
- 2) The *Contractor*, at the *Contractor's* expense, shall promptly make good other work destroyed or damaged by such removals or replacements.
- 3) If, in the opinion of *Canada* it is not expedient to correct defective *Work* or *Work* not performed as provided for in the Contract documents, *Canada* may deduct from the amount otherwise due to the *Contractor* the difference in value between the *Work* as performed and that called for by the Contract Documents.
- 4) The failure of *Canada* to reject any defective *Work* or *Material* shall not constitute acceptance of the defective *Work* or *Material*.

GC3.11 USE OF THE WORK AND CLEANUP OF SITE

- 1) The *Contractor* shall be responsible for analyzing conditions at the site of the *Work* and selecting the appropriate design and construction solution for the successful completion of the *Work*.
- 2) The *Contractor* shall not load or permit to be loaded any part of the *Work* or its site with a weight or force that will endanger the safety of the *Work*.
- 3) The *Contractor* shall maintain the *Work* and its site in a tidy condition and free from an accumulation of waste material and debris.
- 4) Before the issue of a *Certificate of Substantial Performance*, the *Contractor* shall remove waste material and debris, and all *Plant* and *Material* not required for the performance of the remaining work and, unless otherwise stipulated in the Contract documents, shall cause the *Work* and its site to be clean and suitable for occupancy by *Canada*.
- 5) Before the issue of a *Certificate of Completion*, the *Contractor* shall remove all surplus plant and materials, and any waste products and debris from the site of the *Work*.
- 6) The *Contractor's* obligations described in paragraphs 4) to 6) do not extend to waste products and other debris caused by *Canada's* servants, or by other contractors and workers referred to in GC3.7 CONSTRUCTION BY OTHER CONTRACTORS OR WORKERS.

GC3.12 WARRANTY AND RECTIFICATION OF DEFECTS IN WORK

- 1) Without restricting any warranty or guarantee implied or imposed by law or contained in the Contract, the *Contractor* shall, at the *Contractor's* expense
 - (a) rectify and make good any defect or fault that appears in the *Work* or comes to the attention of *Canada* with respect to those parts of the *Work* accepted in connection with the *Certificate of Substantial Performance* within 12 months from the date of *Substantial Performance*;
 - (b) rectify and make good any defect or fault that appears in or comes to the attention of *Canada* in connection with those parts of the *Work* described in the *Certificate of Substantial Performance* within 12 months from the date of the *Certificate of Completion*;
 - (c) transfer and assign, to *Canada*, any subcontractor, manufacturer or supplier extended warranties or guarantees implied or imposed by law or contained in the Contract covering periods beyond the 12 months stipulated above. Extended warranties or guarantees referred to herein shall not

extend the 12-month period whereby the Contractor, except as may be provided elsewhere in the Contract, must rectify and make good any defect or fault that appears in the Work or comes to the attention of Canada; and

(d) provide, to Canada prior to the issuance of the Certificate of Completion, a list of all extended warranties and guarantees referred to in paragraph (c) of GC3.12.

- 2) Canada may direct the Contractor to rectify and make good any defect or fault referred to in paragraph 1) of GC3.12 or covered by any other expressed or implied warranty or guarantee, and the Contractor shall rectify and make good such defect within the time stipulated in the direction.
- 3) A direction referred to in paragraph 2) of GC3.12 shall be in writing and shall be given to the Contractor in accordance with GC2.3 NOTICES.

GC5 TERMS OF PAYMENT

GC5.1 INTERPRETATION

In these Terms of Payment

- 1) The "payment period" means a period of 30 consecutive days or such other longer period as is agreed between the Contractor and Canada.
- 2) An amount is "due and payable" when it is due and payable by Canada to the Contractor according to GC5.4 PROGRESS PAYMENT, GC5.5 SUBSTANTIAL PERFORMANCE OF THE WORK, or GC5.6 FINAL COMPLETION;
- 3) An amount is overdue when it remains unpaid on the first day following the day upon which it is due and payable.
- 4) The "date of payment" means the date of the negotiable instrument of an amount due and payable by the Receiver General for Canada.
- 5) The "Bank Rate" means the rate of interest established by the Bank of Canada as the minimum rate at which it makes short term advances to members of the Canadian Payments Association.
- 6) The "Average Bank Rate" means the simple arithmetic mean of the Bank Rate in effect at 4:00 p.m. Eastern Time each day during the calendar month which immediately precedes the calendar month in which payment is made.

GC5.2 AMOUNT PAYABLE

- 1) Subject to any other provisions of the Contract, Canada shall pay the Contractor, at the times and in the manner hereinafter set out, the amount by which the amounts payable by Canada to the Contractor in accordance with the Contract exceed the amounts payable by the Contractor to Canada, and the Contractor shall accept that amount as payment in full satisfaction for everything furnished and done by the Contractor in respect of the work to which the payment relates.
- 2) When making any payment to the Contractor, the failure of Canada to deduct an amount payable to Canada by the Contractor shall not constitute a waiver of the right to do so, or an admission of lack of entitlement to do so in any subsequent payment to the Contractor.
- 3) Should any payment be made by Canada in excess of what is owed to the Contractor for the actual work performed, the Contractor will reimburse Canada the excess immediately, with or without demand, and

any amounts outstanding shall bear simple interest at the Average Bank rate plus 3 percent per annum from the date of overpayment until the day prior to the date of repayment by the Contractor.

- 4) No payment other than a payment that is expressly stipulated in the Contract, shall be made by Canada to the Contractor for any extra expense or any loss or damage incurred or sustained by the Contractor.

GC5.3 INCREASED OR DECREASED COSTS

- 1) The Contract Amount shall not be increased nor decreased by reason of any increase or decrease in the cost of the Work that is brought about by an increase or decrease in the cost of labour, Plant, Material or any wage adjustment arising pursuant to the Labour Conditions.
- 2) Notwithstanding paragraph 1) of GC5.3, if any change, including a new imposition or repeal, of any tax, customs or other duty, charge, or any similar imposition that is imposed under sales, customs or excise tax legislation of the Government of Canada or any Provincial or Territorial legislation, affects the cost of the Work to the Contractor, and occurs
 - (a) after the date of submission by the Contractor of its bid; or
 - (b) after the date of submission of the last revision, if the Contractor's bid was revised;
 - (c) the Contract Amount shall be adjusted in the manner provided in paragraph 3) of GC5.3.
- 3) If a change referred to in paragraph 2) of GC5.3 occurs, the Contract Amount shall be increased or decreased by an amount established by an examination by Canada of the relevant records of the Contractor referred to in GC2.8, "Accounts and Audits", to be the increase or decrease in the cost incurred by the Contractor that is directly attributable to that change.
- 4) For the purpose of paragraph 2) of GC5.3, if a tax is changed after the tender closing, but public notice of the change has been given by the Minister of Finance or the corresponding Provincial or Territorial authority before that closing, the change shall be deemed to have occurred before the solicitation closing.
- 5) Notwithstanding paragraphs 2) to 4) of GC5.3, no adjustment to the Contract Amount in respect of the Work or a part thereof shall be made for a change in any imposition referred to in this section that occurs after the date required by the Contract for completion of the Work or that part of the Work.

GC5.4 PROGRESS PAYMENT

- 1) On the expiration of a payment period, the *Contractor* shall deliver to *Canada*
 - (a) a written progress claim in a form acceptable to *Canada*, and certified by the *Designer*, that fully describes any part of the *Work* that has been completed, and any *Material* that was delivered to the *Work* site but not incorporated into the *Work*, during that payment period, and
 - (b) a completed and signed statutory declaration containing a declaration that up to the date of the progress claim, the *Contractor* has complied with all lawful obligations with respect to the Labour Conditions and that, in respect of the *Work*, all lawful obligations of the *Contractor* to its *Subcontractors*, *Suppliers* and the *Designer* (referred to collectively in the declaration as "subcontractors and suppliers") have been fully discharged.
- 2) Within 10 days of receipt of a progress claim and statutory declaration from the *Contractor*, *Canada* shall inspect, or cause to have inspected, the part of the *Work* and the *Material* described in the progress claim, and shall issue a progress report to the *Contractor*, that indicates the value of the part of the *Work* and the *Material* described in the progress claim that, in the opinion of *Canada*

- (a) is in accordance with the *Contract*, and
 - (b) was not included in any other progress report relating to the *Contract*.
- 3) Subject to GC5.2 AMOUNT PAYABLE and paragraph 5) of GC5.4, *Canada* shall pay the *Contractor* an amount that is equal to 100% of the value that is indicated in *Canada's* progress report with respect to the provision of the *Design Services*, together with an amount that is equal to
- (a) 95% of the value that is indicated in *Canada's* progress report with respect to the *Construction*, if a labour and material payment bond has been furnished by the *Contractor*, or
 - (b) 90% of the value that is indicated in the progress report with respect to the *Construction*, if a labour and material payment bond has not been furnished by the *Contractor*.
- 4) *Canada* shall pay the amount referred to in paragraph 3) of GC5.4 not later than
- (a) 30 days after the receipt by *Canada* of a progress claim and statutory declaration referred to in paragraph 1) of GC5.4, or
 - (b) 15 days after the *Contractor* has submitted to *Canada* a progress schedule or updated progress schedule in accordance with GC3.1 PROGRESS SCHEDULE,
- whichever is later.
- 5) In the case of the *Contractor's* first progress claim, it is a condition precedent to *Canada's* obligation under paragraph 3) of GC5.4 that the *Contractor* has provided all necessary documentation required by the *Contract* for the first progress claim.

GC5.5 SUBSTANTIAL PERFORMANCE OF THE WORK

- 1) If, at any time before the issuance of a *Certificate of Completion*, *Canada* determines that the *Work* has reached Substantial Performance as described in subparagraph 1) (b) of GC1.1.4 SUBSTANTIAL PERFORMANCE, *Canada* shall request the *Contractor* to provide a written declaration prepared and signed by the *Designer* in accordance with subparagraph 9)(e) of GC3.2 PROJECT DESIGN AND ROLE OF THE DESIGNER. Following receipt of the declaration, *Canada* shall inspect the *Work*, and if satisfied that the *Work* has reached Substantial Performance, shall issue a *Certificate of Substantial Performance* to the *Contractor*. The *Certificate of Substantial Performance* shall state the date of Substantial Performance and shall describe the parts of the *Work* not completed to the satisfaction of *Canada*, and all things that must be done by the *Contractor* before a *Certificate of Completion* is issued, and before the 12-month warranty period referred to in GC3.12 WARRANTY AND RECTIFICATION OF DEFECTS IN WORK shall commence for the said parts and all the said things.
- 2) The issuance of a *Certificate of Substantial Performance* does not relieve the *Contractor* from the *Contractor's* obligations under GC3.10 DEFECTIVE WORK.
- 3) Subject to GC5.2 AMOUNT PAYABLE and paragraph 4) of GC5.5, *Canada* shall pay the *Contractor* the amount referred to in paragraph 1) of GC5.2 AMOUNT PAYABLE less the aggregate of
- (a) the sum of all payments that were made pursuant to GC5.4 PROGRESS PAYMENT;
 - (b) an amount that is equal to *Canada's* estimate of the cost to *Canada* of rectifying defects described in the *Certificate of Substantial Performance* ; and

- (c) an amount that is equal to Canada's estimate of the cost to *Canada* of completing the parts of the *Work* described in the Certificate of Substantial Performance , other than defects listed therein.
- 4) *Canada* shall pay the amount referred to in paragraph 3) of GC5.5, not later than
- (a) 30 days after the date of issue of a Certificate of Substantial Performance , or
 - (b) 15 days after the *Contractor* has delivered to *Canada*
 - (i) a statutory declaration containing a declaration by the *Contractor* that up to the date of the Certificate of Substantial Performance , the *Contractor* has complied with all lawful obligations with respect to the Labour Conditions, discharged all its lawful obligations to its *Subcontractors*, *Suppliers* and the *Designer* in respect of the work under the *Contract*, and discharged its lawful obligations referred to in GC1.8 LAWS, PERMITS AND TAXES, and
 - (ii) evidence of compliance with workers' compensation legislation in accordance with GC1.9 WORKERS' COMPENSATION, and
 - (iii) an update of the progress schedule in accordance with the requirements of GC3.1 PROGRESS SCHEDULE

whichever is later.

GC5.6 FINAL COMPLETION

- 1) When *Canada* is of the opinion that the *Work* has been completed, the *Contractor* shall, on request, cause the *Designer* to provide *Canada* with
- (a) a written declaration attesting to the completeness of the *Work*, and
 - (b) if the *Work* or a portion of the *Work* is subject to a *Unit Price Arrangement*, a certificate of measurement of the final quantities of the *Work*
- both to the satisfaction of *Canada*.
- 2) Within five (5) days of the receipt of satisfactory documentation described in paragraph 1) of GC5.6 if *Canada* is satisfied that the *Contractor* has complied with the *Contract* and all orders and directions made pursuant thereto, and that the *Work* has been completed, *Canada* shall issue a *Certificate of Completion* to the *Contractor* and, if the *Work* or a portion of the *Work* is subject to a *Unit Price Arrangement*, *Canada* shall issue a *Final Certificate of Measurement* which shall be binding upon and conclusive between *Canada* and the *Contractor* as to the quantities referred to therein.
- 3) Subject to GC5.2 AMOUNT PAYABLE and paragraph 4) of GC5.6,, *Canada* shall pay the *Contractor* the amount referred to in GC5.2 less the aggregate of
- (a) the sum of all payments that were made pursuant to GC5.4 PROGRESS PAYMENT, and
 - (b) the sum of all payments that were made pursuant to GC5.5 SUBSTANTIAL PERFORMANCE OF THE WORK.
- 4) *Canada* shall pay the amount referred to in paragraph 3) of GC5.6 not later than

- (a) 60 days after the date of issue of a *Certificate of Completion*, or
- (b) 15 days after the *Contractor* has delivered to Canada
 - (i) a statutory declaration which contains a declaration by the *Contractor* that all of the *Contractor's* lawful obligations and any lawful claims against the *Contractor* that arose out of the performance of the *Contract* have been discharged and satisfied, and
 - (ii) evidence of compliance with workers' compensation legislation in accordance with GC1.9 WORKERS' COMPENSATION

whichever is later.

GC5.7 PAYMENT NOT BINDING ON CANADA (2015-02-25)

Neither acceptance of a progress claim or progress report, nor any payment made by *Canada* under the *Contract*, nor partial or entire use or occupancy of the *Work* by *Canada* shall constitute an acceptance by *Canada* of any portion of the *Work* or *Material* that is not in accordance with the requirements of the *Contract*.

GC5.8 CLAIMS AND OBLIGATIONS

- 1) The *Contractor* shall discharge all the *Contractor's* lawful obligations and shall satisfy all lawful claims against the *Contractor* arising out of the performance of the *Work* at least as often as the *Contract* requires *Canada* to pay the *Contractor*.
- 2) Whenever requested to do so by *Canada*, the *Contractor* shall make a statutory declaration declaring to the existence and condition of any obligations and claims against the *Contractor* arising out of the performance of the *Work*.
- 3) In order to discharge lawful obligations of and satisfy lawful claims against the *Contractor*, or its *Designers* or *Subcontractors* arising out of the performance of the *Contract*, *Canada* may pay an amount that is due and payable to the *Contractor* directly to the claimant. Such payment is, to the extent of the payment, a discharge of *Canada's* liability to the *Contractor* under the *Contract* and may be deducted from any amount payable to the *Contractor* under the *Contract*.
- 4) For the purposes of paragraph 3) of GC5.8, and subject to paragraph 6) of GC5.8, a claim or obligation shall be considered lawful when it is so determined by
 - (a) a court of legal jurisdiction, or
 - (b) an arbitrator duly appointed to arbitrate the claim, or
 - (c) the written consent of the *Contractor* authorizing payment of the claim or obligation.
- 5) If a claim or obligation would have been subject to the provisions of Provincial or Territorial lien legislation or, in the Province of Quebec, the law relating to legal hypothecs had the *Contractor* been performing the *Work* for an entity other than *Canada*:
 - (a) such amount as may be paid by *Canada* pursuant to paragraphs 3) and 4) of GC5.8 shall not exceed the amount which the *Contractor* would have been obliged to pay had the provisions of such legislation or law been applicable to the *Work*;

- (b) a claimant need not comply with the provisions of such legislation setting out the steps by way of notice, registration or otherwise as might have been necessary to preserve or perfect any claim for lien or privilege which the claimant might have had, and
 - (c) for the purposes of determining the entitlement of a claimant, the notice required by paragraph 8) of GC5.8 shall be deemed to replace the registration or provision of notice after the performance of work as required by any applicable legislation and no claim shall be deemed to have expired, become void or unenforceable by reason of the claimant not commencing any action within the time prescribed by such legislation.
- 6) The *Contractor*, shall at the request of any claimant, submit to binding arbitration, those questions that need be answered to establish any entitlement of the claimant to payment. The arbitration shall have as parties to it any *Designer*, *Subcontractor*, or suppliers to whom the claimant supplied *Material*, performed work or rented equipment should such *Subcontractor*, *Designer*, or supplier wish to be adjoined, and *Canada* shall not be a party to such arbitration. Subject to any agreement between the *Contractor* and the claimant, the arbitration shall be conducted in accordance with the governing Provincial or Territorial legislation applicable to the site of the *Work*.
- 7) Paragraph 3) of GC5.8 shall apply only to claims and obligations
- (a) the notification of which has set forth the amount claimed to be owing and the person or entity who by contract is primarily liable and has been received by *Canada* in writing before final payment is made to the *Contractor* pursuant to GC5.6 FINAL COMPLETION, and within 120 days of the date on which the claimant
 - (i) should have been paid in full under the claimant's contract with the *Contractor*, its *Designer*, *Subcontractor* or *Supplier*, if the claim is for money that was lawfully required to be held back from the claimant; or
 - (ii) performed the last of the services, work, labour, or furnished the last of the *Material* pursuant to the claimant's Contract with the *Contractor*, its *Designer*, *Subcontractor*, or *Supplier* where the claim is for money not lawfully required to be held back from the claimant, and
 - (b) the proceedings to determine the right to payment of which, pursuant to paragraph 5) of GC5.8, shall have commenced within one year from the date that the notification required by subparagraph 7)(a) of GC5.8 was received by *Canada*.
- 8) Upon receipt of a notice of claim, *Canada* may withhold from any amount that is due and payable to the *Contractor* pursuant to the *Contract*, the full amount of the claim or any portion thereof.
- 9) *Canada* shall notify the *Contractor* in writing in a timely manner of receipt of any claim and of the intention of *Canada* to withhold funds. At any time thereafter and until payment is made to the claimant, the *Contractor* may be entitled to post, with *Canada*, security in a form acceptable to *Canada* in an amount equal to the value of the claim, and upon receipt of such security *Canada* shall release to the *Contractor* any funds which would be otherwise payable to the *Contractor*, that were withheld pursuant to the provisions of this clause in respect of the claim of any claimant for whom the security stands.

GC5.9 RIGHT OF SET-OFF

- 1) Without limiting any right of setoff or deduction given or implied by law or elsewhere in the Contract, *Canada* may set off any amount payable to *Canada* by the *Contractor* under the Contract, or under any current contract, against any amount payable to the *Contractor* under the Contract.

- 2) For the purposes of paragraph 1) of GC5.9, "current contract" means a contract between Canada and the Contractor
 - (a) under which the Contractor has an undischarged obligation to perform or supply work, labour or material; or
 - (b) in respect of which Canada has, since the date of the Contract, exercised any right to take the work that is the subject of that contract out of the Contractor's hands.

GC5.10 ASSESSMENTS AND DAMAGES FOR LATE COMPLETION

- 1) For the purposes of this clause
 - (a) the *Work* shall be deemed to be completed on the date of *Certificate of Completion*, and
 - (b) the "period of delay" means the number of days commencing on the day fixed for completion of the *Work* and ending on the day immediately preceding the day on which the *Work* is completed but does not include any day within a period of extension granted pursuant to GC6.5 DELAYS AND EXTENSION OF TIME, and any other day on which, in the opinion of Canada, completion of the *Work* was delayed for reasons beyond the control of the *Contractor*.
- 2) If the *Contractor* does not complete the *Work* by the day fixed for its completion but completes it thereafter, the *Contractor* shall pay *Canada* an amount equal to the aggregate of
 - (a) all salaries, wages and traveling expenses incurred by *Canada* in respect of persons overseeing the performance of the *Work* during the period of delay;
 - (b) the cost incurred by *Canada* as a result of the inability to use the completed *Work* for the period of delay; and
 - (c) all other expenses and damages incurred or sustained by *Canada* during the period of delay as a result of the *Work* not being completed by the day fixed for its completion.
- 3) *Canada* may waive the right of *Canada* to the whole or any part of the amount payable by the *Contractor* pursuant to paragraph 2) of GC5.10 if, in the opinion of *Canada*, it is in the public interest to do so.

GC5.11 DELAY IN MAKING PAYMENT

- 1) Notwithstanding GC1.5 TIME OF THE ESSENCE, any delay by *Canada* in making any payment when it is due pursuant to GC5 shall not be a breach of the *Contract* by *Canada*.
- 2) Subject to paragraph 3) of GC5.11, *Canada* shall pay to the *Contractor* simple interest at the Average Bank Rate plus 3 percent per annum on any amount which is overdue pursuant to paragraph 3) of GC5.1 INTERPRETATION, and the interest shall apply from and include the day such amount became overdue until the day prior to the date of payment.
- 3) Interest shall be paid without demand by the *Contractor* except that
 - (a) in respect of amounts that are less than 15 days overdue, no interest shall be paid in respect of payment made within such 15 days unless the *Contractor* so demands after such amounts have become due and payable, and
 - (b) interest shall not be payable or paid on overdue advance payments, if any.

GC5.12 INTEREST ON SETTLED CLAIMS

- 1) For the purposes of this clause, a claim means a disputed amount subject to negotiation between *Canada* and the *Contractor* under the *Contract*.
- 2) A claim is deemed to have been settled when an agreement in writing is signed by *Canada* and the *Contractor* setting out the amount of the claim to be paid by *Canada* and the items of work for which the said amount is to be paid.
- 3) A settled claim is deemed to be outstanding from the day immediately following the date the said claim would have been due and payable under the *Contract* had it not been disputed.
- 4) *Canada* shall pay to the *Contractor* simple interest on the amount of a settled claim at the Average Bank Rate plus 3 per cent per annum from the date the settled claim was deemed to be outstanding until the day prior to the date of payment.

GC5.13 RETURN OF SECURITY DEPOSIT

- 1) After a *Certificate of Substantial Performance* has been issued, and if the *Contractor* is not in breach of nor in default under the *Contract*, *Canada* shall return to the *Contractor* all or any part of a Security Deposit that, in the opinion of *Canada*, is not required for the purposes of the *Contract*.
- 2) After a *Certificate of Completion* has been issued, *Canada* shall return to the *Contractor* the remainder of any security deposit unless the *Contract* stipulates otherwise.
- 3) If the security deposit was paid into the Consolidated Revenue Fund of *Canada*, *Canada* shall pay interest thereon to the *Contractor* at a rate established from time to time pursuant to section 21(2) of the Financial Administration Act.

GC6 DELAYS AND CHANGES IN THE WORK

GC6.1 CHANGES IN THE WORK

- 1) At any time before issuing a *Certificate of Completion*, *Canada* may issue orders for additions, deletions or other changes to the *Work*, or changes in the location or position of the whole or any part of the *Work*, if the addition, deletion, change or other revision is deemed by *Canada* to be, consistent with the general intent of the *Contract*.
- 2) An order referred to in paragraph 1) of GC6.1 shall be in writing and given to the *Contractor* in accordance with GC2.3 NOTICES.
- 3) Upon receipt of an order, the *Contractor* shall promptly perform the work in accordance with the order as if the order had appeared in and been part of the original *Contract*.
- 4) If anything done or omitted by the *Contractor* pursuant to an order increases or decreases the cost of the *Work* to the *Contractor*, payment for the work shall be made in accordance with GC6.4 DETERMINATION OF PRICE.

GC6.2 CHANGES IN SUBSURFACE CONDITIONS

- 1) If, during the performance of the *Work*, the *Contractor* encounters subsurface conditions that are substantially different from the subsurface conditions described in the Request for Proposal documents supplied to the *Contractor*, or a reasonable assumption of fact based thereon, the *Contractor* shall give notice to *Canada* immediately upon becoming aware of the situation.

- 2) If the Contractor is of the opinion that the Contractor may incur or sustain any extra expense or any loss or damage that is directly attributable to the changed subsurface conditions, the Contractor shall within 10 days of the date the changed subsurface conditions were encountered, give Canada written notice of intention to claim for that extra expense, loss or damage.
- 3) If the Contractor has given a notice referred to in paragraph 2) of GC6.2, the Contractor shall give Canada a written claim for extra expense, loss or damage no later than 30 days after the date that a Certificate of Substantial Performance is issued.
- 4) A written claim referred to in paragraph 3) of GC6.2 shall contain a sufficient description of the facts and circumstances of the occurrence that is the subject of the claim to enable Canada to determine whether or not the claim is justified, and the Contractor shall supply such further and other information for that purpose as Canada requires.
- 5) If Canada determines that a claim referred to in paragraph 3) of GC6.2 is justified, Canada shall make an extra payment to the Contractor in an amount that is calculated in accordance with GC6.4, "Determination of Price".
- 6) If, in the opinion of Canada, the Contractor effects a saving of expenditure that is directly attributable to a substantial difference between the information relating to subsurface conditions at the site of the Work that is contained in the Request for Proposal documents, or a reasonable assumption of fact based thereon, and the actual subsurface conditions encountered by the Contractor, the Contract Amount shall be reduced by the amount of the saving of expenditure determined in accordance with GC6.4, "Determination of Price".
- 7) If the Contractor fails to give a notice referred to in paragraph 2) of GC6.2 and a claim referred to in paragraph 3) of GC6.2 within the times stipulated, an extra payment shall not be made to the Contractor in respect of the occurrence.
- 8) Canada does not warrant the content expressed in any subsurface report available for the perusal of the Contractor that does not form part of the Request for proposal and contract documents.

GC6.3 HUMAN REMAINS, ARCHAEOLOGICAL REMAINS AND ITEMS OF HISTORICAL OR SCIENTIFIC INTEREST

- 1) For the purposes of this clause
 - (a) "human remains" means the whole or any part of a deceased human being, irrespective of the time of death;
 - (b) "archaeological remains" are items, artifacts or things made, modified or used by human beings in antiquity and may include, but not be limited to, stone, wood or iron structures or monuments, dump deposits, bone artifacts, weapons, tools, coins, and pottery;
 - (c) "items of historical or scientific interest" are naturally occurring or manufactured objects or things of any age that are not archaeological remains but may be of interest to society because of their historical or scientific significance, value, rarity, natural beauty, or other quality.
- 2) If, during the course of the *Work*, the *Contractor* encounters any object, item or thing which is described in paragraph 1) of GC6.3 or which resembles any object, item or thing described in paragraph 1) of GC6.3, the *Contractor* shall
 - (a) take all reasonable steps, including stopping work in the affected area, to protect and preserve the object, item or thing,

- (b) immediately notify *Canada* of the circumstances in writing, and
 - (c) take all reasonable steps to minimize additional costs which may accrue as a result of any work stoppage.
- 3) Upon receipt of a notification in accordance with paragraph 2)(b) of GC6.3, *Canada* shall promptly determine whether the object, item or thing is one described in, or contemplated by paragraph 1) of GC6.3, and shall notify the *Contractor* in writing of any action to be performed, or work to be carried out, by the *Contractor* as a result of *Canada*'s determination.
- 4) *Canada* may, at any time, enlist the services of experts to assist in the investigation, examination, taking of measurements or other such recordings, placing of permanent protection around or removing of the object, item or thing encountered by the *Contractor*, and the *Contractor* shall, to the satisfaction of *Canada*, allow them access and cooperate with them in the carrying out of their duties and obligations.
- 5) Human remains, archaeological remains and items of historical or scientific interest encountered at the site of the *Work* shall be deemed to be the property of *Canada*.
- 6) Except as may be otherwise provided for in the *Contract*, the provisions of GC6.4 DETERMINATION OF PRICE, and GC6.5 DELAYS AND EXTENTION OF TIME shal apply.

GC6.4 DETERMINATION OF PRICE

GC6.4.1 Price Determination Prior to Undertaking Changes

- 1) If a Lump Sum Arrangement applies to the Contract or a part thereof, the price of any change shall be the aggregate estimated cost of labour, Plant and Material that is required for the change as agreed upon in writing by the Contractor and *Canada* plus an allowance for supervision, co-ordination, administration, overhead, margin and the risk of undertaking the work within the stipulated amount, which allowance shall be equal to
- (a) 20 percent of the aggregate costs referred to herein for that portion of the *Work* done by the Contractor's own forces, if the aggregate cost of the *Work* does not exceed \$50,000;
 - (b) 15 percent of the aggregate costs referred to herein for that portion of the *Work* that is done by subcontract, if the aggregate cost of the *Work* does not exceed \$50,000; or
 - (c) a negotiated percentage of the aggregate costs referred to herein or a negotiated amount
 - (i) if the aggregate cost of the *Work* exceeds \$50,000; or
 - (ii) if the Contractor and *Canada* agree in writing.
- 2) If a Unit Price Arrangement applies to the Contract or a part thereof, the Contractor and *Canada* may, by agreement in writing, add items, units of measurement, estimated quantities and prices per unit to the Unit Price Table.
- 3) A price per unit referred to in paragraph 2) of GC6.4.1 shall be determined on the basis of the aggregate estimated cost of labour, Plant and Material that is required for the additional item as agreed upon by the Contractor and *Canada*, plus an allowance determined in accordance with paragraph 1) of GC6.4.1.
- 4) To facilitate approval of the price of the change or the additional price per unit as applicable, the Contractor shall submit a cost estimate breakdown identifying, as a minimum, the estimated cost of labour, Plant, Material, each subcontract amount, and the amount of the allowance.

- 5) If no agreement is reached as contemplated in paragraph 1) of GC6.4.1, the price shall be determined in accordance with GC6.4.2.
- 6) If no agreement is reached, as contemplated in paragraphs 2) and 3) of GC6.4.1, Canada shall determine the class and the unit of measurement of the item of labour, Plant or Material and the price per unit shall be determined in accordance with GC6.4.2.

GC6.4.2 Price Determination Following Completion of Changes

- 1) If it is not possible to predetermine, or if there is failure to agree upon the price of a change in the Work, the price of the change shall be equal to the aggregate of
 - (a) all reasonable and proper amounts actually expended or legally payable by the Contractor in respect of the labour, Plant and Material that fall within one of the classes of expenditure described in paragraph 2) of GC6.4.2, that are directly attributable to the performance of the Contract;
 - (b) an allowance for profit and all other expenditures or costs, including overhead, general administration costs, financing and interest charges, in an amount that is equal to 10% of the sum of the expenses referred to in subparagraph 1)(a) of GC6.4.2; and
 - (c) interest on the amounts determined under subparagraphs 1)(a) and 1)(b) of GC6.4.2 calculated in accordance with GC5.12, "Interest on Settled Claims";
- 2) The cost of labour, Plant and Material referred to in subparagraph 1)(a) of GC6.4.2 shall be limited to the following categories of expenditure:
 - (a) payments to Subcontractors and Suppliers;
 - (b) wages, salaries, bonuses and, if applicable, travel and lodging expenses of employees of the Contractor located at the site of the Work and that portion of wages, salaries, bonuses and, if applicable, travel and lodging expenses of personnel of the Contractor generally employed at the head office or at a general office of the Contractor provided they are actually and properly engaged on the Work under the Contract;
 - (c) assessments payable under any statutory authority relating to workers' compensation, employment insurance, pension plan or holidays with pay, provincial health or insurance plans, environmental reviews, and Applicable Taxes collection costs;
 - (d) rent that is paid for Plant, or an amount equivalent to the said rent if the Plant is owned by the Contractor, that is necessary for and used in the performance of the Work, if the rent or the equivalent amount is reasonable and use of that Plant has been approved by Canada;
 - (e) payments for maintaining and operating Plant necessary for and used in the performance of the Work, and payments for effecting repairs thereto that, in the opinion of Canada, are necessary for the proper performance of the Contract, other than payments for any repairs to the Plant arising out of defects existing before its allocation to the Work;
 - (f) payments for Material that is necessary for and incorporated in the Work, or that is necessary for and consumed in the performance of the Contract;
 - (g) payments for preparation, delivery, handling, erection, installation, inspection, protection and removal of the Plant and Material necessary for and used in the performance of the Contract; and
 - (h) any other payments made by the Contractor with the approval of Canada that are necessary for the performance of the Contract in accordance with the contract documents.

GC6.4.3 Price Determination - Variations in Tendered Quantities

For the purpose of this clause "tendered quantities" means the estimated quantities identified in the Request for Proposal documents.

- 1) Except as provided in paragraphs 2), 3), 4) and 5) of GC6.4.3, if it appears that the final quantity of labour, Plant and Material under a price per unit item shall exceed or be less than the estimated tendered quantity, the Contractor shall perform the Work or supply the Plant and Material required to complete the item and payment shall be made for the actual Work performed or Plant and Material supplied at the price per unit set out in the Contract.
- 2) If the final quantity of the price per unit item exceeds the estimated tendered quantity by more than 15 percent, either party to the Contract may make a written request to the other party negotiate an amended price per unit for that portion of the item which exceeds 115 percent of the estimated tendered quantity, and to facilitate approval of any amended price per unit, the Contractor shall, on request, provide Canada with
 - (a) detailed records of the actual cost to the Contractor of performing or supplying the tendered quantity for the price per unit item up to the time the negotiation was requested, and
 - (b) the estimated unit cost of labour, Plant and Material required for the portion of the item that is in excess of 115 percent of the tendered quantity.
- 3) If agreement is not reached as contemplated in paragraph 2) of GC6.4.3, the price per unit shall be determined in accordance with GC6.4.2.
- 4) If it appears that the final quantity of labour, Plant and Material under a price per unit item shall be less than 85 percent of the estimated tendered quantity, either party to the Contract may make a written request to the other party to negotiate a change to the price per unit for the item if
 - (a) there is a demonstrable difference between the unit cost to the Contractor of performing or supplying the estimated tendered quantity and the unit cost to the Contractor for performing or supplying the final quantity; and
 - (b) the difference in unit cost is due solely to the decrease in quantity and not to any other cause.
- 5) For the purposes of the negotiation referred to in paragraph 4) of GC6.4.3
 - (a) the onus of establishing, justifying and quantifying a proposed change lies with the party making the request for negotiation; and
 - (b) in no event shall the total price for an item that has been amended as a result of a reduction in quantity pursuant to paragraph 4) of GC6.4.3 exceed the amount that would have been payable to the Contractor had 85 percent of the tendered quantity actually been performed or supplied.

GC6.5 DELAYS AND EXTENSION OF TIME

- 1) Upon application of the Contractor made before the date first fixed for completion of the Work or before any other date previously fixed under this clause, Canada may extend the time for completion of the Work by fixing a new date if Canada determines that causes beyond the control of the Contractor have delayed its completion.
- 2) The Contractor's application shall be accompanied by the written consent of the bonding company whose bond forms part of the Contract Security.
- 3) Subject to paragraph 4) of GC6.5, no payment, other than a payment that is expressly stipulated in the Contract, shall be made by Canada to the Contractor for any extra expense, loss or damage incurred or

sustained by the Contractor due to delay, whether or not the delay is caused by circumstances beyond the control of the Contractor.

- 4) If the Contractor incurs or sustains any extra expense or any loss or damage that is directly attributable to any neglect or delay that occurs after the date of the Contract on the part of Canada in providing any information or in doing any act that the Contract either expressly requires Canada to do or that would ordinarily be done by an owner in accordance with the practice of the trade, the Contractor shall give Canada written notice of intention to claim for that extra expense or loss or damage within 10 working days of the date the neglect or delay first occurred.
- 5) When the Contractor has given a notice referred to in paragraph 4) of GC6.5, the Contractor shall give Canada a written claim for the extra expense, loss or damage no later than 30 days after the date that a Certificate of Completion is issued and not afterwards.
- 6) A written claim referred to in paragraph 5) of GC6.5 shall contain a sufficient description of the facts and circumstances of the occurrence that is the subject of the claim to enable Canada to determine whether or not the claim is justified and the Contractor shall supply such further and other information for that purpose as Canada may require.
- 7) If Canada determines that a claim referred to in paragraph 5) of GC6.5 is justified, Canada shall make an extra payment to the Contractor in an amount that is calculated in accordance with GC6.4, "Determination of Price".
- 8) If the Contractor fails to give a notice referred to in paragraph 4) and a claim referred to in paragraph 5) of GC6.5 within the times stipulated, an extra payment shall not be made to the Contractor in respect of the occurrence.

GC7 DEFAULT, SUSPENSION OR TERMINATION OF CONTRACT

GC7.1 TAKING THE WORK OUT OF THE CONTRACTOR'S HANDS

- 1) By giving notice in writing to the Contractor in accordance with GC2.3, "Notices", Canada, without any other authorization, may take all or any part of the Work out of the Contractor's hands, and may employ such means as Canada sees fit to have the Work completed if the Contractor
 - (a) fails to remedy any delay in the commencement or default in the diligent performance of the Work to the satisfaction of Canada within 6 days of Canada giving notice to the Contractor in writing in accordance with GC2.3, "Notices";
 - (b) defaults in the completion of any part of the Work within the time fixed for its completion by the Contract;
 - (c) becomes insolvent, or has committed an act of bankruptcy, and has neither made a proposal to its creditors nor filed a notice of intention to make such a proposal, pursuant to the Bankruptcy and Insolvency Act;
 - (d) abandons the work;
 - (e) makes an assignment of the Contract without the consent required by GC1.17, "Assignment", or
 - (f) otherwise fails to observe or perform any of the provisions of the Contract.
- 2) If the whole or any part of the Work is taken out of the Contractor's hands, the Contractor's right to any further payment that is due or accruing due under the Contract is, subject only to paragraph 3) of GC7.1, extinguished, and the Contractor is liable to pay Canada, upon demand, an amount that is equal to the

amount of all loss and damage incurred or sustained by Canada in respect of the Contractor's failure to complete the Work.

- 3) If the whole or any part of the Work that is taken out of the Contractor's hands is completed by Canada, Canada may pay the Contractor the amount, if any, of the holdback or a progress claim as determined by Canada that had accrued and was due prior to the date on which the Work was taken out of the Contractor's hands and that is not required for the purposes of having the Work performed or of compensating Canada for any other loss or damage incurred or sustained by reason of the Contractor's default.
- 4) The taking of the Work or any part thereof out of the Contractor's hands does not relieve the Contractor from any obligation under the Contract or imposed by law except the obligation to complete the performance of that part of the Work that was taken out of the Contractor's hands.
- 5) If the Work or any part thereof is taken out of the Contractor's hands, all Plant and Material and the interest of the Contractor, or its suppliers or subcontractors at any tier, in all real property, licences, powers and privileges acquired, used or provided by the Contractor, or its suppliers or subcontractors at any tier, under the Contract shall continue to be the property of Canada without compensation.
- 6) When Canada certifies that any Plant, Material, or any interest of the Contractor is no longer required for the purposes of the Work, or that it is not in the interests of Canada to retain that Plant, Material, or interest, it shall revert to the Contractor.
- 7) If the Contractor has become insolvent or has committed an act of bankruptcy, and has either made a proposal to its creditors or filed a notice of intention to make such a proposal, pursuant to the Bankruptcy and Insolvency Act, the Contractor shall immediately forward a copy of the proposal or the notice of intention to Canada.

GC7.2 SUSPENSION OF WORK

- 1) When, in Canada's opinion, it is in the public interest to do so, Canada may require the Contractor to suspend performance of the Work either for a specified or an unspecified period, by giving a notice of suspension in writing to the Contractor in accordance with GC2.3, "Notices".
- 2) When a notice of suspension is received by the Contractor, the Contractor shall suspend all operations in respect of the Work except those that Canada determines are necessary for the care and preservation of the Work, Plant and Material.
- 3) During a period of suspension, the Contractor shall not remove any part of the Work, Plant or Material from its site without the consent of Canada.
- 4) If a period of suspension is 60 days or less, the Contractor shall resume the performance of the Work on the expiration of that period, and the Contractor is entitled to be paid the extra costs necessarily incurred by the Contractor as a result of the suspension, determined in accordance with GC6.4, "Determination of Price".
- 5) If a period of suspension is more than 60 days, Canada and the Contractor may agree that the performance of the Work shall be continued by the Contractor, and the Contractor shall resume performance of the Work subject to any terms and conditions agreed upon by Canada and the Contractor. If Canada and the Contractor do not agree that performance of the Work shall be continued by the Contractor, or upon the terms and conditions under which the Contractor shall continue the Work, the notice of suspension shall be deemed to be a notice of termination pursuant to GC7.3, "Termination of Contract".

GC7.3 TERMINATION OF CONTRACT

- 1) Canada may terminate the Contract at any time by giving a notice of termination in writing to the Contractor in accordance with GC2.3, "Notices".
- 2) If the Contractor receives a notice of termination, the Contractor shall forthwith cease all operations in performance of the Contract, subject to any conditions stipulated in the notice.
- 3) Subject to paragraph 4) of GC7.3, if the Contract is terminated, Canada shall pay the Contractor an amount determined to be due to the Contractor pursuant to GC6.4, "Determination of Price", less the aggregate of all amounts that were paid to the Contractor by Canada and all amounts that are due to Canada from the Contractor pursuant to the Contract.
- 4) In no event shall the total amount payable by Canada to the Contractor exceed the amount, calculated in accordance with GC5, "Terms of Payment", that would have been payable to the Contractor had the Contractor completed the Work.
- 5) Payment to the Contractor, if any, shall be made as soon as practicable under the circumstances.

GC7.4 SECURITY DEPOSIT - FORFEITURE OR RETURN

- 1) If the Work is taken out of the Contractor's hands, or the Contractor is in breach of, or in default under, the Contract, Canada may convert a security deposit to Canada's own use.
- 2) If Canada converts a security deposit, the amount realized shall be deemed to be an amount due from Canada to the Contractor under the Contract.
- 3) Any balance of the amount realized that remains after payment of all losses, damage and claims of Canada and others shall be paid by Canada to the Contractor if, in the opinion of Canada, it is not required for the purposes of the Contract.

SUPPLEMENTARY CONDITIONS

SC01 PAYMENT FOR DESIGN CHANGES AND REVISIONS

1. Payment for any additional or reduced Design Services authorized by Canada prior to their performance, and for which a basis of payment has not been established at the time of execution of the Contract, shall be in an amount or amounts to be mutually agreed upon from time to time, subject to the Terms of Payment and the approval of Canada.
2. Where it is not possible, or appropriate, to agree upon a fixed price fee prior to the performance of the additional or reduced Design Services, payment shall be made on the basis of a time based fee as follows:
 - (a) The *Designer's* principals and executives, and other personnel approved in that capacity by *Canada* shall be paid at the hourly rates provided for in clause 1.3.4 of the Price Bid Form.
 - (b) The *Designer's* staff approved by *Canada* shall be paid at the hourly rate specified in Annex B..
 - (c) The normal working hours per day for *Designer's* principals, executives and the employees, shall be deemed to be seven and a half (7.5) hours of any day during which they are actually engaged in the performance of the *Design Services*.
 - (d) Travel time during normal working hours, that is related to the Project and authorized by *Canada*, shall be chargeable as time worked.
 - (e) The maximum amount(s) that applies (apply) to the *Design Services* to be carried out at time rates shall be as specified in the change request notice issued by *Canada*, which amount(s) shall not be exceeded without the prior authorization of *Canada*.
3. Subject to paragraph 5 below and prior to the performance of additional or reduced *Design Services* on the basis of a time based fee, the *Contractor* shall comply with any request made by *Canada* regarding persons to be employed by its *Designer* or its *Designer's subconsultants* to provide the additional or reduced *Design Services*. In addition, *Canada* shall determine, based on industry practice and input from the *Contractor*, hourly rates for any of those persons for whom the relevant information does not appear in the Price Bid Form.
4. The *Contractor* shall, on request, submit to *Canada* for approval, the names, addresses, qualifications, experience and proposed roles of all persons, including principals, to be employed by its *Designer* to provide the *Design Services* for the Project and, on request, submit any subsequent changes to *Canada* for approval.
5. Payment for additional *Design Services* not identified at the time of execution of the Contract shall be made only to the extent that
 - (a) the additional *Design Services* are *Services* that are not included in stated *Design Services* in the *Contract*,
 - (b) the additional *Design Services* are required for reasons beyond the control of the *Contractor*, and
 - (c) any fee adjustment for *Design Services* resulting from an adjustment in the Construction Cost Estimate arising from the additional *Services* is not commensurate with the additional *Services* performed.
6. Disbursements
 1. The following costs shall be included in the bid Price required to deliver the Work and shall not be reimbursed separately;
 - (a) Standard office expenses such as any photocopying, computer costs, Internet, long distance telephone and fax, including that between the *Contractor's* main office and branch offices or between the *Contractor's* offices and other team members offices;
 - (b) Travel time;

- (c) Travel expenses; and
- (d) Local project office.
- (e) Deliverables identified in Design-Build Services and Specifications.

SC02 PROFESSIONAL LIABILITY INSURANCE REQUIREMENTS:

1. The Contractor shall ensure that appropriate Professional Liability insurance coverage is in place to cover the Designers and other consultants engaged for the services required in the performance of the Work. If required, the Contractor shall furnish evidence satisfactory to Canada of such insurance coverage and any renewals thereof.
2. The Professional Liability insurance coverage shall be in an amount usual for the nature and scope of the services but, shall have a limit of liability of not less than \$1,000,000 per claim, and be continually maintained from the commencement of performance of the services until five (5) years after their completion.

SC03 INSURANCE TERMS

1) Insurance Contracts

- (a) The Contractor must, at the Contractor's expense, obtain and maintain insurance contracts in accordance with the requirements of the Certificate of Insurance. Coverage must be placed with an Insurer licensed to carry out business in Canada.
- (b) Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract. The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

2) Period of Insurance

- (a) The policies required in the Certificate of Insurance must be in force from the date of contract award and be maintained throughout the duration of the Contract.
- (b) The Contractor must be responsible to provide and maintain coverage for Products/Completed Operations hazards on its Commercial General Liability insurance policy, for a period of six (6) years beyond the date of the Certificate of Substantial Performance.

3) Proof of Insurance

- (a) Before commencement of the Work, and no later than thirty (30) days after acceptance of its bid, the Contractor must deposit with Canada a Certificate of Insurance on the form attached herein.
- (b) Upon request by Canada, the Contractor must provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the Certificate of Insurance.

4) Insurance Proceeds

In the event of a claim, the Contractor must, without delay, do such things and execute such documents as are necessary to effect payment of the proceeds.

5) Deductible

The payment of monies up to the deductible amount made in satisfaction of a claim must be borne by the Contractor.

SC04 Workplace Safety and Health

1. EMPLOYER/PRIME CONTRACTOR - *for Work in the province of Manitoba*

- 1.1 The Contractor shall, for the purposes of the Workplace Safety and Health Act and Regulations, Manitoba, and for the duration of the Work:
- 1.1.1 act as the Employer, where there is only one employer on the work site, in accordance with the Authority Having Jurisdiction;
 - 1.1.2 assume the role of Prime Contractor, where there are two or more employers involved in work at the same time and space at the work site, in accordance with the Authority Having Jurisdiction; and
 - 1.1.3 agree, in the event of two or more Contractors working at the same time and space at the work site, without limiting the General Conditions, to Canada's order * to:
 - 1.1.3.1 assume, as the Prime Contractor, the responsibility for Canada's other Contractor(s); or
 - 1.1.3.2 accept that Canada's other Contractor is Prime Contractor and conform to that Contractor's Site Specific Health and Safety Plan.

* "order" definition: after contract award, Contractor is ordered by a Change Order

2. SUBMITTALS

- 2.1 The Contractor shall provide to Canada:
- 2.1.1 prior to the pre-construction meeting, a transmittal and copy of a completed Notice of Project form PWGSC - TPSGC 458 (form will be provided to the proposed contractor prior to award), as sent to the Authority Having Jurisdiction (AHJ); and
 - 2.1.2 prior to commencement of work and without limiting the terms of the General Conditions:
 - 2.1.2.1 copies of all other necessary permits, notifications and related documents as called for in the scope of work/specifications and/or by the AHJ; and
 - 2.1.2.2 a site specific Health and Safety Plan as requested.

NOTE: Please do not include any forms that include personal 3rd party information such as the names of the contractor's employees and their related claims information.

3. LABOUR AUTHORITY CONTACT:

The contact below represents the Labour Authority in the jurisdiction (AHJ). They are not representatives of the Workers Compensation.

Do not contact the people referenced below for issues pertaining to WCB or WCB Clearances. Those queries must be directed specifically to the WCB, and where the WCB has both a Labour and Compensation component, WCB issues must be directed to the Compensation/Employer Services sections.

MANITOBA

Manitoba Labour
Workplace Safety and Health Branch
200 – 401 York Avenue
Winnipeg, Manitoba, R3C 0P8
Attention: Client Services

Telephone: (204) 945-6848

Facsimile: (204) 945-4556

SC05 PERFORMANCE EVALUATION-CONTRACT

R2810D General Condition is modified to include the following GC1.22.

1. Contractors shall take note that the performance of the Contractor during and upon completion of the services shall be evaluated by Canada. The evaluation includes all or some of the following criteria:
 - a. quality of workmanship
 - b. time
 - c. project management
 - d. contract management
 - e. health and safety

2. A weighting factor of 20 points will be assigned to each of the five criteria as follows:
 - a. unacceptable: 0 to 5 points
 - b. not satisfactory: 6 to 10 points
 - c. satisfactory: 11 to 16 points
 - d. superior: 17 to 20 points

3. The consequences resulting from the performance evaluation are as follows:
 - a. For an overall rating of 85% or higher, a congratulation letter is sent to the Contractor.
 - b. For an overall rating of between 51% and 84%, a standard, meets expectations letter, is sent to the Contractor.
 - c. For an overall rating of between 30% and 50%, a warning letter is sent to the Contractor indicating that if, within the next two (2) years, they receive 50% or less on another evaluation, the firm may be suspended from any new PWGSC solicitations for construction services, architectural and engineering services or facility maintenance services, of real property projects, for a period of one year.
 - d. For an overall rating of less than 30%, a suspension letter is sent to the Contractor indicating that the firm is suspended from any new PWGSC solicitations for construction services, architectural and engineering services or facility maintenance services, of real property projects, for a period of one year.
 - e. For a rating of 5 points or less on any one criterion, a suspension letter is sent to the Contractor indicating that the firm is suspended from any new PWGSC solicitations for construction services, architectural and engineering services or facility maintenance services, of real property projects, for a period of one year.

The form [PWGSC-TPSGC 2913](#), Select - Contractor Performance Evaluation Report (CPEPF), is used to record the performance.

SC06 INTERPRETATION

R2810D General Condition GC1.1.2 Terminology is modified to include the following,

“Architectural and Engineering Services”:

means services to provide a range of investigation and recommendation reports, planning, design, preparation, or supervision of the construction, repair, renovation or restoration of a work and includes contract administration, services for real property projects.

“Construction Services”:

means construction, repair, renovation or restoration of any work except a vessel and includes; the supply and erection of a prefabricated structure; dredging; demolition; environmental services related to a real property; or, the hire of equipment to be used in or incidentally to the execution of any construction services referred to above.

“Facility Maintenance Services ”:

means services related to activities normally associated with the maintenance of a facility and keeping spaces, structures and infrastructure in proper operating condition in a routine, scheduled, or anticipated fashion to prevent failure and/or degradation including inspection, testing, servicing, classification as to serviceability, repairs, rebuilding and reclamation, as well as cleaning, waste removal, snow removal, lawn care, replacement of flooring, lighting or plumbing fixtures, painting and other minor works.

Solicitation No. - N° de l'invitation
ET025-172216/A
Client Ref. No. - N° de réf. du client
PWGSC-ET025-172216/A

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
pwz102
CCC No./N° CCC - FMS No./N° VME

ANNEX D: TERMS OF REFERENCE

Solicitation No. - N° de l'invitation
ET025-172216/A
Client Ref. No. - N° de réf. du client
PWGSC-ET025-172216/A

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
pwz102
CCC No./N° CCC - FMS No./N° VME

ANNEX E: INSURANCE CERTIFICATE

Solicitation No. - N° de l'invitation
ET025-172216/A
Client Ref. No. - N° de réf. du client
PWGSC-ET025-172216/A

Amd. No. - N° de la modif.
File No. - N° du dossier

Buyer ID - Id de l'acheteur
pwz102
CCC No./N° CCC - FMS No./N° VME

ANNEX F – GENERAL PROCEDURES & STANDARDS



TERMS OF REFERENCE (TOR-DB) Design-Builder Services

Storage Garage

For:
St. Andrews Lock and Dam
St. Andrews, Manitoba

PWGSC#: R.066199.002

Date: 2016-11-24



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1 PROJECT DESCRIPTION

1.1 GENERAL

1.1.1 PURPOSE

- .1 These Terms of Reference (TOR) have been developed to engage the services of a Design-Builder (DB) team to undertake the design and construction of one (1) detached storage garage at the St. Andrews Lock and Dam, in St. Andrews, Manitoba.
- .1 The TOR has been developed to assist the Design-Builder in obtaining a clear understanding of the project scope, procedures and performance requirements, in order to deliver the completed project within the agreed budget and on schedule.

1.1.2 PROJECT INFORMATION

| Project Information | |
|------------------------------------|--|
| Project Title: | Storage Garage St. Andrews Lock and Dam |
| User Department: | St. Andrews Lock and Dam |
| Project Location/Address: | St. Andrews, Manitoba |
| PWGSC Project Number: | R.066199.002 |
| PWGSC Departmental Representative: | Kevin Gallays |

1.2 BACKGROUND INFORMATION

1.2.1 USER DEPARTMENT

- .1 The User Department referred to throughout is St. Andrews Lock and Dam (SALD).

1.2.2 NEEDS & GOALS (FUNCTIONAL REQUIREMENTS)

- .1 SALD requires the design and construction of a storage garage.
- .2 The garage will be one (1) detached structure with dimensions of 12.2M (40') wide by 9.15M (30') deep, located on the site of the existing small storage garage, with the following minimum functional performance requirements:
 - .1 All components and assemblies to have a service life of minimum 25 years,
 - .2 Storage will be for surplus cabinets, machinery, wood shavings, and miscellaneous items,(combustible load to be determined by the Consultant),
 - .3 Ceiling should be open for use as storage for combustible material; ensure structure is protected,
 - .4 Minimum foundation to be steel reinforced 6" poured concrete pad with 12" thickened edge,
 - .5 Apron slab of similar construction, full width x 1.84M (6'), hinged to main slab with epoxy coated reinforcing,
 - .6 Precast concrete splashpads, 1.2M (48") long, at downspouts,
 - .7 Exterior finish should compliment the adjacent buildings and be weather proof such as prefinished metal (similar to roof) and/or stucco,
 - .8 Average insulation value of each roof and wall plane: equivalent to RSI 3.5 (R-20),
 - .9 Air barrier to suit MBC for Part 9, occupied buildings,
 - .10 Durable interior finish (ptd G1S plywood if Code acceptable, or equivalent),
 - .11 Prefinished metal roof, (22ga material to have a min 40 year lifespan), complete with all accessories including matching ridge/rake/eave flashings, roof vents (2), fascia, soffit, eavestroughs and downspouts,
 - .12 Insulated overhead door, 4.88M (16') x 2.134M (7') , with power operator,



- .13 Insulated steel door, .914M (36") x 2.134M (7'), complete with commercial hardware including lockset, deadbolt, pinned BB hinges, sliding type overhead stop with cushion device,
- .14 All required electrical wiring and components including panel box, overhead electrical space heater(s), outlets, lighting switching,
- .15 LED lighting for energy savings: general lighting level: 150 lux, providing even distribution but with adjustability in optical control; fixtures to be compact, low-profile, and rugged with easy and precise directional adjustability of the LED panels; high efficiency heat sink,
- .16 Coordinate alarm system with SALD service provider,
- .17 SALD to provide underground electrical power; D/B to provide hook-up to panel,
- .18 Granular backfill as required, topped with quarter down limestone,

1.2.3 EXISTING CONDITIONS

- .1 To be reviewed on site; refer to attached Appendix A - Location Map.
- .2 Existing small garage will be demolished by SALD, leaving existing granular cover.
- .3 Successful proponent will have access to bore hole data from location approximately 50 meters (150') north.
- .4 Environmental conditions and considerations are to be confirmed with Departmental Representative.
- .5 The garage site is adjacent to an existing well which will need to be accommodated by the new construction.
- .6 Fire exposure and limiting distances to other buildings will need to be considered by Consultant for Code compliance.

1.2.4 CONSTRAINTS AND CHALLENGES

- .1 The Design/Build Contractor will be required to become familiar with the project site and obtain local information as required.
- .2 The project has unique site conditions and it is the responsibility of the Design/Build team to determine what is required to achieve Code and regulation compliance.
- .3 All site visits must be arranged through the Departmental Representative.
- .4 The Design/Build Contractor's key personnel must be available to respond to emergencies within 4 hours.

1.3 SCOPE OF WORK

1.3.1 OVERVIEW

- .1 The Design-Builder must provide necessary Architectural and Engineering services throughout the project phases.
- .2 The Design-Builder shall provide construction and coordination services as per of this TOR.
- .3 The DB's design must be acceptable to the Authorities having Jurisdiction and must conform to all permitting requirements.



1.4 PROJECT DELIVERY APPROACH

1.4.1 TURNKEY APPROACH

- .1 The Crown requires the use of a Design-Build (turnkey) approach to complete the design and construction of the storage garage.
- .2 Professional Services:
 - .1 Engineering services must be provided as required to meet permitting and construction, including stamped engineered drawings where required.
 - .2 Architectural design is required for finishes, building envelope and coordination.
- .3 The Design-Builder must provide a single prime consultant entity to fulfill the role of the registered professional of record for the Work including all cross discipline coordination.
 - .1 This prime consultant must be engaged for the entire project duration including design, construction, commissioning and satisfactory completion of the fully functioning project.

1.4.2 PROJECT DELIVERY REQUISITES

- .1 Deliver the project within the key milestones and according to the project schedule.
- .2 Ensure that all members of the Design-Builder's team clearly understand the project requirements, for seamless delivery of the required services.
- .3 Provide a quality management plan that includes rigorous quality reviews.
- .4 Provide a continuous risk management program to address the risks associated with constructing new facilities, while ensuring the continuous operation of the existing facilities.

1.5 SUMMARY OF SERVICES AND QUALIFICATIONS

1.5.1 GENERAL SERVICES

- .1 The Design-Build Contractor will provide a full consulting team including the following services and specialties:
 - .1 Professional Architectural Services: as required for design
 - .2 Professional Engineering Services:
 - .1 Structural and Electrical Engineering;
 - .3 Cost Estimating.

1.5.2 CONSTRUCTION SERVICES

- .1 The Design Builder shall deliver complete construction services in accordance with the duties outlined in the terms and conditions of the contract and the requirements of this Terms of Reference.
- .2 The Design Builder is responsible for the implementation of Division 01 contained in this Terms of Reference.

1.6 SCHEDULE

1.6.1 GENERAL

- .1 Deliver the project to be ready for use in accordance with the project milestone listing identified below.
- .2 Prepare a Project Schedule, in accordance with the milestone list.

1.6.2 ANTICIPATED MILESTONES & DELIVERABLE DATES

| Project Phase | Milestone Date |
|---|----------------|
| Design/Build Contractor Contract Award | 2017-02-17 |
| PD-75% - Pre-Design Report Review | 2017-02-24 |
| SD-75% - Schematic Design Report Review | 2017-03-03 |



| | |
|--|------------|
| CD-66% - Construction Document Review | 2017-03-10 |
| CD-99% - Construction Document Review | 2017-03-17 |
| Certificate of Substantial Performance | 2017-05-12 |
| Commissioning Completion, Final Inspection, Acceptance | 2017-06-09 |
| Post Construction Warranty Evaluation | 2018-06-09 |

1.7 PROJECT BUDGET

1.7.1 FUNDING

- .1 Total Funding for the delivery of this project will be fixed upon selection of the successful Proponent's Proposal.
- .2 The Crown will not accept scope creep or cost escalation of selected Proponent's proposal, except in the limited situations as stipulated in the terms of the contract.

1.8 EXISTING DOCUMENTATION

1.8.1 GENERAL

- .1 Functional requirements as per this TOR.
- .2 Site information and documents:
 - .1 Base site drawings in AutoCAD.
 - .2 Survey is being done under separate contract; top of garage slab elevation will be provided; assume elevation will be set at approximately 300mm (12") above highest point of existing grade within footprint of proposed garage. The survey will be provided for Design/Build team final coordination.
 - .3 Soils reports will be available based on bore hole 50M (150') to the north; this will be provided by PWGSC after award.

1.9 CODES, REGULATIONS, STANDARDS AND GUIDELINES

1.9.1 GENERAL

- .1 Comply with all applicable Codes, Regulations and Standards, per PWGSC GP&S.
- .2 The documents listed below apply to this project and are not limited to:

1.9.2 CODES AND REGULATIONS

- .1 The NRC National Building Code (NBC) of Canada 2010,
- .2 The NRC National Fire Code of Canada, 2010,
- .3 CSA C22.1-09, Canadian Electrical Code Part I Safety Standard for Electrical Installations and CE Code Handbook. Amendments for Provinces,
- .4 The Canada Labour Code,
 - .1 <http://laws.justice.gc.ca/en/L-2/>
- .5 The Canada Occupational Health and Safety Regulations,
 - .1 <http://laws.justice.gc.ca/eng/SOR-86-304/index.html>
- .6 All other Provincial and Municipal Acts, Codes, By-laws and regulations appropriate to the area of concern.

1.9.3 STANDARDS AND GUIDELINES

- .1 American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE), Standards and Handbooks,
- .2 American Society for Testing and Materials (ASTM)
- .3 Canadian Standards Association



2 REQUIRED SERVICES

2.1 GOALS & OBJECTIVES

2.1.1 GENERAL

- .1 Deliver the completed Work for review to the Departmental Representative, while applying rigorous schedule, budget, quality, and scope controls throughout the design, construction, and post-construction phases of the Project.
- .2 The design work and site reviews must be carried out by registered professionals, licensed to practice in at least one Provincial/Territorial jurisdiction in Canada and provide stamped final drawings as required by the jurisdiction.
- .3 Comply with all waste management and environmental responsibility.

2.1.2 STEWARDSHIP OF EXCELLENCE

- .1 Design/Build team must maintain a high standard of design, based on recognized contemporary design principles.
 - .1 All disciplines must be coordinated, integrated and be consistent with good design practices throughout the project.
- .2 The Design Builder will be responsible for ensuring that both the design and construction teams adhere to:
 - .1 Best industry practices and standards in both the development of the Construction Documents and following them during construction,
 - .2 Professional conduct in all phases of the project, employing best practices for budget, schedule, quality, and scope management.
 - .3 The primary responsibility for construction quality control and commissioning remains with the Design Builder

2.1.3 SERVICE PERFORMANCE

- .1 Functional requirements define the minimum Work necessary:
 - .1 Functional requirements do not necessarily include for every component and system required for a complete and fully functional facility.
 - .2 The Design Builder must design, construct and commission a complete and fully functional facility including all required components and systems.
- .2 The Design Builder's Team will work cooperatively to:
 - .1 Apply rigorous quality assurance reviews during the design and construction phases, including participation in reviews of the systems, components, construction tools and techniques of the proposed design.
 - .2 Apply industry standard cost and scheduling processes and techniques.
 - .3 Adopt good project delivery processes such as Risk Management studies,
 - .4 Ensure that all Health, Safety, Security and Sustainable Development issues are properly adhered to
- .3 The Design Builder shall carry out all testing (including commissioning) as per Industry standards to ensure construction quality.
 - .1 Tests shall be identified in the construction specifications;
 - .2 The Design Builder will be responsible for ensuring the tests are carried out and the results achieve industry standards for quality.

2.1.4 BUILDING PERFORMANCE

- .1 Construct the Work in a manner that will:
 - .1 Enable long-term efficient and cost effective life cycle performance effectively and appropriately for 35 years.
- .2 The Design Builder will provide a final design that will ensure that the Work will:
 - .1 Provide a healthy and safe environment that meets or exceeds all codes for fire, health, and life safety, and fully supports optimum work productivity,



- .2 Fully integrate and optimize the performance of components and systems;
- .3 Be efficient and cost-effective over the building's life cycle;
- .4 Incorporate building systems that can be accessed and easily repaired and / or replaced in the building life cycle as required.
- .5 Use materials that are high quality, durable and constructed with the best workmanship possible:
 - .1 Material colour and finish must be selected by Departmental Representative from manufacturer's full standard range.

2.2 PROJECT SERVICES

2.2.1 GENERAL

- .1 Design Services: includes scheduling, cost estimating and risk management
 - .1 Pre-Design:
 - .2 Schematic Design:
 - .3 Design Development:
- .2 Construction Document Services:
- .3 Tender Support Services:
- .4 Construction Support Services:
- .5 Commissioning Services:
- .6 Post Construction & Warranty Support Services:

2.3 PRE-DESIGN

2.3.1 GENERAL

- .1 Pre-Design (PD) establishes and articulates the Owner Project Requirements (OPR) and the Basis of Design (BOD) for the project as the foundation to guide the delivery throughout the project.
- .2 Explore, demonstrate, evaluate and recommend basic design approaches for the project.

2.3.2 SCOPE AND ACTIVITIES:

- .1 Visit the project site(s) as directed by the Departmental Representative.
- .2 Identify all additional information that will be needed to deliver the project.
- .3 Review, identify, record and document, analyze and evaluate, verify and confirm:
 - .1 Functional requirements and scope of work;
 - .2 Existing environmental, site and building conditions, challenges and risks;
 - .3 Existing structural and infrastructure for current condition and capacity to support the design;
 - .4 Sustainability and life cycle targets as applicable;
 - .5 Compliance and non-compliance with codes, standards, guidelines and legislation;
 - .6 All Authorities Having Jurisdiction (AHJ) over the codes, regulations and standards;
 - .7 Commissioning (Cx) requirements as applicable in a Cx Plan.
 - .8 All other available existing material related to the project including the TOR.
 - .9 Decisions, risks, schedules and cost estimates.



2.3.3 DELIVERABLES:

- .1 A clear, brief but complete Pre-Design Report (PDR) including:
 - .1 An executive summary of work done in Pre-Design;
 - .2 A conceptual design approach demonstrating a complete understanding of the project with a viable recommended direction for design;
 - .3 Preliminary Code analysis;
 - .4 Indicative cost estimates (Class D);
- .2 User Department acceptance/approval of the selected conceptual design approach is required to prior to proceeding with Schematic Design.

2.4 SCHEMATIC DESIGN/DEVELOPMENT

2.4.1 GENERAL:

- .1 This phase finalizes the detail of the Owner Project Requirements (OPR) and the Basis of Design (BOD) for the project.
- .2 The Schematic Design/Development Report provides sufficient detail to illustrate and communicate all critical aspects of the project design.

2.4.2 SCOPE AND ACTIVITIES:

- .1 Optimize the approved conceptual design;
- .2 Explore options to arrive at the optimum schematic design;
- .3 An updated Code Analysis;
- .4 Prepare Class B estimate;
- .5 Recommendations provided for the most viable and effective design option;
- .6 Schematic Design/Development Option selected with risks identified to proceed to detailed design and implementation;
- .7 Update documentation, decision logs, schedules, cost estimates and Cx plan.

2.4.3 DELIVERABLES:

- .1 A clear, brief but complete Schematic Design/Development Report (SDR) including:
 - .1 An executive summary of work done in this phase;
 - .2 Final Design Option which best addresses the OPR and BOD and the rationale and recommendations to proceed to develop and construct
 - .3 A Final Regulatory (Code) Analysis.
 - .4 An indicative cost estimate (Class B);
- .2 User Department acceptance/approval of the selected design option is required to prior to proceeding with Construction Documents.

2.5 CONSTRUCTION DOCUMENTS

2.5.1 GENERAL

- .1 The Construction Documents consist of specifications, drawings and addenda.
- .2 Standard practice for the preparation of Construction Documents requires:

2.5.2 SCOPE AND ACTIVITIES

- .1 Design-Builders are required to provide their own quality control process and must review, correct and coordinate all disciplines within all documents before issuing them to PWGSC.
- .2 Drawings, specifications and addenda must be complete and clear.
 - .1 Drawings demonstrating work to be done depicting shape, dimension, location, quantity of materials and relationship between building components.
 - .2 Specifications providing descriptions of materials and construction processes and may be a separate document/project manual and/or included on the drawings.



- .3 Addenda to the Construction Documents or tendering procedures, issued during the tendering process.
- .3 Final Regulatory requirements, to be included and not limited to:
 - .1 Summary of regulatory and statutory requirements;
 - .2 Summary of authorities having jurisdiction;
 - .3 Summary of codes, regulations, and standards;
- .4 Catalogue cuts and manufacturers installation instructions for all equipment and components.

2.5.3 DRAWINGS

- .1 Dimensions
 - .1 Dimensions are to be in metric.
- .2 Information to be included:
 - .1 Drawings must show the quantity and configuration of the project, the dimensions and details of how it is constructed.
 - .2 No information or references to future work to be changed by future addenda.
 - .3 The scope of work should be clearly and concisely detailed.
- .3 Legends
 - .1 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.
- .4 Schedules
 - .1 Where schedules occupy entire sheets, locate them next to the plan sheets or at the back of each set of drawings for convenient reference.
- .5 North Points
 - .1 On all plans include a north point – with north facing top of the sheet (preferable) or to the left.
 - .2 Orient all plans in the same direction for easy cross-referencing.
- .6 Electronic Copies:
 - .1 PDF documents rotated in orientation intended for reading and viewing;
 - .2 Ensure all text and dimensions on original documents to be of sufficient/archival size to be readable when reduced to 11x17 sheets.

2.5.4 DELIVERABLES

- .1 50% complete Construction Documents for interim submission including:
 - .1 50% content drawings, all essential systems resolved and specification (complete ToC and outline of essential systems/components).
- .2 100% complete Construction Documents issued for Tender including:
 - .1 100% content drawings and specifications, all fully coordinated.
- .3 User Department acceptance/approval of the developed design/documents is required to prior to proceeding with Tender and Construction.

2.5.5 AS-BUILT DRAWINGS

- .1 Provide record drawings (CAD) and close out submissions as per the General Requirements of Division 01.

2.6 PROJECT PROCEDURES MANUAL

2.6.1 GENERAL

- .1 The Design Builder must develop a Project Procedures Manual in consultation with the Departmental Representative for the execution of key Project activities.
- .2 The Manual will provide a clear description of procedures, roles, responsibilities, levels of authority and the information systems for the execution of the Project, including details of the processes and sample formats.



2.7 PROJECT MONITORING AND REPORTING

2.7.1 GENERAL

- .1 The Design Builder must:
 - .1 Provide a system for documentation and project monitoring and reporting through each stage of project delivery, for review and acceptance by the Departmental Representative;
 - .2 Develop and provided a Design Builder Monthly Report for review by the Departmental Representative;
 - .1 The date of issue of the Design Builder Monthly Report will be established to fall on the same date each month and within one week before the established date of issue of the PM Monthly Report, and
 - .2 The structure of the Design Builder Monthly Report must be approved by the Departmental Representative and used for all subsequent project stages.
 - .3 Prepare and submit monthly progress reports during the Construction Document stage in a format accepted by the Departmental Representative including:
 - .1 The progress of the work;
 - .2 All expenditures to date (including all change orders) in a form that compares the original budgets for each trade with the expected costs;
 - .3 All instances where the schedule is not being met;
 - .4 Outline remedial measures being taken;
 - .5 Anticipated and/or potential problems to be addressed;

2.8 BUILDING PERFORMANCE REQUIREMENTS

2.8.1 CONTEXT

- .1 Functional requirements define the minimum Work necessary:
 - .1 Functional requirements do not necessarily include for every component and system required for a complete and fully functional facility.
 - .2 The Design Builder must design, construct and commission a complete and fully functional facility including all required components and systems.
- .2 Material colour and finish must be selected by the architectural consultant and approved by the Departmental Representative (from manufacturer's full standard range).

2.9 PROJECT REVIEW AND APPROVAL

2.9.1 GENERAL

- .1 Provide all documents for review in pdf format. Allow for two (2) weeks turnaround time for Departmental Representative to provide comments.
- .2 Design Builder must respond in writing to the Departmental Representative's written review comments.

2.9.2 ACCEPTANCE OF PROJECT DELIVERABLES

- .1 While PWGSC acknowledges the Design-Builder's obligations to meet project requirements, the project delivery process entitles PWGSC to review any work.
- .2 PWGSC (and SALD through PWGSC) reserves the right to reject undesirable or unsatisfactory work.
- .3 The Design Builder must obtain Departmental Representative acceptance of all required deliverables for the Project.
 - .1 Acceptance indicates that, based on a general review of material for specific issues, the material is considered to comply with the performance requirements and that the overall project objectives appear to be satisfied.
 - .2 Acceptance does not relieve the Design Builder of responsibility for the work and compliance with the contract.



- .3 Acceptance does not prohibit rejection of work, which is determined to be unsatisfactory at later stages of review.

2.9.3 FEDERAL GOVERNMENT

- .1 The PWGSC Departmental Representative, as well as the Federal Authorities identified below will review work in progress on a continuing basis.
- .2 The following are authorities having Federal Government jurisdiction over the project:
 - .1 Treasury Board (as engaged by the Departmental Representative),
 - .2 Public Works and Government Services Canada,

2.9.4 PROVINCIAL, MUNICIPAL AND OTHER AUTHORITIES HAVING JURISDICTION

- .1 The federal government defers to provincial and municipal authorities for specific regulations, standards and inspections but in areas of conflict, the more stringent authority prevails.
- .2 Local Authority having Jurisdiction (municipal) review:
 - .1 A building permit submission is required, complete with issuance of a building permit from local municipal authority in advance of construction commencement;
 - .2 Expected turnaround time is as per local service standard; and
 - .3 For each review, provide required submissions plus requested follow-up clarification documents.
 - .4 Codes, regulations, by-laws and decisions of authorities identified herein as having jurisdiction must be observed.
 - .5 In areas of conflict between authorities, the Federal authority prevails.
 - .6 In areas of conflict between Codes, Standards and regulations, the most rigid requirements must be adhered to.
 - .7 The Design Builder must identify other jurisdictions appropriate to the project.
- .3 Provincial Acts, Regulations, Standards and Inspections:
 - .1 Adhere to all applicable provincial Construction Health and Safety Acts and regulations, in addition to the related Canada Occupational Safety and Health Regulations,
 - .2 Adhere to the requirements of the Labour Standards and Regulations including (but not limited) to,
 - .1 Employment Standards,
 - .2 Construction Safety,
 - .3 Designated Substance Management and
 - .4 Workers Compensation.
- .4 Municipal By-laws, Regulations, Standards and Inspections
 - .1 Unless directed otherwise by the Departmental Representative, the Design Builder will:
 - .1 Make preliminary submissions at stages required by the respective municipality having jurisdiction;
 - .2 Provide all required supporting documentation for permit applications;
 - .3 Apply for and obtain all permits and approvals necessary for the work; including and not limited to Building, and Electrical Permits;
 - .4 Resolve all Building Permit related issues, as may be required;
 - .5 Provide Municipal authorities access to the site as required and arrange for inspections of the construction work by governing utility officials.

2.10 SITE PERFORMANCE REQUIREMENTS

2.10.1 SITE SIGNAGE

- .1 As required, requirements as listed in Div 01.
- .2 Provide signage as required for DB purposes.



2.10.2 INTERRUPTION OF SITE SERVICES TO EXISTING FACILITIES

- .1 Notify Departmental Representative, Client and utility companies of any necessary interruption of services and obtain required permission in writing, at least seven (7) calendar days in advance of the interrupted service.

2.10.3 USE OF SITE

- .1 The site is located at St. Andrews Lock and Dam (SALD), east of the Red River.
 - .1 Other facilities outside of the Limits of Site may be occupied or accessed during the entire construction period for execution of normal operations.
 - .2 Confine operations to avoid conflict.
- .2 Define, in consultation with the Departmental Representative a workable scheme to limit parts of the site to Contractor resources while at the same time allowing the site to be fully operational.
 - .1 The sequential use of the site must be defined in a series of "Limits of Site" drawings prepared by the Contractor and submitted to the Departmental Representative and User Department for review and acceptance.
- .3 Adhere to Departmental Representative and User Department/s restriction and limitations.
- .4 Confine construction activities, parking of vehicles of the Design-Builder or companies directly involved in the project, construction equipment, and areas for storage, stockpiling and plant set-up to Limits of Site and other areas as directed by Departmental Representative in consultation with Owner.
- .5 All business and private vehicles of Sub-contractors, their employees and suppliers must be parked in an area agreed upon by the Departmental Representative..
- .6 The Design-Builder must issue mandatory instructions to all involved companies to uphold these requirements, and to minimize construction associated traffic and associated noise, exhaust and dust pollution, vibration and congestion.

2.11 COMMISSIONING

2.11.1 GENERAL

- .1 Follow the requirements of Part 4 – General Requirements. (Division 01) but limit activities and documentation to the basic requirements of this type of structure with its limited number of components.
- .2 The limited Commissioning must serve to demonstrate for the Design/Build team, PWGSC and the Client that the storage garage, and its various components, operate as intended and provide the necessary functions indicated.



3 PROJECT ADMINISTRATION

3.1 GENERAL REQUIREMENTS

3.1.1 GENERAL

- .1 The administration requirements outlined in this section are applicable to all PWGSC projects in Western Region unless otherwise indicated in the TOR.
- .2 “Project Team” refers to key representatives involved in this project.
- .3 All team members must maintain a professional and collaborative relationship.

3.1.2 LANGUAGE

- .1 Construction documents must be prepared in English.

3.1.3 MEDIA

- .1 The Design-Builder must not respond to any media inquiry.
- .2 Direct all media requests to the Departmental Representative.

3.1.4 PROJECT MANAGEMENT

- .1 Public Works and Government Services Canada administers the project on behalf of Canada and exercises continuing control over the project during all phases of development.
- .2 The PWGSC project management team, the Design-Builder, the Contractor and the User Department teams are to work professionally, cooperatively and collaboratively at every stage of the design and construction process.

3.1.5 SECURITY CLEARANCE AND SECURITY INFORMATION

- .1 The Design-Builder is responsible for maintaining appropriate security measures on site to ensure that equipment and various components are temporarily stored and protected against damage, theft and vandalism.
- .2 The Design-Builder must:
 - .1 Ensure Design-Builder’s project team, including all construction workers, suppliers and manufacturers, are subject to the User Department’s security clearance procedures prior to onsite work.
 - .2 Submit a security and backup procedures plan for all documentation related to this project as requested/required by the Departmental Representative.
 - .3 Protect documents and information in their care and access.

3.2 ROLES AND RESPONSIBILITIES

3.2.1 DESIGN BUILDER

- .1 The Design-Builder is completely responsible for providing and coordinating the work of all resources, professional disciplines and Construction Contractor(s), for the design, construction and completion of the project.
- .2 The Design-Builder must provide a single prime consultant to fulfill the role of the licensed professional of record for the Work and all discipline coordination:
 - .1 The prime consultant must be engaged for the project duration including design, construction, commissioning and satisfactory completion of a fully functioning facility.
- .3 The Design-Builder and their personnel identified in the completed Team Identification Form, in the RFP submission, including Sub-Contractors and Specialists comprise the Design Build Team.
- .4 The Design-Builder will be required to maintain its team’s expertise for the duration of the project and to comply with and adhere to:
 - .1 All the requirements in the Contract;
 - .2 All commitments made and included in the RFP submission and in the completed Declaration Form.



- .5 The Design Builder must:
 - .1 Provide all necessary personnel and licensed professionals to perform the Services and duties for the Project, either by assignment of Design Builder qualified staff or by engagement of services contracted directly to the Design Builder,
 - .1 Assign qualified staff and/or engage the services of designers, specialists and/or licensed professionals as required by the province/territory of jurisdiction;
 - .2 Complete the Work with Design Builder's Own Forces and/or contracted Sub-Trades;
 - .3 Engage and manage the Services and Work of qualified and experienced individuals and/or firms to provide the services for which the Design-Builder does not have qualified personnel on staff,
 - .4 Ensure continuity of key personnel and maintain a dedicated working team for the life of this project,
 - .2 Implement and deliver a rigorous design and construction Quality Assurance system,
 - .3 Carefully document and deliver comprehensive Field Review services and reports during the construction phase.
 - .4 Provide contact information for designated Design-Builder's personnel for the purpose of emergencies and if their presence required on site outside normal business hours throughout the project
 - .5 Work constructively to ensure a collaborative and cooperative team approach with knowledge, timely inputs and contributions by all project team members.
 - .6 Commission the Work.

3.2.2 PWGSC TEAM

- .1 The PWGSC Project Manager is;
 - .1 The Departmental Representative,
 - .2 Responsible for conveying all SALD requirements to the Design-Builder,
 - .3 The liaison amongst and between the Design-Builder, Public Works and Government Services Canada and the User Departments.
- .2 PWGSC Architecture and Engineering Centre of Expertise (AECoE) Team:
 - .1 Provides oversight and quality assurance for architectural and engineering disciplines;
 - .2 Reviews documents and drawings submitted by the Design Builder at designated design and construction document stages per TOR.
 - .3 May attend design and construction meetings;
 - .4 AECoE may involve the following disciplines:
 - .1 Architecture & Interior Design
 - .2 Structural Engineering
 - .3 Mechanical Engineering
 - .4 Electrical Engineering
 - .5 Fire Protection Engineering

3.2.3 USER DEPARTMENT TEAM

- .1 The Project Leader is responsible for the interests of User Department, in collaboration with the Departmental Representative.



3.3 DESIGN BUILDER QUALITY ASSURANCE

3.3.1 GENERAL QUALITY ASSURANCE

- .1 The Design-Builder must ensure that:
 - .1 The performance of the Work is in accordance with the specific requirements outlined in this TOR or equivalent or better than standard accepted industry practices for the type of Work, if not stipulated more precisely in the requirements.
 - .2 The Work performed in a neat and careful manner to retain Work plumb, square, and straight.
 - .3 The Work is properly related, to form close joints and appropriately aligned junctions, edges and surfaces and is free of warp, twist, wind, wave or other irregularities.
 - .4 Architects and Engineers provide full contract services as are outlined in the respective Professional Association Guidelines and Best Practices and typical Contracts to ensure conformance to the design and project requirements.

3.3.2 QUALITY ASSURANCE PLAN

- .1 Provide a Quality Control Plan for the purpose ensuring;
 - .1 Documentation of the Design Builder's QA process,
 - .2 Proper lines of communication,
 - .3 Responsibility and accountability of the design,
 - .4 Routine and consistent checks,
 - .5 Conformity with specified performance Standards,
 - .6 Ensuring that materials and items of equipment delivered conform to specifications, before they are incorporated into Work,
 - .7 Identify items of Work that will be subjected to quality assurance measures.
- .2 Activities of the plan should include, but not necessarily be limited to, activities such as:
 - .1 Setting up a system of reviews by Designer's personnel,
 - .2 Engaging appropriately qualified Sub-contractors capable of producing good quality work,
 - .3 Ensuring adequate materials testing procedures are in place, and quality assurance tests carried out and the results acceptable,
 - .4 Consulting with personnel and Sub-contractors to confirm that requirements of the drawings and specifications are thoroughly understood,
 - .5 Close supervision during each stage of each construction operation to ensure Work is being done in accordance with drawings and specifications and in a workmanlike manner,
 - .6 Maintain a checklist and status of inspections, checks, tests.
- .3 Integrate the Quality Assurance Plan with the Commissioning Plan.

3.4 COMMUNICATION AND MEETINGS

3.4.1 COMMUNICATION

- .1 Unless otherwise directed by the Departmental Representative, the Design Builder will conduct all project communication through the Departmental Representative only.
- .2 If any communication results in the need for any change to the Project's scope of work, quality, cost or schedule, the Design Builder must inform the Departmental Representative, and seek direction, before taking any action.



- .3 The Departmental Representative will arrange for the Design Builder to obtain access to PWGSC's secured shared document management site (Buzzsaw).
- .4 Correspondence:
 - .1 All correspondence from the Design Builder must be distributed as directed by the Departmental Representative,
 - .2 There must be no correspondence between occupants or users of the facility and the Design Builder unless directed by the Departmental Representative,
 - .3 All correspondence must carry the Contract name/number, PWGSC Project title, PWGSC Project/WBS number and date in gc.ca format:
 - .1 PWGSC/gc.ca date format is yyyy-mm-dd.
 - .4 Automatic date fields must not be used except when preceded by "Printed on:"
- .5 The Design Builder must:
 - .1 Develop a communication and correspondence protocol, submit it to the Departmental Representative for review and acceptance prior to implementation and incorporate it into the Project Procedures Manual,
 - .1 Account for the involvement of all Stakeholders in this protocol.
 - .2 Direct communication and correspondence between members of the PWGSC Project Team, Design Builder and the User Departments on routine matters as required to enable the project to proceed in a timely and efficient manner,
 - .1 However, no communication must alter the terms of the project scope, budget or schedules unless directed in writing by the Departmental Representative.
 - .3 Provide agenda minimum 2 working days in advance of meetings.

3.4.2 MEETINGS: DESIGN AND CONSTRUCTION DOCUMENT STAGES

- .1 Design Builder will be responsible for:
 - .1 Preparing minutes of meetings during the design phases, and
 - .2 Forwarding minutes to the Departmental Representative and SALD
 - .3 These meetings are for the accurate exchange of information.
 - .4 All requests and decisions taken must follow the formal lines of communications.
- .2 Meetings with PWGSC, the Design Builder during the construction phase will all occur on site.
- .3 Design Builder will arrange meetings bi-weekly, or scheduled at a frequency acceptable to the Departmental Representative, through to the completion of the design and construction documents including the development of the Commissioning Plan for the project, with representatives from:
 - .1 PWGSC;
 - .2 Design Builder team; and
 - .3 SALD representatives.

3.4.3 MEETINGS: CONSTRUCTION STAGES

- .1 Design Builder must:
 - .1 Arrange and coordinate all construction meetings on site:
 - .1 Regular meetings to be held bi-weekly, or scheduled at a frequency acceptable to the Departmental Representative, through the duration of the project, Commissioning may occur following regular meetings;
 - .2 Prepare and distribute minutes within two (2) working days of the meeting,
 - .3 Endeavour to hold all meetings as Green Meetings (i.e. Electronic copies of documents where possible or double sided hard copies).
- .2 Establish a list of standing agenda items, including (as a minimum) the following standing agenda items:
 - .1 Schedule and progress,



- .2 Cost issues and changes,
- .3 Risk and quality issues,
- .4 Quality,
- .5 Scope of work,
- .6 Site safety,
- .7 Sustainable development, and
- .8 Commissioning.

3.4.4 SUBMISSIONS TO PWGSC

- .1 Submissions to PWGSC including summaries, reports, network diagrams, drawings, plans, specifications or finish schedules:
 - .1 Submit one (1) original to the Departmental Representative in electronic format unless otherwise directed in writing.
- .2 Electronic formats:
 - .1 The electronic deliverables must be provided using Microsoft applications.
 - .2 Alternatively, the Design Builder may submit all work in Adobe Acrobat *.pdf format except for Network Diagrams which must be submitted in their original electronic format.
 - .3 Responses to PWGSC reviews to be in the original/editable .doc/.docx format provided by the reviewer.

3.4.5 PROJECT RESPONSE TIME

- .1 Key personnel of the Design Builder are required to be personally available to attend all meetings and respond to inquiries promptly.
- .2 During the project, the Design Builder's Key Personnel must be:
 - .1 Available to attend meetings and respond to inquiries within one (1) working day's notice;
 - .2 Respond to emergencies within four (4) hours including those occurring during off-hours and on weekends/ holidays.
- .3 On occasion, there may be urgent, problem-solving meetings.
 - .1 The Design Builder must be available to attend such meetings within four (4) business hours.

3.5 SCHEDULE MANAGEMENT

3.5.1 PROJECT SCHEDULE

- .1 A Detailed Project Schedule is a schedule developed in reasonable detail to ensure adequate Time Management planning and control of the project.
- .2 Project Schedules are used as a guide for the planning, design and implementation phases 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).
- .3 When building a Project Schedule, the Design-Builder must consider:
 - .1 The level of detail required for control and reporting;
 - .2 The reporting cycle must be monthly, unless otherwise identified in the TOR.
 - .3 What is required for reporting in the Project Teams Communications Plan and
 - .4 The nomenclature and coding structure for naming of scheduled activities and must be submitted to the Departmental Representative for acceptance.

3.5.2 MILESTONES

- .1 The Major Milestones are standard Deliverables and Control Points and are required in all schedule development.
- .2 These Milestones will be used in Time Management Reporting within PWGSC as well as used for monitoring project progress using Variance Analysis.



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

3.5.3 ACTIVITIES

- .1 All activities will need to be developed based on:
 - .1 Project Objectives
 - .2 Project Scope
 - .3 Deliverables
 - .4 Key Milestones
 - .5 Meetings with the project team and
 - .6 The scheduler's full understanding of the project and its processes.
- .2 Subdivide elements into manageable increments to structure and define the total scope of work in levels that can be scheduled, monitored and controlled.
 - .1 This process will develop the Activity List for the project.
- .3 Each activity will describe the work to be performed using a verb and noun combination (i.e. Review Design Development Report).
- .4 These elements will become activities, interdependently linked in the Project Schedule.

3.5.4 SCHEDULE REVIEW AND APPROVAL

- .1 Once the scheduler has identified and properly coded all the activities to the acceptance of the Departmental Representative, the activities are then sorted into a logical order and appropriate duration and applied to complete the schedule.
- .2 The scheduler, together with the Project Team, can then analyze the schedule to see if the milestone dates meet the project timelines and then adjust the schedule accordingly by modifying durations or changing logic.
- .3 When the schedule has been satisfactorily prepared, the scheduler can present the detailed schedule back to the Project Team for acceptance and application as the project baseline.
 - .1 There may be several iterations before the schedule meets with the Project Teams agreement and the critical project timelines.
- .4 The final agreed version must be copied and saved as the Baseline Schedule used to monitor variances throughout the project.

3.5.5 SCHEDULE MONITORING AND CONTROL

- .1 The Baseline Schedule will be better monitored, documented and reported.
- .2 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.
- .3 There will be several schedules generated from the analysis of the baseline schedule as outlined in the Required Services Sections of the TOR
- .4 Each updated schedule reflects the progress of each activity to date, any logic changes, both historic and planned, projections of progress and completion indicating the actual start and finish dates of all activities being monitored.
- .5 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 in accordance with the TOR.
- .6 If unforeseen or critical issues arise, the Scheduler will advise the Departmental Representative and submit proposed alternative solutions in the form of an Exception Report.
 - .1 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.
- .7 At each submission or deliverable stage, provide an updated schedule and exception report.

3.6 WASTE MANAGEMENT

3.6.1 PROTOCOL

- .1 The Construction, Renovation, and Demolition (CRD) Non-hazardous Solid Waste Management Protocol to which PWGSC is bound, provides direction on the undertaking of non-hazardous solid waste management actions on projects;
 - .1 The protocol is designed to meet federal requirements, provincial/territorial policies and PWGSC Sustainable Development Strategy (SDS) objectives;
- .2 The contractor must implement a solid waste management program;
- .3 Contractors must be instructed to plan for extra project time when implementing CRD waste diversion initiatives;
 - .1 Added labour costs can be recuperated and waste management costs savings can be achieved through reduced tipping fees, avoided haulage costs, and the sale of reusable and recyclable materials.

3.6.2 DESIGN-BUILDER RESPONSIBILITIES

- .1 Research and investigate hazardous waste disposal strategies in context of the project and make recommendations;
- .2 Include in the contract documents, a requirement for the contractor to develop a waste reduction and management plan during the construction of this project;
- .3 Identify where large (garbage) bins must be stored, as well as easy disposal truck access/exit to/from same, to assist the Contractor in reducing waste or re-cycling of materials on and off site.

4 GENERAL REQUIREMENTS (DIVISION 01)

4.1 01 11 00 - SUMMARY OF WORK

4.1.1 WORK SEQUENCE

- .1 Construct Work in stages to accommodate Departmental Representative's continued use of the site and existing surrounding premises during construction.
- .2 Maintain fire access/control.

4.1.2 WORK BY OTHERS

- .1 Co-operate with other Contractors in carrying out their respective works and carry out instructions from Departmental Representative.
- .2 Co-ordinate work with that of other Contractors. If any part of work under this Contract depends for its proper execution or result upon work of another Contractor, report promptly to Departmental Representative, in writing, any defects which may interfere with proper execution of Work.

4.1.3 DESIGN BUILDER USE OF PREMISES

- .1 Restricted use of site and premises as directed by Departmental Representative until Substantial Performance.



- .2 Limit use of premises for Work, and for storage.
 - .1 Utilize Laydown areas for all storage, all vehicle and equipment parking, and all site offices and trailers.
 - .2 Maintain Laydown Area to prevent dusting and mud.
 - .3 Make good Laydown Area to original condition, composition, nature and character upon completion of Work.
- .3 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

4.1.4 EXISTING SERVICES

- .1 Notify, Departmental Representative and utility companies, with minimum 7 days notice, of intended interruption of services and obtain required permission.
- .2 Minimize duration of interruptions.
- .3 Carry out work at times as directed by governing authorities with minimum disturbance to facility operation.
- .4 Provide alternative routes for personnel, pedestrian and vehicular traffic.
- .5 Establish location and extent of service lines in area of work before starting Work. Notify Departmental Representative of findings.
- .6 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility including power and communications services. Adhere to approved schedule and provide notice to affected parties.
- .7 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .8 Construct barriers in accordance with Section 01 56 00.
- .9 Provide and maintain for purposes of the Work access road within construction area for Design Builder's own construction vehicles, equipment and material access.

4.1.5 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each document as follows:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed Shop Drawings.
 - .5 List of Outstanding Shop Drawings.
 - .6 Change Orders.
 - .7 Commissioning Documentation
 - .8 Other Modifications to Contract.
 - .9 Field Test Reports.
 - .10 Copy of Approved Work Schedule.
 - .11 Health and Safety Plan and Other Safety Related Documents.
 - .12 Material and Safety Data Sheets.
 - .13 Labour conditions and Wage Schedules.
 - .14 Material and Labour Bonds.
 - .15 Manufacturers' applicable instructions.
 - .16 Municipal and Provincial Permits.
 - .17 Other documents as specified.

4.2 01 14 00 - WORK RESTRICTIONS

4.2.1 ACCESS AND EGRESS

- .1 Design, construct and maintain temporary "access to" and "egress from" work areas, including stairs, ramps or ladders and scaffolding, independent of finished surfaces and in accordance with municipal, provincial and other regulations.



- .2 Subject to security clearances. the DB will have site access 24/7, 7 days a week.

4.2.2 BUILDING SMOKING RESTRICTIONS

- .1 Comply with smoking restrictions. Smoking is not allowed.

4.3 01 29 00 - PAYMENT PROCEDURES

4.3.1 APPLICATION FOR PROGRESS PAYMENT

- .1 Submit a Cost Breakdown, in detail to the Department Representative at least 14 days before first application for progress payment for the Work aggregating the total amount of the Contract Price;
- .2 After approval by Department Representative, the Cost Breakdown will be used as the basis for progress payments.
- .3 Support claims for products and material delivered to the Place of the Work that are not yet incorporated into Work with the documentation/evidence to establish the value and delivery of products as required by the Departmental Representative.

4.4 01 31 19 - PROJECT MEETINGS

4.4.1 ADMINISTRATIVE

- .1 Schedule and administer project meetings throughout the progress of the work.
- .2 Prepare agenda for meetings.
- .3 Distribute written notice of each meeting four days in advance of meeting date to Departmental Representative.
- .4 Make arrangements for meetings.
- .5 Preside at meetings.
- .6 Record the meeting minutes including;
 - .1 Include significant proceedings and decisions.
 - .2 Identify actions by parties.
- .7 Reproduce and distribute copies of minutes within three days after meetings and transmit to meeting participants and, affected parties not in attendance and Departmental Representative.
- .8 Representative of Design-Builder, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

4.4.2 PRECONSTRUCTION MEETING

- .1 Within 7 days after each Contract award, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Departmental Representative, Design Builder, major Subcontractors, field inspectors and supervisors will be in attendance.
- .3 Establish time, location and agenda of meetings and notify parties concerned a minimum of 5 days prior to the meeting.
- .4 Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
- .5 Agenda to include:
 - .1 Appointment of official representative of participants in the Work.
 - .2 Schedule of Work: in accordance with Section 01 32 15.
 - .3 Schedule of submission of shop drawings, samples, colour chips, product data. Submit submittals in accordance with Section 01 33 00.
 - .4 Commissioning
 - .5 Requirements for temporary facilities, in accordance with Section 01 52 00.
 - .6 Delivery schedule of specified equipment in accordance with Section.
 - .7 Site security in accordance with Section 01 56 00.



- .8 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.
- .9 Departmental Representative provided products.
- .10 Record drawings in accordance with Section 01 33 00.
- .11 Maintenance manuals in accordance with Section 01 78 00.
- .12 Take-over procedures, acceptance, warranties in accordance with Section 01 78 00.
- .13 Monthly progress claims, administrative procedures, photographs, hold backs.
- .14 Appointment of inspection and testing agencies or firms.
- .15 Insurances, transcript of policies.

4.4.3 PROGRESS MEETINGS

- .1 During course of Work schedule construction and commissioning progress meetings every two weeks.
- .2 Design Builder, major Subcontractors involved in Work and Departmental Representative are to be in attendance.
- .3 Notify parties a minimum of 5 days prior to meetings.
- .4 Record minutes of meetings and circulate to attending parties and affected parties not in attendance within 2 days after meeting.
- .5 Agenda to include the following items such as:
 - .1 Review, approval of minutes of previous meeting.
 - .2 Review of Work progress since previous meeting.
 - .3 Field observations, problems, conflicts.
 - .4 Problems which impede construction schedule.
 - .5 Review of off-site fabrication delivery schedules.
 - .6 Corrective measures and procedures to regain projected schedule.
 - .7 Revision to construction schedule.
 - .8 Progress schedule, during succeeding work period.
 - .9 Review submittal schedules: expedite as required.
 - .10 Commissioning.
 - .11 Maintenance of quality standards.
 - .12 Review proposed changes for affect on construction schedule and on completion date.
 - .13 Health and Safety
 - .14 Other business.

4.5 01 32 15 - CONSTRUCTION PROGRESS SCHEDULES

4.5.1 GENERAL

- .1 Use a project management control system based on Critical Path Method (CPM) and Bar (GANTT) Chart techniques as may be required and agreed with the Departmental Representative.
- .2 Schedule reviews by Departmental Representative shall not mean approval of detail inherent in schedule, responsibility for which lies with Design Builder.

4.5.2 KEY REQUIREMENTS

- .1 Summary-level Schedule identifying major activities and key milestones.
- .2 Project Plan: a formal, approved document to guide project execution and project control. Primary uses of Project Plan include:
 - .1 Document planning assumptions and decisions
 - .2 Facilitate communication among stakeholders
 - .3 Document approved scope, cost, and schedule baselines.



- .4 Project Plans may be a summary or detailed and an executive summary is advised for detailed Project Plans.
- .3 Project Schedule: planned dates for performing activities and planned dates for meeting milestones.
- .4 Risk: uncertain event or condition that, if it occurs, has positive or negative effect on Project's objectives.
- .5 Include work breakdown by Sub-Contract or Own Forces and major tasks.

4.5.3 SYSTEM DESCRIPTION

- .1 Construction Progress Schedule (Project Time Management):
 - .1 Describes processes required to ensure timely completion of Project.
 - .2 These processes ensure that various elements of Project are properly coordinated.
 - .3 Consists of planning, scheduling, progress monitoring and control.
- .2 Project monitoring and reporting:
 - .1 As the project progresses, keep team aware of changes to schedule, impacts and possible consequences.

4.5.4 SCHEDULE REQUIREMENTS

- .1 Ensure Schedule is practical and remains within specified Contract duration.
- .2 Acceptance of Schedule showing scheduled Contract duration shorter than specified Contract duration does not constitute change to Contract. Duration of Contract may only be changed through bilateral Agreement.
- .3 Consider Schedule showing Work completed in less than specified Contract duration, to have float.
- .4 Calculate dates for completion milestones from Plan and Schedule.
- .5 Delays to non-critical activities, those with float may not be basis for time extension.
- .6 Allow for and include adverse weather conditions normally anticipated within Schedule. Specified Contract duration has been predicated assuming normal amount of adverse weather conditions.
- .7 Provide necessary crews and manpower to meet schedule requirements for performing Work within specified Contract duration. Simultaneous use of multiple crews on multiple fronts on multiple critical paths may be required.
- .8 Arrange participation on and off site of Design Builder's Contractors, Own Forces and suppliers, as required by Departmental Representative for purpose of network planning, scheduling, updating and progress monitoring. Approvals by Departmental Representative of original networks and revisions do not relieve Design Builder from duties and responsibilities required by Contract.
- .9 Substantial Completion Certificate and Final Certificate as defined times of completion are of essence of this contract.

4.5.5 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00.
- .2 Submit preliminary construction progress schedule and Commissioning Schedule within 7 days of Construction Approval to Departmental Representative for review.
- .3 Coordinate with Departmental Representative's project schedule.
- .4 After review, revise and resubmit schedule to comply with revised project schedule.
- .5 During progress of Work revise and resubmit as directed by Departmental Representative.
- .6 Submit Project planning and monitoring data as required by Departmental Representative in following form.;



- .1 CD files in original scheduling software specified in TOR and PWGSC Documentation and Submissions Standards containing schedule and cash flow information, labeled with data date, specific update, and person responsible for update.
- .2 Schedule Bar Chart.
- .3 Criticality report listing activities and milestones with days total float.
- .4 Progress report in early start sequence, listing for each trade or tender package, activities due to start, underway, or finished within two months from monthly update date. List activity identifiers, description and duration.

4.5.6 QUALITY ASSURANCE

- .1 Use experienced personnel, fully qualified in planning and scheduling to provide services from start of construction to Final Certificate, including Commissioning.

4.5.7 PROJECT MILESTONES

- .1 Project milestones include:
 - .1 Award.
 - .2 Submissions such as shop drawings and samples.
 - .3 Permits.
 - .4 Mobilization and demobilization.
 - .5 Demolition.
 - .6 Tender Packages/Own Forces Work.
 - .7 Structural Work.
 - .8 Electrical.
 - .9 Earthwork.
 - .10 Exterior Work.
 - .11 Commissioning
 - .1 Systems
 - .2 Final Commissioning Report
 - .12 Training
 - .13 Substantial Completion.
 - .14 Final Certificate Completion.

4.5.8 SCHEDULE

- .1 Provide project schedules within 5 working days of agreement to proceed with construction, showing activity sequencing, interdependencies and duration estimates. Include listed activities as follows:
 - .1 Shop drawings.
 - .2 Samples.
 - .3 Approvals.
 - .4 Procurement.
 - .5 Construction.
 - .6 Installation.
 - .7 Site works.
 - .8 Testing.
 - .9 Commissioning and acceptance.
- .2 Insert Change Orders in appropriate and logical location of Schedule. After analysis, clearly state and report to Departmental Representative for review effects created by insertion of new Change Order.

4.5.9 REVIEW OF THE CONSTRUCTION SCHEDULE

- .1 Allow 5 workdays for review by Departmental Representative of proposed construction Schedule.



- .2 Upon receipt of reviewed Schedule make necessary revisions and resubmit to Departmental Representative for review within 5 workdays.
- .3 Promptly provide additional information to validate practicability of Schedule as required by Departmental Representative.
- .4 Submittal of Schedule indicates that it meets Contract requirements and will be executed generally in sequence.

4.5.10 COMPLIANCE WITH SCHEDULE

- .1 Comply with reviewed Schedule.
- .2 Proceed with significant changes and deviations from scheduled sequence of activities that cause delay, when agreed by Departmental Representative.
- .3 Identify activities that are behind schedule and causing delay. Provide measures to regain slippage.
 - .1 Construction delays affecting project schedule will not constitute justification for extension of contract completion date.

4.5.11 PROGRESS MONITORING AND REPORTING

- .1 On ongoing basis, Schedule on job site must show "Progress to Date". Arrange participation on and off site of Design Builder's Own Forces, Contractors and suppliers, as, and when necessary, for purpose of network planning, scheduling, updating and progress monitoring. Inspect Work with Departmental Representative at least once monthly to establish progress on each current activity shown on applicable networks.
- .2 Perform Schedule update monthly with status dated (Data Date) on last working day of month. Update to reflect activities completed to date, activities in progress, logic and duration changes.
- .3 Submit to Departmental Representative copies of updated Detail Schedule.
- .4 Requirements for monthly progress monitoring and reporting are basis for progress payment request.
- .5 Submit monthly written report based on Detail Schedule, showing Work to date performed, comparing Work progress to planned, and presenting current forecasts. Report must summarize progress, defining problem areas and anticipated delays with respect to Work schedule, and critical paths. Explain alternatives for possible schedule recovery to mitigate any potential delay. Include in report:
 - .1 Description of progress made.
 - .2 Pending items and status of: permits, shop drawings, Change Orders, possible time extensions.
 - .3 Status of Design Builder's Contractors' completion date and milestones.
 - .4 Risk review including current and anticipated problem areas, potential areas of delays and gains and corrective measures and opportunities with gains in time.
 - .5 Review of progress and status of critical activities.

4.6 01 33 00 - SUBMITTAL PROCEDURES

4.6.1 ADMINISTRATIVE

- .1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Present shop drawings, product data, samples in SI Metric units.
- .3 Where items or information is not produced in SI Metric units converted values are acceptable.
- .4 Review submittals prior to submission to Departmental Representative. This review represents that necessary requirements have been determined and verified, or will



be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and considered rejected.

- .5 Verify field measurements and affected adjacent Work are coordinated.
- .6 Design Builder's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .7 Design Builder's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.
- .8 Keep one reviewed copy of each submission on site.
- .9 Unless otherwise stated, ensure 4 reviewed copies of all submissions are available to be retained by the Departmental Representative.

4.6.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other product data which are to be provided by Design Builder to illustrate details of a portion of Work.
- .2 Submit shop drawings bearing stamp and signature of qualified professional registered or licensed in a Province or Territory in Canada.
 - .1 Submit in addition to specified number of hard copies in electronic pdf version.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Allow 5 working days for Departmental Representative's review of each submission.
- .5 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Design Builder's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .8 Submissions include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Design Builder.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Design Builder's stamp, signed by Design Builder's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.



- .2 Layout, showing dimensions, including identified field dimensions, and clearances.
- .3 Setting or erection details.
- .4 Capacities.
- .5 Performance characteristics.
- .6 Standards.
- .7 Operating weight.
- .8 Wiring diagrams.
- .9 Single line and schematic diagrams.
- .10 Relationship to adjacent work.
- .9 After Departmental Representative's review, distribute copies.
- .10 Submit 4 prints of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
- .11 Submit 4 copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .12 Submit 4 copies of test and commissioning reports for requirements requested in specification Sections and as Departmental Representative may reasonably request.
 - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
- .13 Submit 4 copies of certificates for requirements requested in specification Sections and as Departmental Representative may reasonably request.
 - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.
 - .2 Certificates must be dated after award of project contract complete with project name.
- .14 Submit 4 copies of manufacturers instructions for requirements requested in specification Sections and as Departmental Representative may reasonably request.
 - .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .15 Submit 4 copies of Manufacturer's Field Reports for requirements requested in specification Sections and as Departmental Representative may reasonably request.
 - .1 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .16 Submit 4 copies of Operation and Maintenance Data for requirements requested in specification Sections and as Departmental Representative may reasonably request.
- .17 Delete information not applicable to project.
- .18 Supplement standard information to provide details applicable to project.
- .19 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
- .20 The review of shop drawings by Departmental Representative is for sole purpose of ascertaining conformance with general concept.



- .1 This review shall not mean that Departmental Representative approves detail design inherent in shop drawings, responsibility for which shall remain with Design Builder submitting same, and such review shall not relieve Design Builder of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.
- .2 Without restricting generality of foregoing, Design Builder is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades.

4.6.3 PROGRESS PHOTOGRAPHS

- .1 Submit digital progress photographs.
- .2 Frequency: twice monthly and with each progress statement.

4.7 01 35 43 - ENVIRONMENTAL PROCEDURES

4.7.1 NOTIFICATION

- .1 Design Builder to confirm in writing with the Departmental Representative, in writing, compliance with applicable Federal, Provincial or Municipal environmental laws or regulations, permits.
- .2 Design Builder: after receipt of any notice of non-compliance, must inform Departmental Representative of proposed corrective action and take such action for approval by Departmental Representative.
- .3 No time extensions granted or equitable adjustments allowed to Design Builder for such suspensions.

4.8 01 41 00 - REGULATORY REQUIREMENTS

4.8.1 REFERENCES AND CODES

- .1 Perform Work in accordance with National Building Code of Canada (NBC) including Provincial amendments, as current up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2 Meet or exceed requirements of:
 - .1 Contract documents.
 - .2 Specified standards, codes and referenced documents.

4.8.2 BUILDING SMOKING ENVIRONMENT

- .1 Comply with smoking restrictions and municipal by-laws.

4.9 01 45 00 - QUALITY CONTROL

4.9.1 INSPECTION

- .1 Allow Departmental Representative access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give at minimum, 3 working days notice requesting inspection if Work is designated for special tests, inspections or approvals by Departmental Representative instructions, or law of Place of Work.
- .3 If Design Builder covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 Departmental Representative will order part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with



Contract Documents, Departmental Representative shall pay cost of examination and replacement.

4.9.2 PROCEDURES

- .1 Notify appropriate agency and Departmental Representative in advance of requirement for tests, in order that attendance arrangements can be made.
- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in orderly sequence to not cause delays in Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

4.9.3 REJECTED WORK

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Departmental Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Work damaged by such removals or replacements promptly.
- .3 If in opinion of Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Departmental Representative.

4.9.4 REPORTS

- .1 Submit 4 copies of inspection and test reports to Departmental Representative.
- .2 Provide copies to subcontractor of work being inspected or tested and manufacturer or fabricator of material being inspected or tested.

4.10 01 51 00 - TEMPORARY UTILITIES

4.10.1 TEMPORARY HEATING AND VENTILATION

- .1 Provide temporary heat and ventilation in enclosed areas as required to:
 - .1 Protect susceptible work from freezing.
- .2 Ventilating:
 - .1 Prevent accumulations of dust, fumes, mists, vapours or gases in areas occupied during construction.
- .3 Maintain strict supervision of operation of temporary heating and ventilating equipment to:
 - .1 Conform with applicable codes and standards.
 - .2 Enforce safe practices.
 - .3 Prevent abuse of services.
 - .4 Prevent damage to finishes.
 - .5 Vent direct-fired combustion units to outside.
- .4 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

4.11 01 52 00 - CONSTRUCTION FACILITIES

4.11.1 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CSA-A23.1/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.
 - .2 CSA-0121-M1978(R2003), Douglas Fir Plywood.



- .3 CAN/CSA-S269.2-M1987(R2003), Access Scaffolding for Construction Purposes.
- .4 CAN/CSA-Z321-96(R2001), Signs and Symbols for the Occupational Environment.
- .2 Master Painters Institute (MPI)

4.11.2 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00.

4.11.3 CONSTRUCTION PARKING

- .1 Parking
 - .1 Limited parking is available on site.
- .2 Make good damage to roads used for project site access.
- .3 Provide and maintain adequate access to project site.
- .4 Clean site access areas/routes where used by Design Builder's equipment.

4.11.4 OFFICE AND TRAILERS

- .1 A nearby location on site can be made available for the DB's site office and a trailer should the DB require. DB will be responsible for own services.

4.11.5 EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

4.11.6 SANITARY FACILITIES

- .1 The Design/Builder must provide for workers sanitary facilities, coordinate with SALD.

4.11.7 CONSTRUCTION SIGNAGE

- .1 No construction advertisement signs, other than health and safety, warning and instructional signs, are permitted on site.
- .2 Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if directed by Departmental Representative.

4.11.8 CLEAN-UP

- .1 Remove construction debris, waste materials, packaging material from work site daily.
- .2 Clean dirt or mud tracked onto paved or surfaced roadways.
- .3 Store materials resulting from demolition activities that are salvageable.
- .4 Stack stored new or salvaged material not in construction facilities.

4.12 01 56 00 - TEMPORARY BARRIERS AND ENCLOSURES

4.12.1 INSTALLATION AND REMOVAL

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from site all such work after use.

4.12.2 GUARD RAILS AND BARRICADES

- .1 Provide as required by governing authorities.

4.12.3 FIRE ROUTES

- .1 Maintain access to property including overhead clearances for use by emergency response vehicles.

4.12.4 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY



- .1 Protect surrounding private and public property including laydown, site office facilities and parking areas from damage during performance of Work.
- .2 Be responsible for damage incurred.

4.13 01 61 00 - COMMON PRODUCT REQUIREMENTS

4.13.1 QUALITY

- .1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition.
- .3 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .4 Should disputes arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .6 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

4.13.2 AVAILABILITY

- .1 Immediately upon signing Contract(s), review product delivery requirements and anticipate foreseeable supply delays for items. If delays in supply of products are foreseeable, notify Departmental Representative of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .2 In event of failure to notify Departmental Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Departmental Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

4.13.3 STORAGE HANDLING AND PROTECTION

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials, lumber and on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .8 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

4.13.4 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work.



- .2 Departmental Representative will pay for transportation cost of products supplied by Departmental Representative. Unload, handle and store such products.

4.13.5 MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise indicated in specifications install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, to allow for Departmental Representative's review of the next course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

4.13.6 QUALITY OF WORK

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Departmental Representative if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative whose decision is final.

4.13.7 CO-ORDINATION

- .1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

4.13.8 REMEDIAL WORK

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

4.13.9 FASTENINGS

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

4.13.10 FASTENINGS – EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.



- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

4.13.11 PROTECTION OF WORK IN PROGRESS

- .1 Prevent overloading of parts of building. Do not cut, drill or sleeve load bearing structural member, unless specifically indicated without written approval of Departmental Representative.

4.14 01 71 00 - EXAMINATION AND PREPARATION

4.14.1 EXISTING SERVICES

- .1 Before commencing work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings.

4.14.2 RECORDS

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 On completion of foundations and major site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of Work.
- .3 Record locations of maintained, re-routed and abandoned service lines.

4.14.3 SUBMITTALS

- .1 Submit name and address of Surveyor to Departmental Representative.
- .2 On request of Departmental Representative, submit documentation to verify accuracy of field engineering work.
- .3 Submit certificate signed by surveyor certifying those elevations and locations of completed Work that conform and do not conform with Contract Documents.

4.15 01 73 03 - EXECUTION REQUIREMENTS

4.15.1 SUBMITTALS

- .1 Submittals: in accordance with Section 01 33 00.

4.15.2 MATERIALS

- .1 Required for original installation.
- .2 Change in Materials: Submit request for substitution in accordance with Section 01 33 00.

4.15.3 PREPARATION

- .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- .2 After uncovering, inspect conditions affecting performance of Work.
- .3 Beginning of work means acceptance of existing conditions.
- .4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.

4.15.4 EXECUTION

- .1 Execute cutting, fitting, and patching including excavation and fill to complete Work.
- .2 Fit several parts together, to integrate with other Work.
- .3 Uncover Work to install ill-timed Work.
- .4 Remove and replace defective and non-conforming Work.
- .5 Remove samples of installed Work for testing.
- .6 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.
- .7 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.



- .8 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- .9 Restore work with new products in accordance with requirements of Contract Documents.
- .10 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

4.16 01 74 11 - CLEANING

4.16.1 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Design Builders.
- .2 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .3 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .4 Provide on-site containers for collection of waste materials and debris.
- .5 Provide and use marked separate bins for recycling. Refer to Section 01 74 21.
- .6 Dispose of waste materials and debris off site.
- .7 Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.
- .8 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .9 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .10 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .11 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

4.16.2 FINAL CLEANING

- .1 When Work is Substantially Performed remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for use.
- .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
- .4 Remove waste materials from site at regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .5 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .6 Remove dirt and other disfiguration from exterior surfaces.
- .7 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.

4.17 01 74 21 - CONSTRUCTION DEMOLITION WASTE MANAGEMENT AND DISPOSAL

4.17.1 WASTE MANAGEMENT GOALS

- .1 Prior to start of Work conduct meeting with Departmental Representative to review and discuss PWGSC's waste management goals.
- .2 PWGSC's waste management goal 75 percent of total project waste to be diverted from landfill sites. Provide Departmental Representative documentation certifying



that waste management, recycling, reuse of recyclable and reusable materials have been extensively practiced.

- .3 Accomplish maximum control of solid construction waste.
- .4 Preserve environment and prevent pollution and environment damage.

4.17.2 STORAGE HANDLING AND PROTECTION

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by Departmental Representative.
- .2 Unless specified otherwise, materials for removal become Design Builder's property.
- .3 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.
- .4 Protect surface drainage, mechanical and electrical from damage and blockage.
- .5 Prevent contamination of materials to be salvaged and recycled and handle materials in accordance with requirements for acceptance by designated facilities.
 - .1 On-site source separation is recommended.
 - .2 Remove co-mingled materials to off-site processing facility for separation.
 - .3 Provide waybills for separated materials.

4.17.3 DISPOSAL OF WASTES

- .1 Do not bury or burn rubbish or waste materials.
- .2 Do not dispose of waste, volatile materials, mineral spirits, oil, paint thinner into waterways, storm, or sanitary sewers.
- .3 Keep records of construction waste including:
 - .1 Number and size of bins.
 - .2 Waste type of each bin.
 - .3 Total tonnage generated.
 - .4 Tonnage reused or recycled.
 - .5 Reused or recycled waste destination.
- .4 Prepare project summary to verify destination and quantities on a material-by-material basis as identified in pre-demolition material audit.

4.17.4 APPLICATION

- .1 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

4.17.5 CLEANING

- .1 Remove tools and waste materials on completion of Work, and leave work area in clean and orderly condition.
- .2 Clean-up work area as work progresses.
- .3 Source separate materials to be reused/recycled into specified sort areas.

4.18 01 77 00 - CLOSEOUT PROCEDURES

4.18.1 INSPECTION AND DECLARATION

- .1 Design Builder's Inspection: Design Builder and SubContractor: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Departmental Representative in writing of satisfactory completion of Design Builder's Inspection and that corrections have been made.
 - .2 Request Departmental Representative Inspection.
- .2 Completion: submit written certificate that following have been performed:
 - .1 Work has been completed and inspected for compliance with
 - .1 Contract Documents.
 - .2 Local authorities having jurisdiction.



- .3 Local services/utility providers.
- .2 Defects have been corrected and deficiencies have been completed.
- .3 Equipment and systems have been tested, adjusted and balanced and are fully operational.
- .4 Certificates required by Authorities Having Jurisdiction, by HRSDC Fire Prevention Engineering and by Utilities have been submitted.
- .5 Operation of systems have been demonstrated to Departmental Representative's and Institution's personnel.
- .6 Work is complete and ready for final inspection.
- .3 Final Inspection: when items noted above are completed, request final inspection of Work by Departmental Representative and Design Builder. If Work is deemed incomplete by Departmental Representative, complete outstanding items and request reinspection.

4.18.2 WARRANTY INSPECTION

- .1 In the case of one year warranty, conduct joint inspections six (6) and ten (10) months after Interim Certificate of Completion. In the case of each extended warranty, conduct joint inspections in four (4) periods as agreed by Departmental Representative.
- .2 Immediately prior to end of warranty period(s) Departmental Representative and Design Builder shall make a joint final inspection of the remedial Work noted two (2) months prior to end of warranty(s) and reported within the two (2) during remedial work.

4.19 01 78 00 - CLOSEOUT SUBMITTALS

4.19.1 SUBMITTALS

- .1 Submittals: in accordance with Section 01 33 00.
- .2 Prepare instructions and data using personnel experienced in maintenance and operation of described products.
- .3 Copy will be returned after final inspection, with Departmental Representative's comments.
- .4 Revise content of documents as required prior to final submittal.
- .5 Two weeks prior to Substantial Performance of the Work, submit to the Departmental Representative;
 - .1 Four final copies plus electronic copies of operating and maintenance manuals in English.
 - .2 Four copies plus electronic copies of final Commissioning Report.
- .6 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.
- .7 Furnish evidence, if requested, for type, source and quality of products provided.
- .8 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
- .9 Pay costs of transportation.

4.19.2 FORMAT

- .1 Organize data as instructional manual with both hard copy and digital format.
- .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
- .3 When multiple binders are used correlate data into related consistent groupings. Identify contents of each binder on spine.



- .4 Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5 Arrange content by components and systems under Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7 Text: manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .9 On project completion submit to Departmental Representative 4 electronic pdf copies on CD R/W and 4 paper copies in binders of Operations and Maintenance Manual.
 - .1 Organize manuals into industry standard maintenance manual tabs with links in index to each descriptive section describing the component or maintenance procedure.
 - .2 Label disk "Operational and Maintenance Data", project name, date, names of Design Builder, subcontractors, consultants and sub-consultants.
 - .3 Include scanned guarantees, bonds, diagrams and drawings.
 - .4 Organize contents into applicable sections of work to parallel specification breakdown. Mark each section by labeled tabs (navigation buttons).
 - .5 Ensure all content is legible.

4.19.3 AS-BUILTS SPECIFICATIONS AND SAMPLES

- .1 Maintain, in addition to requirements in General Conditions, at site for Departmental Representative one record copy of:
 - .1 Contract Drawings.
 - .2 Addenda.
 - .3 Change Orders and other modifications to Contract.
 - .4 Reviewed shop drawings, product data, and samples.
 - .5 Field test records.
 - .6 Inspection certificates.
 - .7 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.
- .6 Departmental Representative may furnish additional drawings and specifications to clarify Work.
 - .1 Such documents become part of Contract Document.
 - .2 Include such documents in As Built submission.
- .7 Turn over at completion with all as-built information:
 - .1 Drawings;
 - .1 4 copies of drawings.
 - .2 4 sets of printed as-built drawings.
 - .3 1 pdf copy.
 - .2 Catalogue information, Maintenance materials and Installation Instructions;
 - .1 4 electronic copies.



- .2 4 sets of printed as-built specifications.
- .3 1 pdf copy.
- .8 Submit to Departmental Representative one copy of drawings and specifications for review prior to final submission.

4.19.4 RECORDING ACTUAL SITE CONDITIONS

- .1 Record information on set of black line opaque drawings, and in copy of Specifications Documents.
- .2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Contract Drawings and shop drawings: mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by change orders.
 - .6 Details not on original Contract Drawings.
 - .7 References to related shop drawings and modifications.
- .4 Specifications: mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.
- .5 Other Documents: maintain manufacturer's certifications, guarantees, inspection certifications, field test records, required by individual specifications sections.

4.19.5 EQUIPMENT AND SYSTEMS

- .1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .9 Provide Design Builder's co-ordination drawings, with installed colour coded piping diagrams.
- .10 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

4.19.6 MATERIALS AND FINISHES



- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-Protection and Weather-Exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional Requirements: as specified in individual specifications sections.

4.19.7 SPARE PARTS

- .1 Provide spare parts.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to site as directed; place and store.
- .4 Receive and catalogue items. Submit inventory listing to Departmental Representative. Include approved listings in Maintenance Manual.
- .5 Obtain receipt for delivered products and submit prior to final payment.

4.19.8 MAINTENANCE MATERIALS

- .1 Provide maintenance and extra materials.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to site as directed; place and store.
- .4 Receive and catalogue items. Submit inventory listing to Departmental Representative. Include approved listings in Maintenance Manual.
- .5 Obtain receipt for delivered products and submit prior to final payment.

4.19.9 SPECIAL TOOLS

- .1 Provide special tools, as required.

4.19.10 STORAGE, HANDLING AND PROTECTION

- .1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.
- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.

4.19.11 WARRANTIES AND BONDS

- .1 Develop warranty management plan to contain information relevant to Warranties.
- .2 Submit warranty management plan, 60 days before planned pre-warranty conference, to Departmental Representative approval.
- .3 Warranty management plan to include required actions and documents to assure that Departmental Representative receives warranties to which it is entitled.
- .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.
- .5 Submit, warranty information made available during construction phase, to Departmental Representative for approval prior to each monthly pay estimate.
- .6 Assemble approved information in binder and submit upon acceptance of work. Organize binder as follows:
 - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
 - .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.



- .3 Obtain warranties, manufacturers' guarantees and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
- .4 Verify that documents are in proper form, contain full information, and are notarized.
- .5 Co-execute submittals when required.
- .6 Retain warranties and bonds until time specified for submittal.
- .7 Except for items put into use with Departmental Representative permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.
- .8 Include information contained in warranty management plan as follows:
 - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Design Builders, subcontractors, manufacturers or suppliers involved.
 - .2 Listing and status of delivery of Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps, motors, transformers, and commissioned systems.
 - .3 Provide list for each warranted equipment, item, feature of construction or system indicating:
 - .1 Name of item.
 - .2 Model and serial numbers.
 - .3 Location where installed.
 - .4 Name and phone numbers of manufacturers or suppliers.
 - .5 Names, addresses and telephone numbers of sources of spare parts.
 - .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
 - .7 Cross-reference to warranty certificates as applicable.
 - .8 Starting point and duration of warranty period.
 - .9 Summary of maintenance procedures required to continue warranty in force.
 - .10 Cross-Reference to specific pertinent Operation and Maintenance manuals.
 - .11 Organization, names and phone numbers of persons to call for warranty service.
 - .12 Typical response time and repair time expected for various warranted equipment.
 - .4 Design Builder's plans for attendance of the various required post-construction warranty inspections.
 - .5 Procedure and status of tagging of equipment covered by extended warranties.
 - .6 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.
- .9 Respond in a timely manner to oral or written notification of required construction warranty repair work.
- .10 Written verification will follow oral instructions. Failure to respond will be cause for the Departmental Representative to proceed with action against Design Builder.

4.19.12 PRE-WARRANTY CONFERENCE

- .1 Meet with Departmental Representative, to develop understanding of requirements of this section. Schedule meeting prior to contract completion, and at time designated by Departmental Representative.
- .2 Departmental Representative will establish communication procedures for:
 - .1 Notification of construction warranty defects.



- .2 Determine priorities for type of defect.
- .3 Determine reasonable time for response.
- .3 Provide name, telephone number and address of licensed and bonded company that is authorized to initiate and pursue construction warranty work action.
- .4 Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

4.19.13 WARRANTY TAGS

- .1 Tag, at time of installation, each warranted item. Provide durable, oil and water resistant tag approved by Departmental Representative.
- .2 Attach tags with copper wire and spray with waterproof silicone coating.
- .3 Leave date of acceptance until project is accepted for use.
- .4 Indicate following information on tag:
 - .1 Type of product/material.
 - .2 Model number.
 - .3 Serial number.
 - .4 Contract number.
 - .5 Warranty period.
 - .6 Inspector's signature.
 - .7 Design Builder.

4.20 01 91 13 - GENERAL COMMISSIONING (CX) REQUIREMENTS

4.20.1 GENERAL

- .1 Commissioning is a planned program of tests, procedures and checks carried out systematically on components, systems verifying that the Work is in accordance with the design intent. Commissioning includes all testing procedures, such as:
 - .1 Field quality testing.
 - .2 Equipment Start up procedures.
 - .3 Component Verifications.
 - .4 System testing procedures.
- .2 Commissioning verifies that key deliverables are submitted such as:
 - .1 Commissioning Plan
 - .2 Shop drawings.
 - .3 Commissioning schedule.
 - .4 Commissioning documentation.
 - .5 Training Plan/Training
 - .6 O/M Manuals.
 - .7 Record drawings.
 - .8 Final Commissioning Report.

4.20.2 COMMISSIONING

- .1 Cooperate with Departmental Representative in all aspects of commissioning process.
- .2 Define and lead commissioning team.
- .3 Develop all project specific component forms, system test procedures in accordance with commissioning plan and final shop drawings.
- .4 Provide and maintain at site office Commissioning Report binders including all commissioning documents by discipline.
- .5 Manage commissioning process.
- .6 Coordinate and attend site commissioning meetings:
 - .1 To be contiguous with site project meetings during project commissioning phase



- .2 Chair, record minutes and distribute minutes of all commissioning meetings
- .7 Issue a fully integrated commissioning schedule which is fully compatible and integrates with Design Builder's construction schedule and:
 - .1 Incorporates Critical Path Methods.
 - .2 Includes all contractor field testing, start-ups and verifications as prerequisites for each System test procedure.
 - .3 Identifies all commissioning component and System Test Procedures.
- .8 Coordinate commissioning process with sub-contractor coordinators, owner and Departmental Representative.
- .9 Schedule and coordinate training of owner's staff during the commissioning phase.
- .10 Track and compile all commissioning results and documents as they are completed.
- .11 Verify all component forms are completed and in accordance with design data and installation prior to systems being commissioned.
- .12 Witness all System Testing and sign off results confirming they are in accordance with design.
- .13 Prepare, submit and track deficiencies identified during commissioning process.
 - .1 Submit to Departmental Representative
 - .2 Document resolutions and incorporate into Final Commissioning Report
- .14 Incorporate all commissioning documentation and results into a final commissioning report and submit to Departmental Representative recommending interim acceptance.
- .15 Participate in warranty period and review.

4.20.3 COMMISSIONING SCHEDULE

- .1 When required develop a detailed commissioning schedule and submit to the Departmental Representative. Include the following milestones:
 - .1 Equipment Start-ups.
 - .2 Component Verification Forms: Contractor Verification/ Professional Designer sign-off.
 - .3 Testing.
 - .4 System Testing Procedures: Design Builder verification/ Professional Designer sign-off.

4.20.4 COMMISSIONING DOCUMENTS

- .1 Sample component forms and System Performance Verification Test procedures are included in this section. – Design Builder's Team to develop all:
 - .1 Component Verification Forms and System Performance Verification test procedures for all systems to be commissioned in accordance with the Commissioning Plan.
 - .2 System Performance Verification test procedures.
 - .3 Submit to Departmental Representative for review.
 - .4 Revise or develop Component Forms and System Performance procedures to incorporate revisions as a result of:
 - .1 Approved shop drawings.
 - .2 Approved construction changes.

4.20.5 COMMISSIONING MEETINGS

- .1 Conduct Commissioning meetings as per Section 01 31 19.

4.20.6 EXECUTION

- .1 Commissioning process shall follow a logical sequence of verification, from component verifications through to system Performance Verification Testing.
 - .1 Verification of components:



- .1 Sample Component verification Forms are included in this section.
- .2 Independent Commissioning Agent Team shall develop Component Verification Forms one month following shop drawing approval and submit to the Departmental Representative for review.
- .3 Design Builder design team to complete the specified data field of the Component Verification Forms.
- .4 Complete the shop drawing, installed data fields and installation checks. Sign off and submit to Independent Commissioning Agent Team for approval.
- .5 Independent Commissioning Agent Team to approve all completed Component Forms.
- .2 System Performance Verification Testing Procedures:
 - .1 Design Builder Verification:
 - .2 Prior to System Performance Verification confirm all pre-requisites are complete and approved including:
 - .3 Field Testing.
 - .4 Equipment Start-ups.
 - .5 All component forms for the system to be commissioned.
 - .3 Re-test until results are successful.
 - .4 Certify the results are acceptable.
 - .2 Design Builder's Verification:
 - .1 Notify Departmental Representative Agent 7 Working Days prior to the final System Performance Testing.
 - .2 Demonstrate System Performance Verification tests in the presence of the Departmental Representative.
 - .3 Design Builder certify the results.
 - .4 Resolve deficiencies identified during the System Performance Verification test.
 - .5 Re-test in the presence of Departmental Representative.
 - .6 Final results to be a type written report.
 - .7 Final results of testing to be entered and submitted electronically.



4.21 01 91 14 - COMMISSIONING SAMPLE FORMS

4.21.1 GENERAL COMMISSIONING

- .1 All tests and procedures to be developed by Design Builder's Designer.
- .2 Sample forms only

4.21.2 COMPONENT VERIFICATION

COMPONENT VERIFICATION

Project Number:

Project Name:

Project Location:

DB Design Team:

EQUIPMENT DATA:

| | |
|---------------|--|
| Manufacturer | |
| Type | |
| Model Number | |
| Serial Number | |

Building
Area
Floor
room

LOCATION DATA:

| |
|--|
| |
| |
| |
| |

NAMEPLATE DATA:

| | Specified | Shop Drawings | Installed | Verified |
|---------------|-----------|---------------|-----------|----------|
| GPM | | | | |
| Head Pressure | | | | |
| Voltage/Phase | | | | |
| Amperage | | | | |
| RPM | | | | |
| HP | | | | |

SUPPORT DOCUMENTS:

Comments :

| | Y / N / NA | |
|-----------------------------|------------|--|
| Manufacturer's report | Y / N / NA | |
| Manufacturer's certificates | Y / N / NA | |
| Pump & Fans Curves attached | Y / N / NA | |
| DB start-up report | Y / N / NA | |

COMMENTS

| |
|--|
| |
|--|

SIGN-OFFS:

| | | |
|------------------------------|------------------------------|-------------|
| Design Builder Manager: | _____ | Date: _____ |
| | Print name – sign above line | yyyy-mm-dd |
| DB Design Team: | _____ | Date: _____ |
| | Print name – sign above line | yyyy-mm-dd |
| Departmental Representative: | _____ | Date: _____ |
| | Print name – sign above line | yyyy-mm-dd |



4.21.3 SYSTEM PERFORMANCE VERIFICATION

SYSTEM PERFORMANCE VERIFICATION

Project Number:

Project Name:

Project Location:

DB Design Team:

System:



4.22 01 91 41 - DEMONSTRATION AND TRAINING

4.22.1 OBJECTIVE

- .1 Transfer knowledge of equipment and systems and their operation and maintenance to User Department's Operating and Maintenance personnel including:
 - .1 Overall design intent.
 - .2 Demonstration of operation and maintenance of equipment and systems, including:
 - .1 Start up procedures.
 - .2 Safe and energy efficient operation.
 - .3 Normal operational modes.
 - .4 Typical failure modes, Alarms and appropriate operator response.
 - .5 Shut down procedures.
 - .6 Lock out procedures.
 - .7 Manufacturer recommended maintenance procedures.

4.22.2 TRAINING PLAN AND CONTENT

- .1 Develop and conform to Training Plan.
- .2 Training content to include;
 - .1 System operation, limitations of systems and emergency procedures.
 - .2 Review of system layout, equipment, components and controls.
 - .3 Equipment and system start-up, operation, monitoring, servicing, maintenance and shut-down procedures.
 - .4 Maintenance and servicing.
 - .5 Trouble-shooting diagnosis.
 - .6 Review of O&M documentation.

4.22.3 SUBMITTALS

- .1 Submit to Departmental Representative for approval:
 - .1 Two months prior to training,
 - .1 Updated Training Plan.
 - .2 Operating and Maintenance manuals.
 - .3 Detailed training schedule including:
 - .4 Time and date of each demonstration and instruction.
 - .5 Training Manuals
 - .6 As-built documents
 - .2 Submit within two weeks of completion of demonstration and training to Departmental Representative:
 - .1 Final Training Plan as delivered.
 - .2 Certified list of all trainee's and Instructors.
 - .3 Submit 4 DVD R/W copies of each recorded module immediately after Demonstration and Training.

4.22.4 EXECUTION

- .1 Coordinate training with the approval of Departmental Representative.
- .2 Deliver training during regular working hours.
- .3 Provide 1, half day training session.
- .4 Allow for up to 4 trainees.
- .5 Provide training in conformance with the training plan.
- .6 Certify that designated personnel completed the training.



5 APPENDICES

5.1 APPENDIX A – LOCATION MAP



CERTIFICATE OF INSURANCE – ANNEX E

(Not required at solicitation closing)

| | |
|--|------------------------------|
| Description and Location of Work Storage Garage – St. Andrews Lock and Dam, St. Andrews, Manitoba | Contract No. ET025-172216 |
| | Project No. R.066199.002 |

| | | | | |
|----------------------------------|-----------------------|------|----------|-------------|
| Name of Insurer, Broker or Agent | Address (No., Street) | City | Province | Postal Code |
|----------------------------------|-----------------------|------|----------|-------------|

| | | | | |
|------------------------------|-----------------------|------|----------|-------------|
| Name of Insured (Contractor) | Address (No., Street) | City | Province | Postal Code |
|------------------------------|-----------------------|------|----------|-------------|

Additional Insured
Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services

| Type of Insurance | Insurer Name and Policy Number | Inception Date D / M / Y | Expiry Date D / M / Y | Limits of Liability | | |
|---|--------------------------------|-----------------------------|--------------------------|---------------------|--------------------------|--------------------------------|
| | | | | Per Occurrence | Annual General Aggregate | Completed Operations Aggregate |
| Commercial General Liability Umbrella/Excess Liability | | | | \$ | \$ | \$ |
| | | | | \$ | \$ | \$ |
| Builder's Risk / Installation Floater | | | | \$ | | |

I certify that the above policies were issued by insurers in the course of their Insurance business in Canada, are currently in force and include the applicable insurance coverage's stated on page 2 of this Certificate of Insurance, including advance notice of cancellation / reduction in coverage.

Name of person authorized to sign on behalf of Insurer(s) (Officer, Agent, Broker)

Telephone number

Signature

Date D / M / Y

General

The insurance policies required on page 1 of the Certificate of Insurance must be in force and must include the insurance coverage listed under the corresponding type of insurance on this page.

The policies must insure the Contractor and must include Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services as an additional Insured.

The insurance policies must be endorsed to provide Canada with not less than thirty (30) days notice in writing in advance of a cancellation of insurance or any reduction in coverage.

Without increasing the limit of liability, the policies must protect all insured parties to the full extent of coverage provided. Further, the policies must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.

Commercial General Liability

The insurance coverage provided must not be substantially less than that provided by the latest edition of IBC Form 2100. The policy must either include or be endorsed to include coverage for the following exposures or hazards if the Work is subject thereto:

- (a) Blasting.
- (b) Pile driving and caisson work.
- (c) Underpinning.
- (d) Removal or weakening of support of any structure or land whether such support be natural or otherwise if the work is performed by the insured contractor.

The policy must have the following minimum limits:

- (a) **\$5,000,000** Each Occurrence Limit;
- (b) **\$10,000,000** General Aggregate Limit per policy year if the policy contains a General Aggregate; and
- (c) **\$5,000,000** Products/Completed Operations Aggregate Limit.

Umbrella or excess liability insurance may be used to achieve the required limits.

Builder's Risk / Installation Floater

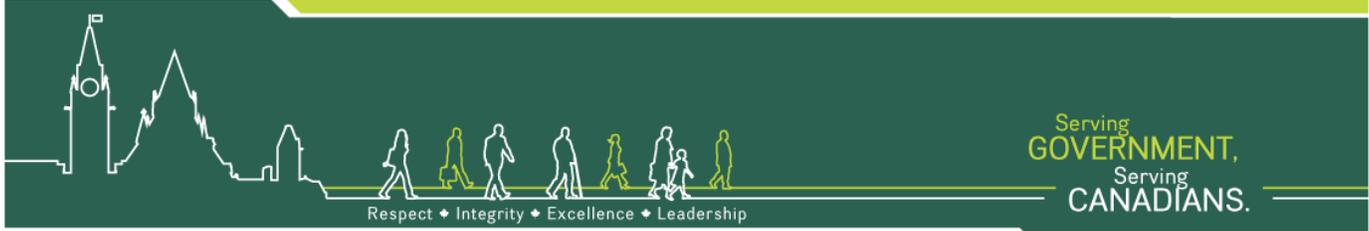
The insurance coverage provided must not be less than that provided by the latest edition of IBC Forms 4042 and 4047.

The policy must permit use and occupancy of any of the projects, or any part thereof, where such use and occupancy is for the purposes for which a project is intended upon completion.

The policy may exclude or be endorsed to exclude coverage for loss or damage caused by asbestos, fungi or spores, cyber and terrorism.

The policy must have a limit that is **not less than the sum of the contract value** plus the declared value (if any) set forth in the contract documents of all material and equipment supplied by Canada at the site of the project to be incorporated into and form part of the finished Work. If the value of the Work is changed, the policy must be changed to reflect the revised contract value.

The policy must provide that the proceeds thereof are payable to Canada or as Canada may direct in accordance with GC10.2, "Insurance Proceeds" (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R/R2900D/2>).



GENERAL PROCEDURES & STANDARDS

For Professional & Design Services

MMXI Edition



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I INTRODUCTION

I.1 GENERAL PROCEDURES AND STANDARDS

I.1.1 GENERAL

- .1 These PWGSC *General Procedures and Standards* (P&S) have been developed to:
 - .1 Facilitate the development of a rational, well-documented design process; and
 - .2 Ensure compliance with federal government standards, PWGSC Policies and Treasury Board directives.

I.1.2 HARMONIZATION WITH THE TERMS OF REFERENCE (TOR)

- .1 The P&S document must be used in conjunction with the TOR, as the two documents are complimentary.
- .2 The TOR describes project-specific requirements, services and deliverables while the GP&S document outlines with minimum standards and procedures common to all projects.
- .3 In the case of a conflict between the two documents, the requirements of the TOR override this document.

I.2 PROJECT DELIVERY

I.2.1 GENERAL REQUIREMENTS

- .1 The project delivery requirements outlined in this section are applicable to the design and construction of all PWGSC projects in Western Region, unless otherwise indicated in the TOR.
- .2 Under the direction of the Consultant, the Consultant team shall provide fully integrated and coordinated professional and design services for the delivery of a project, in accordance with the requirements in the TOR and as contained herein.
- .3 The Consultant must:
 - .1 Obtain written authorization from the Departmental Representative before proceeding from one phase of work to the next phase of a project;
 - .2 Coordinate all services with the Departmental Representative;
 - .3 Deliver each project utilizing best practices in support of User Department needs, respecting the approved financial budget, schedule, scope, quality energy budget;
 - .4 Establish a cohesive functional partnership and open communication between all members of the project delivery team throughout all phases of the project life;
 - .5 Ensure that the Consultant team has an in-depth understanding and collective 'buy-in' of the project requirements, scope, budget and scheduling objectives, working constructively to build a collaborative and cooperative team approach with knowledgeable and timely input and contribution by all project team members, including representatives from PWGSC and the User Department;
 - .6 Conduct rigorous quality assurance reviews during the design and construction phases, including the application of value engineering principles during the design of all complex systems;
 - .7 Provide a written response to all PWGSC comments included in Quality Assurance reviews conducted throughout the design of the project;
 - .8 If any alterations are required during the development of the design, analyse the impact on all project components and resubmit for approval before proceeding further;
 - .9 Establish and maintain a change control procedure for scope changes;



- .10 Ensure that an experienced Project Architect or Project Engineer is assigned to each project, who shall be responsible for the production, coordination and delivery of all design and construction documents for all project disciplines;
- .11 Prepare a continuous risk identification and management program employing effective methodologies to ensure construction safety as well as claims avoidance;
- .12 Provide continuous and comprehensive documentation of the project at all stages of the project implementation;
- .13 Ensure continuity of key personnel and maintain a dedicated working team for the life of the project;

I.2.2 SERVICE DELIVERY FOR ALL PROJECTS

- .1 For all projects, the Consultant shall:
 - .1 Deliver the project to be within;
 - .1 The established construction budget,
 - .2 The key milestones, according to the established project schedule.
 - .2 Ensure that each Consultant team member:
 - .1 Understands the project requirements, for seamless delivery of the required services;
 - .2 Functions as a cohesive partnership with open communication between all members of the project delivery team throughout all phases of the project life;
 - .3 Function as an integrated and focused team with an in-depth understanding and collective 'buy-in' of the project requirements, scope, budget and scheduling objectives.
 - .3 Provide;
 - .1 Full co-ordination of services with other consultants engaged by PWGSC,
 - .2 A continuous risk management program to address the risks associated specifically with this project, including construction safety and claims avoidance issues.
 - .4 Deliver the work in a professional manner during all phases of the project, employing best practices for budget, schedule, quality, and scope management;
 - .5 Maintain continuity of key personnel and maintain a dedicated working team for the life of the project.

I.2.3 SERVICE DELIVERY (BUILDINGS)

- .1 For Building projects, where an Architectural firm is the Prime Consultants, the Consultant team shall, as a minimum, adhere to the standards of services outlined in the "Canadian Handbook of Practice for Architects - Volume 2 Management" (latest edition) distributed by the Royal Architectural Institute of Canada (RAIC).

I.2.4 SERVICE DELIVERY (ENGINEERING)

- .1 For Engineering projects, where an Engineering firm is the Prime Consultants, the Consultant team shall adhere to the standards of services established by the Professional Engineering Association in the Province or Territories where the project is located.

I.3 PROCUREMENT OF GOODS AND SERVICES

I.3.1 PUBLIC PROCUREMENT

- .1 Public procurement by Canada is legislated and guided by a number of international and national trade agreements, and acts, as well as policies, directives, and guidelines provided by the Treasury Board Secretariat (TBS) and PWGSC.



- .2 There is one over-arching principle for all PWGSC procurement activities: Integrity. Subordinate to this are guiding principles, which provide the framework for PWGSC procurement process.
- .3 For further information refer to the following web link;
 - .1 <http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

I.3.2 INTEGRITY AND GUIDING PRINCIPLES

- .1 PWGSC procurement processes will be open, fair and honest.
- .2 Client Service:
 - .1 PWGSC will make every reasonable effort to satisfy the operational requirements of its clients, while obtaining the best value in each procurement process.
- .3 National Objectives:
 - .1 PWGSC procurement activities will advance established government policies, within the limits imposed by international trade obligations.
- .4 Competition:
 - .1 PWGSC procurement will be competitive, with specific exceptions.
- .5 Equal Treatment:
 - .1 PWGSC must ensure that all potential bidders of a particular requirement are subject to the same conditions.
- .6 Accountability:
 - .1 PWGSC is accountable for the integrity of the contracting process.



2 REQUIRED SERVICES STANDARDS

2.1 GENERAL

- .1 Where Services are called for in the project specific TOR, the standards outlined in the following articles apply.

2.2 COST MANAGEMENT

2.2.1 GENERAL

- .1 The following provides a general indication of the information needed by the Consultant's cost estimator to prepare specific classifications of estimates.
- .2 These are the minimum requirements only and should be supplemented where additional information exists or is warranted.
- .3 Construction cost estimates are to be prepared and submitted to PWGSC at various stages during the design process.
- .4 In addition to the Consultants' estimate, PWGSC may have independent estimates performed to compare with the Consultant estimate.

2.2.2 TREASURY BOARD (TB) SUBMISSIONS

- .1 Projects that are subject to TB approval are normally submitted twice.
 - .1 The first submission is for Preliminary Project Approval (PPA) at Pre-Design or Schematic Design stage of a project and must include an Indicative Estimate for the cost of the work.
 - .2 The second submission is for Effective Project Approval (EPA) at the completion of Design Development or Pre-Tender stage of a project and must include a Substantive Estimate for the cost of the work.
- .2 The Treasury Board estimate definitions are:
 - .1 Indicative Estimate;
 - .1 A low quality, order of magnitude estimate that is not sufficiently accurate to warrant TB approval as a Cost Objective.
 - .2 Substantive Estimate;
 - .1 An estimate which is of sufficiently high quality and reliability as to warrant TB approval as a Cost Objective for the project phase under consideration.
 - .2 It is based on detailed systems and component design, taking into account all project objectives and deliverables.
- .3 TB Terminology:
 - .1 Constant dollar estimate;
 - .1 This is an estimate expressed in terms of the dollars of a particular base fiscal year.
 - .1 It includes no provision for inflation.
 - .2 Cash flows over a number of fiscal years may also be expressed in constant dollars of the base year including no allowance for inflation in the calculation of costs.
 - .2 Budget-year (BY) dollar estimate:
 - .1 Budget year dollars is also be referred to as Nominal dollars or Current dollars.
 - .1 This is an estimate based on costs arising in each FY of the project schedule.
 - .2 It is escalated to account for inflation and other economic factors affecting the period covered by the estimate.
 - .2 The costs and benefits across all periods should initially be tabulated in budget year dollars for three following reasons:



- .1 First; this is the form in which financial data are usually available,
- .2 Second; adjustments, such as tax adjustments, are accurately and easily made in budget year dollars,
- .3 Finally; working in budget-year dollar enables the analyst to construct a realistic picture over time, taking into account changes in relative prices.

2.2.3 CLASSES OF ESTIMATES

- .1 PWGSC applies a detailed, four level, classification using the terms Class A, B, C and D.
- .2 Apply these estimate classifications at the project stages as defined in the TOR.
- .3 For projects required to be submitted to TB for approval:
 - .1 An Indicative Estimate shall be at least a class 'D'; and
 - .2 A Substantive Estimate shall be at least a class 'B'.

2.2.4 CLASS 'D' (INDICATIVE) ESTIMATE

- .1 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 of all the options being considered.
- .2 Submit Class 'D' cost estimates in elemental analysis format, in accordance with the 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.
- .3 Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.
- .4 The level of accuracy of a class D cost estimate shall be such that no more than a 20% design contingency allowance is required.

2.2.5 CLASS 'C' ESTIMATE

- .1 Based on a comprehensive list of requirements and assumptions, including a full description of the preferred Schematic Design option, construction experience, design experience and market conditions, this estimate must be sufficient for making the correct investment decision.
- .2 Submit Class 'C' cost estimates in elemental analysis format, in accordance with the 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.
- .3 Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.
- .4 The level of accuracy of a class C cost estimate shall be such that no more than a 15% design contingency allowance is required.

2.2.6 CLASS 'B' (SUBSTANTIVE) ESTIMATE

- .1 Based on design development drawings and outline specifications, which include the preliminary 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.
- .2 Submit Class 'B' cost estimates in both elemental analysis format and trade divisional format, in accordance with the latest edition issued by the Canadian Institute of Quantity Surveyors.
- .3 Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.
- .4 The level of accuracy of a class 'B' cost estimate shall be such that no more than a 10% design contingency allowance is required.

2.2.7 CLASS 'A' (PRE-TENDER) ESTIMATE



- .1 Based on completed construction drawings and specifications prepared prior to calling competitive tenders, this estimate must be sufficient to allow a detailed reconciliation and/or negotiation with any contractor's tender.
- .2 Submit Class 'A' cost estimates in both elemental analysis format and trade divisional format, in accordance with the latest edition issued by the Canadian Institute of Quantity Surveyors.
- .3 Include a summary in the cost estimate, plus full back up, showing items of work, quantities, unit prices, allowances and assumptions.
- .4 The level of accuracy of a class 'A' cost estimate shall be such that no more than a 5% design contingency allowance is required.

2.3 SCHEDULE MANAGEMENT

2.3.1 SCHEDULER

- .1 The Scheduler shall provide a Project Planning and Control Schedule for the project, for the purpose of Planning, Scheduling, Progress Monitoring (Time Management), during all the design phases up to the construction procurement phase.
- .2 A qualified Scheduler, with experience commensurate with the complexity of the project, is required to develop and monitor the project schedule during the design process.
- .3 The Scheduler shall adhere to good industry practices for schedule development and maintenance, as recognized by the Project Management Institute (PMI).
- .4 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 either of these programs, using one of the many commercially available software packages.

2.3.2 PROJECT SCHEDULE

- .1 A Detailed Project Schedule is a schedule developed in reasonable detail to ensure adequate Time Management planning and control of the project.
- .2 Project Schedules are used as a guide for the planning, design and implementation phases 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).
- .3 When building a Project Schedule, the Consultant must consider:
 - .1 The level of detail required for control and reporting;
 - .2 The reporting cycle shall be monthly, unless otherwise identified in the Terms of Reference;
 - .3 What is required for reporting in the Project Teams Communications Plan; and
 - .4 The nomenclature and coding structure for naming of scheduled activities, which must be submitted to the Project Manager for acceptance.

2.3.3 MILESTONES

- .1 The Major Milestones are standard Deliverables and Control Points within NPMS and are required in all schedule development.
- .2 These Milestones will be used in Time Management Reporting within PWGSC as well as used for monitoring project progress using Variance Analysis.
- .3 Milestones may also be external constraints such as the completion of an activity, exterior to the project, affecting the project.

2.3.4 ACTIVITIES

- .1 All activities will need to be developed based on:
 - .1 Project Objectives;
 - .2 Project Scope;



- .3 Milestones;
 - .4 Meetings with the project team; and
 - .5 The scheduler's full understanding of the project and its processes.
- .2 Subdivide the elements down into smaller more manageable pieces that organize and define the total scope of work in levels that can be scheduled, monitored and controlled.
- .1 This process will develop the Activity List for the project.
- .3 Each activity will describe the work to be performed using a verb and noun combination (i.e. Review Design Development Report).
- .4 These elements will become activities, interdependently linked in the Project Schedule.

2.3.5 SCHEDULE REVIEW AND APPROVAL

- .1 Once the scheduler has identified and properly coded all the activities to the acceptance of the Project Manager, the activities are then sorted into a logical order and appropriate duration are applied to complete the schedule.
- .2 The scheduler, together with the Project Team, can then analyze the schedule to see if the milestone dates meet the project timelines and then adjust the schedule accordingly by modifying durations or changing logic.
- .3 When the schedule has been satisfactorily prepared, the scheduler can present the detailed schedule back to the Project Team for acceptance and application as the project baseline.
- .4 There may be several iterations before the schedule meets with the Project Teams agreement and the critical project timelines.
- .5 The final agreed version must be copied and saved as the baseline to monitor variances during the design process.

2.3.6 SCHEDULE MONITORING AND CONTROL

- .1 Once Baseline, the schedule can be better monitored, controlled and reports can be produced.
- .2 Monitoring is performed by, comparing the baseline activities completed 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.
- .3 There will be several schedules generated from the analysis of the baseline schedule as outlined in the Required Services Sections of the TOR.
- .4 Each updated schedule reflects the progress of each activity to date, any logic changes, both historic and planned, projections of progress and completion indicating the actual start and finish dates of all activities being monitored.
- .5 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 in accordance with the TOR.
- .6 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.
 - .1 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.



- .7 At each submission or deliverable stage, provide an updated schedule and exception report.

2.4 RISK MANAGEMENT

2.4.1 CONTEXT

- .1 The Departmental Representative prepares the Risk Management Plan.
- .2 The Departmental Representative may ask for assistance from the Consultant Team for identification of risk items and factors arising from the technical requirements of the project.

2.5 WASTE MANAGEMENT

2.5.1 PROTOCOL

- .1 The Construction, Renovation, and Demolition (CRD) Non-hazardous Solid Waste Management Protocol to which PWGSC is bound, provides direction on the undertaking of non-hazardous solid waste management actions on projects.
 - .1 The protocol is designed to meet the federal requirements, provincial/territorial policies and the objectives of the PWGSC Sustainable Development Strategy (SDS).
- .2 The contractor must implement a solid waste management program.
- .3 Contractors must be instructed to plan for extra project time when implementing CRD waste diversion initiatives.
 - .1 Added labour costs can be recuperated and waste management costs savings can be achieved through reduced tipping fees, avoided haulage costs, and the sale of reusable and recyclable materials.

2.5.2 CONSULTANT RESPONSIBILITIES

- .1 Research and investigate hazardous waste disposal strategies in context of the project and make recommendations.
- .2 Include in the contract documents, a requirement for the contractor to develop a waste reduction and management plan during the construction of this project.
- .3 Identify, on the site plan where large (garbage) bins shall be stored, as well as easy disposal truck access/exit to/from same, to assist the Contractor in reducing waste or re-cycling of materials on and off site.

2.6 TECHNICAL REPORTS

2.6.1 PURPOSE

- .1 This section provides direction and standards for the preparation of reports delivered to PWGSC during all the various stages of project delivery and for specific services such as investigations, studies, analysis, strategies, audits, surveys, programs, plans, etc.
- .2 Technical Reports are official government documents, which are typically used to support an application for approval or to obtain authorization or acceptance and as such they must:
 - .1 Be complete, clear and professional in appearance and organization, with proper reference to related parts and contents in the report;
 - .2 Clearly outline the intent, objectives, process, results and recommendations;
 - .3 Present the flow of information and conclusions in a logical, easy to follow sequence;
 - .4 Be in written narrative, graphic, model (traditional and / or computer generated), and photographic format, which can be web enabled;
 - .5 Ensure that all pages are numbered in sequence; and
 - .6 Be printed double-sided, if hard copies are produced.

2.6.2 STANDARDS FOR PWGSC TECHNICAL REPORTS

- .1 Standard practice for the organization of technical reports requires:



- .1 A cover page, clearly indicating the nature of the report, the date, the PWGSC reference number and who prepared the report;
 - .2 A Table of Contents;
 - .3 An Executive Summary;
 - .4 The body of the report is to be structured such that the reader can easily review the document and locate, respond to and /or reference related information contained elsewhere in the report;
 - .5 Appendices used for lengthy segments of the report, supplementary and supporting information and / or for separate related documents.
- .2 The report content must:
- .1 Ensure that the executive summary is a true condensed version of the report following the identical structure, including only key points and results / recommendations requiring review and / or approval;
 - .2 Use a proper numbering system (preferably legal numbering), for ease of reference and cross-reference;
 - .1 The use of 'bullets' is to be avoided.
 - .3 Use proper grammar, including using complete sentences, in order to ensure clarity, avoid ambiguity and facilitate easy translation into French, if required;
 - .1 The use of undefined technical terms, industry jargon and cryptic phrases are to be avoided.
 - .4 Be written as efficiently as possible, with only essential information included in the body of the report and supporting information in an appendix if needed.

2.6.3 PRE-DESIGN REPORT CONTENT

- .1 Administrative aspects to be included (but not limited to) are:
 - .1 Quality management process for the consultant team;
 - .2 Confirmation that all necessary pre-design documentation required for this project is available and confirmation that the information is still current and up-to-date.
- .2 Regulatory Analysis aspects to be included (but not limited to) are:
 - .1 Preliminary summary of regulatory and statutory requirements, authorities having jurisdiction, and codes, regulations, and standards.
- .3 Program Analysis aspects to be included (but not limited to) are a review and analysis of:
 - .1 Functional program, User Department reports and studies, Space data sheets, Work stations, offices, common areas and commercial space requirements, Laboratories, Data Room requirements, etc.
- .4 Site Analysis aspects to be included (but not limited to) are a review and analysis of:
 - .1 Site features and restrictions (i.e. landscape features, topographical feature, climatic influences, setback requirements, easements, existing buildings, and / or structures.);
 - .2 Subsurface, geotechnical analysis of soils;
 - .3 Municipal infrastructure, subsurface and above grade services, including capacities and limitations (i.e. storm water drainage, fire protection, domestic water, power, telecommunications,);
 - .4 Historical/archaeological features, previous uses;
 - .5 Environmental features including sustainable design opportunities.
- .5 Building Analysis aspects to be included (but not limited to) are a review and analysis of:
 - .1 Substructure, including foundations and basement(s), parking;
 - .2 Shell, including superstructure, interior structural systems, exterior enclosure, roofing;
 - .3 Interiors, including interior construction, stairs, interior finishes;



- .4 Services, including conveying (elevators, escalators), plumbing, HVAC, fire protection, electrical, telecommunications, building automation;
- .5 Equipment and furnishings;
- .6 Special construction and demolition, materials abatement.
- .6 Budget, Schedule, and Risk Analysis aspects to be included (but not limited to) are:
 - .1 Updated Class 'D' estimate and revised schedule;
 - .2 Analysis of risk implications and preliminary mitigation strategies.
- .7 Sustainable Development Strategies
 - .1 Proposed policy for the project to minimize environmental impacts consistent with the project objectives and economic constraints, including:
 - .1 Recommendations on Sustainable Development Design standards to be applied to the project;
 - .2 Achievable levels for LEED® or Green Globes certification;
 - .3 Preliminary sustainability targets for water and energy use, waste reduction etc.
 - .2 Environmental impacts and application of the Canadian Environmental Assessment (CEA) Act.

2.6.4 SCHEMATIC DESIGN REPORT CONTENT

- .1 Standard practice for the organization of technical reports requires:
 - .1 Executive Summary;
 - .2 Regulatory Analysis;
 - .1 Preliminary building code analysis,
 - .2 Preliminary zoning analysis,
 - .3 Fire and life safety strategy, and
 - .4 Preliminary standards analysis.
 - .3 Program Analysis;
 - .1 Updated Functional Program requirements,
 - .2 Preliminary horizontal and vertical zoning diagrams,
 - .3 Spatial relationship diagrams,
 - .4 Facilities services strategy,
 - .5 Basic area calculations and analyses.
 - .4 Site Analysis;
 - .1 Drawings, renderings and supporting 3D visualization illustrating the building and site,
 - .2 Site features and restrictions (i.e. landscape features, topographical features, climatic influences, setback requirements, easements, existing buildings and/or structures etc.),
 - .3 Subsurface features,
 - .4 Municipal infrastructure, subsurface and above grade services, including capacities and limitations (i.e. storm water drainage, fire protection, domestic water, power, telecommunications etc.),
 - .5 Historical site features,
 - .6 Archaeological features,
 - .7 Environmental features including sustainable design strategies (i.e. storm water management, landscaping etc.).
- .2 Building Analysis and Design Options;
 - .1 Architectural,



- .1 Prepare a site plan indicating relationships, landscape concept, building outlines, main accesses, roadways, vehicular and pedestrian traffic patterns,
 - .2 Provide building plans, showing relative disposition of main accommodation areas, circulation patterns, floors, horizontal and vertical space relationships, mechanical / electrical shafts,
 - .3 Include elevations, sections and typical wall details for the building envelope,
 - .4 Provide perspectives and / or 3D visualization diagrams, and
 - .5 Calculate the gross building area and provide a net area summary of all accommodation areas required.
- .2 Civil,
- .1 Describe the overall impact on the site systems infrastructure,
 - .2 Verify of all site services information,
 - .3 Provide a site plan showing the existing building, proposed site services, building service connections, site drainage, roads, parking and sidewalks, and
 - .4 Include a preliminary analysis of the impact on existing systems, where contributing to existing sewer lines.
- .3 Structural / Seismic,
- .1 Describe the potential impact on the existing building structure and include any required structural modifications and /or upgrades,
 - .2 Provide a general description of structures, including systems considered and benefits/disadvantages,
 - .3 Include design loads for all load cases, and
 - .4 Prepare concept drawings of structural systems proposed, including typical floor plans, foundations, lateral systems and explanatory sketches.
- .4 Mechanical Engineering,
- .1 Provide narratives describing the following,
 - .1 Overview,
 - .2 Code & Standards Considerations & Concerns,
 - .3 Potential Energy Conservation Measures,
 - .4 Description of three distinct mechanical options including,
 - .1 Narratives of each option,
 - .2 Discussion of advantages and disadvantages of each,
 - .3 System schematics sufficient to describe each option,
 - .4 Preliminary energy analysis for each,
 - .5 Discussion of recommendations.
- .5 Electrical Engineering,
- .1 Provide an electrical design synopsis, describing the electrical work in sufficient detail for assessment and acceptance by the Departmental Representative,
 - .1 Include feasibility and economic studies of proposed systems complete with cost figures and loads, and in accordance with Sustainable Development requirements.
 - .2 Prepare a site plan showing the location of electrical and telecommunication service entrances.
 - .3 Prepare floor plans indicating locations and size of,
 - .1 Major electrical equipment and distribution centres,
 - .2 Telecommunications rooms, closets and major conduits,



- .4 Provide Normal and Emergency power distribution details, including a diagram showing the distribution up to distribution centres on each floor,
 - .5 Indicate typical lighting concepts for the interior and exterior environments,
 - .6 Indicate typical ceiling (or floor) distribution systems for lighting, power and telecommunications, and
 - .7 Provide concept descriptions of Fire alarm and Security systems.
- .3 Commissioning;
 - .1 Provide preliminary commissioning plan.
 - .4 Cost Management;
 - .5 Schedule Management;
 - .6 Furniture / Equipment;
 - .1 Prepare a Furniture Recommendation Report based on the Functional Program and on parameters developed in conjunction with the Departmental Representative and the Client / User. Report to include an examination of the following;
 - .1 Procurement process and requirements,
 - .2 Furniture type and layout,
 - .3 Panel screen height,
 - .4 Power requirements,
 - .5 Finishes.
 - .2 Recommendations are to take into consideration current inventory of furniture and reflect the client's vision, functional requirements, proposed planning alternatives, space allocation and project budget.
 - .3 Prepare a Class 'C' cost estimate for refurbishment of existing furniture and / or the purchase of new furniture and equipment.
 - .4 Document scheduling requirements for refurbishment of existing furniture and / or the procurement of new furniture and equipment.
 - .7 Budget;
 - .1 Class 'C' Estimates for each option.
 - .8 Schedule;
 - .1 Milestone project schedule including allowances for reviews and approvals for each stage of the project life cycle.
 - .9 Risk Analysis;
 - .1 Report on any deviations that may affect cost or schedule and recommend corrective measures.
 - .10 Sustainable Development Strategies;
 - .1 Indicate how each option can meet the sustainability targets, and
 - .2 Provide energy simulations of the proposed design options, including estimated annual energy cost as predicted by using current energy cost for the appropriate area.
 - .11 Response to PWGSC Quality Assurance Report ; and
 - .12 Project Log tracking all approved major decisions including those affecting changes to project scope, budget and schedule.

2.6.5 DESIGN DEVELOPMENT REPORT CONTENT

- .1 Executive Summary
- .2 Regulatory Analysis
 - .1 Preliminary building code analysis;



- .2 Preliminary zoning analysis;
- .3 Fire and life safety strategy;
- .4 Preliminary standards analysis
- .3 Program Analysis
 - .1 Updated Functional Program requirements
 - .2 Preliminary horizontal and vertical zoning diagrams;
 - .3 Facilities services strategy;
 - .4 Basic area calculations and analyses;
- .4 Site Analysis
 - .1 Drawings, renderings and supporting 3D visualization illustrating the building and site,
 - .2 Site features and restrictions (i.e. landscape features, topographical features, climatic influences, setback requirements, easements, existing buildings and/or structures etc.);
 - .3 Subsurface features;
 - .4 Municipal infrastructure, subsurface and above grade services, including capacities and limitations (i.e. storm water drainage, fire protection, domestic water, power, telecommunications etc.);
 - .5 Historical site features;
 - .6 Archaeological features;
 - .7 Environmental features including sustainable design strategies (i.e. storm water management, landscaping etc.);
- .5 Building Analysis and Design Options
 - .1 Architectural
 - .1 Prepare a site plan showing the building and Infrastructure items including the following:
 - .1 Pedestrian, vehicular, security, delivery service access,
 - .2 Provide floor plans of each level (including the roof) showing all accommodation required, including all necessary circulation areas, stairs, elevators, and ancillary spaces anticipated for service use. Indicate building grids, modules, and key dimensions.
 - .3 Provide reflected ceiling plans of ceilings with special features.
 - .4 Show elevations of all exterior building facades indicating all doors and windows, accurately sized and projected from the floor plans and sections.
 - .1 Clearly indicate levels for grade, all floors, ceilings, roof and penthouse levels.
 - .5 Develop cross-sections through the building to show floor levels, room heights, inner corridor elevations, etc.
 - .6 Identify primary architectural materials proposed for the exterior and interior of the building, including choice of finishes.
 - .7 Provide plans and preliminary details for millwork, built-in furniture and lab casework.
 - .8 Provide detail sections of walls with special design features requiring illustration and explanation at this stage, such as firewalls, acoustical barriers, security partitions, isolation or separation of laboratory spaces, etc.
 - .9 Special construction and demolition, including heritage conservation and rehabilitation requirements, hazardous materials abatement,
 - .10 Provide sections and details for any spaces requiring acoustic security.
 - .1 Include STC ratings for doors, transfer ducts and other assemblies
 - .2 Civil



- .1 Further refine site plans showing site services and building service connections referenced to proposed building outlines, site access roads and sidewalks, including existing and proposed grades and drainage improvements.
- .2 Indicate locations of manholes (complete with invert elevations), valves, and fire hydrant locations.
- .3 Identify proposed pipe sizes and slopes, where applicable, and include pipe invert elevations at building foundation.
- .4 Identify, by means of Design Summary Sheets, pipe capacity and estimated flows for storm and sanitary sewers. Where contributing to an existing sewer, include analysis of impact on existing systems.
- .5 Provide Hydraulic Analysis of any relevant alterations to existing water distribution system in the vicinity of the proposed building to confirm anticipated maximum available fire flow. Calculate and compare site flows to building site fire flow.
- .6 Provide typical trench and related details, including profiles of below grade services.
- .3 Structural
 - .1 Provide drawings indicating modifications to existing structure and new structural systems, structural materials, cladding details, fireproofing methods and other significant or unusual details.
 - .2 Indicate all design loads, e.g. dead and live loads on all plans with atypical loads marked. Live loads to include localized seismic, wind and snow.
 - .3 Provide brief design calculations including outputs from computerized analysis.
- .4 Mechanical
 - .1 Provide narratives describing the following
 - .1 Overview
 - .2 Code & Standards Analysis
 - .3 Site Services & Utilities
 - .4 Fire Protection Systems
 - .5 Plumbing Systems
 - .6 Heating Systems
 - .7 Cooling Systems
 - .8 Ventilation Systems
 - .9 Exhaust Systems
 - .10 Insulation
 - .11 Humidification Systems
 - .12 Acoustic and sound control measures
 - .13 Controls
 - .14 Energy Conservation Measures & Energy Analysis & Report
 - .2 Provide system schematics for heating water, chilled water, ventilation and plumbing systems.
 - .3 Provide catalogue cut sheets of representative equipment for each type of component to be used on the project.
 - .4 Provide preliminary layout drawings showing locations of all major components.
 - .5 Provide brief design calculations including outputs from computerized analysis.
- .5 Electrical
 - .1 Update the electrical design synopsis for the selected option. Provide data on the total connected load, the maximum demand and diversity factors, and the sizing of the emergency load.



- .2 Elaborate on proposed emergency power scheme and provide preliminary installation details for any emergency generator installation.
 - .3 Indicate metering locations on distribution diagram.
 - .4 Provide typical lighting, power and telecommunication system details for all workspaces.
 - .5 Include lighting design and control schemes for typical lighting arrangements.
 - .6 Elaborate on exterior lighting scheme. Provide typical fixture concepts.
 - .7 Provide a fire alarm riser diagram.
 - .8 Indicate security system major conduit requirements on floor plans.
 - .9 Provide typical security system details (conduit and boxes) that will be included on construction drawings.
 - .10 Provide brief design calculations including outputs from computerized analysis.
- .6 Sustainable Development Strategies:
- .1 Indicate how each option can meet the sustainability targets
 - .2 Provide energy simulations of the proposed design options, including estimated annual energy cost as predicted by using current energy cost for the appropriate area,
- .7 Response to PWGSC Quality Assurance Report

2.7 CODES, ACTS, STANDARDS, REGULATIONS

2.7.1 GENERAL

- .1 The Codes, Acts, Standards and Guidelines listed in the following articles, may apply to this project. The Consultant must identify and analyse the applicable documents in the Code Analysis.
- .2 In all cases the most stringent Code, standard and guideline shall apply.

2.7.2 PWGSC DOCUMENTS AVAILABLE FROM PWGSC PROJECT MANAGER:

- .1 PWGSC Fit-Up Standards: Technical Reference Manual;
- .2 Public Works and Government Services MD Standards – Departmental Representative to provide on request;
 - .1 MD 15000; Environmental Standards for Office Accommodation,
 - .2 MD 15116-2006; Computer Room Air conditioning Systems,
 - .3 MD-15126; Laboratory HVAC (currently in draft form),
 - .4 MD 15128; Laboratory Fume Hoods: Guidelines for owners, design professionals and maintenance personnel – 2008,
 - .5 MD 15129; Guidelines for Perchloric Acid fumehoods and their exhaust systems – 2006,
 - .6 MD 15161; Control of Legionella in Mechanical Systems - 2006,
 - .7 MD 250005; Energy Monitoring and Control Systems Design Guidelines - 2009,
- .3 PWGSC Best Practice; Prescribing indoor humidity levels for Federal Buildings - 2006,
- .4 Public Works and Government Services Commissioning Standards and Guidelines,
- .5 PWGSC Commissioning Manual CP-I version 2006.

2.7.3 CODES AND REGULATIONS:

- .1 The NRC National Building Code of Canada 2010;
- .2 The NRC National Fire Code of Canada, 2010;
- .3 The NRC National Plumbing Code of Canada 2010;
- .4 The NRC Model National Energy Code for Buildings 2011;
- .5 CSA C22.1-09, Canadian Electrical Code Part I Safety Standard for Electrical Installations and CE Code Handbook. Amendments for Provinces;



- .6 Canadian Code for Preferred Packaging;
- .7 National Electrical Manufacturers Association (NEMA);
- .8 Electrical and Electronic Manufacturers' Association of Canada (EEMAC);
- .9 American National Standards Institute/Institute of Electrical and Electronics Engineers (ANSI/IEEE) - ANSI/IEEE C62.41-1991, Surge Voltages in Low-Voltage AC Power Circuits;
- .10 American Society for Testing and Materials (ASTM);
- .11 ASTM F 1137-00(2006), Specification for Phosphate/Oil and Phosphate/Organic Corrosion Protective Coatings for Fasteners;
- .12 The Canada Labour Code;
- .13 <http://laws.justice.gc.ca/en/L-2/>
- .14 The Canada Occupational Health and Safety Regulations;
- .15 <http://laws.justice.gc.ca/eng/SOR-86-304/index.html>
- .16 All other Territorial and Municipal Acts, Codes, By-laws and regulations appropriate to the area of concern.

2.7.4 STANDARDS AND GUIDELINES PRODUCED BY THE GOVERNMENT OF CANADA:

- .1 Standards and Directives of the Treasury Board (TB):
 - .1 <http://www.tbs-sct.gc.ca/pol/index-eng.aspx?tree=standard>
 - .2 <http://www.tbs-sct.gc.ca/pol/index-eng.aspx?tree=directive>
 - .3 And including;
 - .1 Accessibility Standard for Real Property,
 - .1 <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=12044>
 - .2 Fire Protection Standard.
 - .1 <http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=17316>
- .2 Labour Canada's, Fire Commissioner of Canada Standards;
 - .1 http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/index.shtml.
 - .2 And including,
 - .1 FC-301 Standard for Construction Operations, June 1982,
 - .2 FC-302 Standard for Welding and Cutting, June 1982,
 - .3 FC-311 Standard for Record Storage, May 1979.
 - .4 FC-403 Fire Protection Standard for sprinkler Systems, November 1994
- .3 The Standards and Guidelines for the Conservation of Historic Places in Canada
 - .1 www.historicplaces.ca;
- .4 Labour Canada's, Technical Documents;
 - .1 http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/guidelines/index.shtml
 - .2 And Including,
 - .1 Fire Protection for Information Technology Facilities and Equipment.
- .5 Canadian Food Inspection Agency's Containment Standard for Facilities Handling Plant Pests.
- .6 Public Health Agency of Canada's Laboratory Biosafety Guidelines, 3rd Edition,
- .7 Canadian Council of Animal Care's Guidelines on: Laboratory Animal Facilities – Characteristics, Design and Development.

2.7.5 HEALTH CANADA STANDARDS AND GUIDELINES:

- .1 Guidelines for Canadian Drinking Water Quality – Sixth Edition – 1996;
- .2 Guidelines for Canadian Drinking Water Quality – Summary Table – Dec 2010;



- .3 Guidance for Providing Safe Drinking Water in Areas Of Federal Jurisdiction – Version I – 2005;
- .4 The Canadian Council of Ministers of the Environment (CCME) ;
- .5 Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products (CCME, 2003);
- .6 Canada – Wide Strategy for the Management of municipal Waste Water Effluent;
- .7 The Canadian Environmental Protection Act (CEPA, 1999);
- .8 The Storage Tank Systems for Petroleum Products and Allied Petroleum Products Regulations, published in Canada Gazette Part II on June 12, 2008 (Registration SOR/2008-197).

2.7.6 STANDARDS AND GUIDELINES:

- .1 Air Conditioning and Refrigeration Institute (ARI);
- .2 American Conference of Governmental Industrial Hygienists (ACGIH, Industrial Ventilation Handbook);
- .3 Air Diffusion Council (ADC);
- .4 Air Movement and Control Association (AMCA);
- .5 American Association of State Highway and Transportation Officials (AASHTO) Standards
- .6 American National Standards Institute (ANSI);
- .7 ANSI/AIHA Z9.5, Laboratory Ventilation;
- .8 .1 ANSI/NEMA C82.1-04, Electric Lamp Ballasts-Line Frequency Fluorescent Lamp Ballast;
- .9 .2 ANSI/NEMA C82.4-02, Ballasts for High-Intensity-Discharge and Low-Pressure Sodium Lamps;
- .10 ANSI/TIA/EIA-606- Administration Standard for the Telecommunications Infrastructure of Commercial Buildings;
- .11 ANSI Z358.1, Emergency Eyewash and Shower Equipment;
- .12 American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE), including but not limited to;
 - .1 ASHRAE Laboratory Design Guide,
 - .2 ASHRAE Standards and Guidelines,
 - .3 ASHRAE Applications Handbook – 2007,
 - .4 ASHRAE HVAC Systems and Equipment Handbook – 2008,
 - .5 ASHRAE Fundamentals Handbook – 2009,
 - .6 ASHRAE Refrigeration Handbook – 2010,
 - .7 ASHRAE 52.2 Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particle Size – 2007,
 - .8 ANSI/ASHRAE 55, Thermal Environmental Conditions for Human Occupancy – 2004,
 - .9 ANSI/ASHRAE 62.1, Ventilation for Acceptable Indoor Air Quality – 2010,
 - .10 ASHRAE 90.1, Energy Efficient Design of New Buildings – 2010,
 - .11 ASHRAE 105: Standard Method of Measuring and Expressing Building Energy Performance,
 - .12 ASHRAE 110, Method of Testing Performance of Laboratory Fume Hoods,
 - .13 ASHRAE 111; Practices for Measurement, Testing, Adjusting and Balancing of Building HVAC&R Systems,
 - .14 ASHRAE 114; Energy Management Control Systems Instrumentation, and
 - .15 ASHRAE 135; BACnet: A Data Communication Protocol for Building Automation and Control Networks.
- .13 Asphalt Institute Standards for Hot Mix;



- .14 American Society of Mechanical Engineers (ASME);
- .15 American Society for Testing and Materials (ASTM);
- .16 American Water Works Association (AWWA) Standards;
- .17 American Welding Society (AWS);
- .18 Associated Air Balance Council (AABC);
- .19 Canadian Standards Association;
- .20 CSA A23.3-04 (2010) Design of Concrete Structures;
- .21 CSA B51-09 Boiler, pressure vessel and pressure piping Code;
- .22 CSA B52-05 Mechanical Refrigeration Code;
- .23 CSA B64-01 Backflow Preventers and Vacuum Breakers;
- .24 CSA B139-09 Installation Code for Oil Burning Equipment;
- .25 CSA B149.1-10 Natural Gas and Propane Installation Code;
- .26 CSA B651-04 Accessible Design for the Built Environment;
- .27 CSA C22.2 No. 41-07 Grounding and Bonding Equipment;
- .28 CSA S16-09 Design of Steel Structures;
- .29 CSA Z204-1994 Guideline for Managing Indoor Air Quality in Office Buildings;
- .30 CSA Z320-11 Building Commissioning Standard & Check Sheets;
- .31 CSA Z316.5-94, Fume Hoods and Associated Exhaust Systems;
- .32 CAN/CSA-23.1-04 and CAN/CSA-A23.2-04 Concrete materials and methods of concrete construction; and Methods of test and standard practice for concrete CAN/CSA-C22.2 No. 214-94 "Communications Cables";
- .33 CAN/CSA-C22.3 No.3-[98(R2007)], Electrical Co-ordination;
- .34 CAN/CSA-B651-04(R2010), Accessible Design for the Built Environment;
- .35 CAN3 C235-[83(R2010)], Preferred Voltage Levels for AC Systems, 0 to 50,000 V;
- .36 CAN/CSA-T528-93, "Design Guidelines for Administration of Telecommunications Infrastructure in Commercial Buildings", Canadian Standards Association;
- .37 CAN/ULC – S524-06 Standard for the Installation of Fire Alarm Systems;
- .38 CAN/ULC – S537-04 Fire Alarm System Verification Report;
- .39 CAN/ULC – S102-07 Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies;
- .40 CAN/ULC – S102.2-07 Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies
CAN/ULC S112-M90 (R2001) Standard Methods of Fire Test of Fire-Damper Assemblies;
- .41 CAN/ULC S115-05 Standard Method of Fire Tests of Fire stop Systems;
- .42 International Mechanical Code – Latest Version;
- .43 Institute of Boiler and Radiation, Hydronic Institute (IBR);
- .44 Manufacturers Standardization Society of Valve and Fitting Industry (MSS);
- .45 National Fire Protection Association (NFPA), including;
 - .1 NFPA 10; Standard for Portable Fire Extinguishers – 2010,
 - .2 NFPA 13; Standard for Installation of Sprinkler Systems – 2010,
 - .3 NFPA 14; Standard for Installation of Standpipe and Hose Systems – 2010,
 - .4 NFPA 24: Standard for the Installation of Private Fire Service Mains and Their Appurtenances-2010,
 - .5 NFPA 30; Flammable and Combustible Liquids Code,
 - .6 NFPA 45; Standard on Fire Protection for Laboratories Using Chemicals,
 - .7 NFPA 1142: Standard on Water Supplies for Suburban and Rural Fire Fighting-2007.



- .46 SEFA I.2, Scientific Equipment & Furniture Association;
- .47 Sheet Metal and Air Conditioning Contractors National Association (SMACNA);
- .48 Transportation Association of Canada (TAC) Guide for Canadian Roads;
- .49 Manual of Uniform Traffic Control Devices (MUTCD);
- .50 Telecommunications Industry Association (TIA);
 - .1 Commercial Building Telecommunications Cabling Standard TIA/EIA-568,
 - .1 Part 1: General Requirements, TIA/EIA-568-B.1,
 - .2 Part 2: Balanced Twisted Pair Cabling Components, TIA/EIA-568-B.2,
 - .3 Addendum 1 - Transmission Performance Specification for 4-pair 100 Ohm Category 6 Cabling, TIA/EIA-568-B.2-1,
 - .4 Optical Fibre Cabling Components Standards, TIA/EIA-568-B.3.
 - .2 ANSI/TIA/EIA-569-A Commercial Building Standards for Telecommunications pathways and spaces,
 - .3 Pathways and Spaces, ANSI/TIA/EIA-569-B,
 - .4 Telecommunications Infrastructure Standard for Data centers TIA-942,
 - .5 J-STD-607-A Commercial Building Grounding and - Bonding Requirements for Telecommunications.
- .51 Underwriters' Laboratories of Canada (ULC);
- .52 ULC/CSA Approval is required for all electrical and mechanical equipment.

2.7.7 STANDARDS AND GUIDELINES FOR TRANSPORTATION

- .1 Canadian Highway Bridge Design Code
- .2 Transportation Association of Canada - Manuals, Guides and Handbooks.

2.8 COMMISSIONING PROCESS

2.8.1 GENERAL

- .1 This section summarizes the PWGSC commissioning process, the requirements and associated roles and responsibilities as they relate to the various phases in the delivery of a project.
- .2 It is to be used as a guide in further developing the commissioning plan, specification and related documents for a project.
- .3 Commissioning is not a replacement for good design and construction practices.
 - .1 It requires coordinated efforts on the part of all parties involved in the Project.
- .4 The Commissioning overlaps the design phase through construction and into the operation phase.
- .5 The PWGSC Commissioning Manual CP.1 4th edition, November 2006, is available for free download at the following site:
 - .1 <http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/bi-rp/tech/miseenservice-commissioning/manuel-manual-eng.html>
- .6 The PWGSC Commission Manual CP.2 – Commissioning Glossary is available for free download at the following site:
 - .1 <http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/bi-rp/tech/miseenservice-commissioning/manuel-manual-b-eng.html>
- .7 “Commissioning” is a quality assurance process, in which the functional requirements of the Owner/occupant and the operational requirements of facility management are proven to function as intended.



- .8 The “commissioning process” is a planned program of quality management and information transfer that extends through all phases of a project’s development and delivery, up to and including the warranty period.
- .9 The process consists of a series of checks and balances to ensure that the work is designed, installed and proven to operate as intended.
- .10 Commissioning has two main components, functional and operational.
 - .1 The functional component deals with:
 - .1 Security, Health (indoor air quality) and occupant safety;
 - .2 Comfort (temperature, relative humidity, ventilation, air flow patterns, air purity and well being);
 - .3 Cost-effectiveness of design; and
 - .4 Systems and equipment supporting Owner’s functional requirements.
 - .2 The operational component deals with:
 - .1 Operation and Maintenance (O&M) issues; e.g., design review with a particular concern for the operation and maintenance of the systems today and in the future, when repairs are required;
 - .2 Performance evaluation of systems and equipment;
 - .3 Accessibility to O&M Documentation; and
 - .4 Review of the training plan against the current needs now and in the future.

2.8.2 COMMISSIONING PLAN

- .1 The Commissioning Plan will typically be developed by the Contractor through his own Commissioning Agent.
- .2 The Commissioning Plan is the project-specific document and which describes the process for verifying that all built works meet the Investor's requirements within the limits of the working documents.
- .3 It is essential that the Consultant provide specifications that detail requirements for all submittals and testing in each Specification Section in order for the Contractor to properly prepare a complete Commissioning Plan.
- .4 The Commissioning Plan will be reviewed and accepted by the Departmental Representative prior to commencement of construction.
- .5 The Commissioning Plan may require periodic update throughout design.

2.8.3 COMPONENT VERIFICATION

- .1 Component verification sheets (CV) sheets are developed by the Consultant and incorporated in the contract documents to ensure the facility is an operating entity and meets the requirements as described in the Agreement.
- .2 The CV sheets are intended to monitor and track the supply and shop drawing requirements associated with each component. The *Consultant* must verify that the components being installed in the built works are acceptable to their design and the approved shop drawings.
- .3 The commissioning process requires the documentation of all the components installed as part of a system that will have performance verification testing conducted.
- .4 Sample CV sheets for various types of components are to be provided by the Consultant in Div 01.

2.8.4 SYSTEM & INTEGRATED SYSTEM TESTING

- .1 The “performance verification tests” (PVTs) are developed by the Design-Builder to ensure the facility is an operating entity and meets the requirements as described in the Agreement.



- .2 The PVTs are intended to demonstrate the functional performance of the systems & integrated system during the various modes of operation, against the design intent. Each test must be uniquely identified and reflected in the contractor's commissioning schedule.
- .3 Once the contract has been awarded the Design-Builder must monitor the sub-contractor's process to help ensure the timely completion of these tests. The Design-Builder must witness each test. The Design-Builder must provide final certification of the test results. After an acceptable review of the test document, the PWGSC Commissioning Specialist will recommend to the Departmental Representative the acceptance or rejection of the test results.
- .4 Sample PVT sheets for various types of system are to be provided by the Consultant in Div 01.

2.8.5 TEST REQUIREMENTS

- .1 Each CV or PVT shall be uniquely named, numbered and categorized by discipline.
- .2 Tests shall define:
 - .1 Test Purpose;
 - .2 System design narrative;
 - .3 Test Prerequisites;
 - .4 Testing Procedures;
 - .5 Test Comments; and
 - .6 Test Sign-off Block.
- .3 System Performance Verifications Tests
 - .1 These tests have prerequisites that are to be completed and approved prior to conducting the tests, which, may include but are not limited to:
 - .1 CV and PVT sheets developed and accepted,
 - .2 Contractor proving start-up and tests,
 - .3 Manufacturers start-ups,
 - .4 Consultant has certified testing, adjusting & balancing (TAB) results, per TAB specification.
 - .1 TAB work must be completed and approved prior to the control system Pts.
 - .5 Associated control device calibrations and physical point verifications are completed and approved.
 - .1 Note, control system end to end checks to be completed and approved prior to the control system PVTs.
 - .6 Other specified deliverables, i.e. factory test reports, O&M submissions, etc.
 - .7 System performance tests associated with the integrated systems under test,
 - .8 Integrated System Performance Verifications,
 - .9 Fire alarm verifications.

2.8.6 COMMISSIONING (EVALUATION) REPORT

- .1 The Commissioning (Evaluation) Report must provide:
 - .1 An executive summary,
 - .2 Completed CV and PVT sheets,
 - .3 A complete assessment of the project,
 - .4 Lessons learned from this project and any necessary recommendations,
 - .5 Variances between the actual and planned levels of performance,
 - .6 An evaluation of the validation and acceptance process and of the commissioning phase.

2.8.7 OVERVIEW OF ROLES AND RESPONSIBILITIES



- .1 The following provides a general overview of the roles, responsibilities and implementation of the commissioning process. The commissioning process is a logical sequence of verifications from component verifications through to system & integrated system, performance verification testing.
- .2 At completion of the commissioning process all results are documented and audited for acceptance.

2.8.8 MAJOR TASKS AND RESPONSIBILITIES

- .1 Schematic Design and Design Development Phase:
 - .1 Consultant;
 - .1 Develop commissioning strategy,
 - .2 Develop preliminary commissioning plan.
 - .2 Construction Documentation Phase:
 - .1 Consultant;
 - .1 Complete the final commissioning plan,
 - .2 Specify the Commissioning requirements in Div 01 and provide sample Commissioning CV and PCT sheets in Div 01 for Bidders purposes,
 - .3 Develop project specific CV and PVT sheets.
 - .3 Construction Phase:
 - .1 Consultant;
 - .1 Monitor and report on contract commissioning activities,
 - .2 Finalize development of job specific CV and PVT sheets,
 - .3 Review and certify component verification sheets as they are completed by the Contractor, and
 - .4 Review commissioning schedule
 - .2 Contractor;
 - .1 Comply with the requirements in the Specifications,
 - .2 Complete the component verification,
 - .3 Conduct the equipment system start-up and proving, and
 - .4 Develop the commissioning schedule, reflecting the PVTs.
 - .4 Commissioning Phase
 - .1 Consultant
 - .1 Witness all system and integrated systems tests,
 - .2 Review and certify commissioning test results,
 - .3 Track and compile all commissioning documentation submitted by the contractor and confirm that all commissioning tasks are completed,
 - .4 Incorporate all commissioning documentation into a preliminary commissioning report and recommend interim acceptance.
 - .5 Identify “deferred” commissioning tests due to seasonal constraints, etc.
 - .2 Contractor
 - .1 Comply with the requirements in the specifications,
 - .2 Conduct the system testing, and
 - .3 Conduct the integrated system testing.
 - .5 Operating Phase
 - .1 Consultant
 - .1 Provide advice and recommendations for fine tuning, if required,
 - .2 Witness “deferred” commissioning tests,



- .3 Review and certify “deferred” systems test results,
- .4 Incorporate deferred system test results and all other commissioning documentation into a final commissioning report with an executive summary recommending final acceptance.
- .2 Contractor
 - .1 Address warranty issues,
- .6 Evaluation Phase
 - .1 Consultant
 - .1 Provide advice and recommendations during the final evaluation.

2.9 CONSTRUCTION DOCUMENTS

2.9.1 PURPOSE

- .1 This section provides direction in the preparation of construction contract documents (namely specifications, drawings and addenda) for PWGSC.
- .2 Drawings, specifications and addenda must be complete and clear, in order that a contractor can prepare a bid without guesswork. Standard practice for the preparation of construction contract documents requires that:
 - .1 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.
 - .2 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.
 - .3 Addenda are changes to the construction contract documents or tendering procedures, issued during the tendering process.

2.9.2 PRINCIPLES FOR PWGSC CONTRACT DOCUMENTS

- .1 PWGSC’s contract documents are based on common public procurement principles.
- .2 PWGSC does not use Canadian Construction Document Committee (CCDC) documents.
- .3 The construction contract and the terms and conditions are prepared and issued by PWGSC, along with all other related bidding and contractual documents.
 - .1 For more detailed information, the clauses are available on the following web site:
 - .2 <http://ccua-sacc.tpsgc-pwgsc.gc.ca/pub/acho-eng.jsp>
 - .3 Any questions should be directed through the PWGSC Project Manager.

2.9.3 QUALITY ASSURANCE

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

2.9.4 ADDENDA

- .1 Format
 - .1 Prepare addenda using the format shown in Appendix ‘C’.
 - .2 No signature type information is to appear.
 - .3 Every page of the addendum (including attachments) must be numbered consecutively.
 - .4 All pages must have the PWGSC project number and the appropriate addendum number.
 - .5 Sketches shall appear in the PWGSC format, stamped and signed.
 - .6 No Consultant information (name, address, phone #, consultant project # etc.) may appear in the addendum or its attachments (except on sketches).
- .2 Content



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

2.9.5 SUBMISSIONS

- .1 For each construction document submission, the Consultant shall provide:
 - .1 A completed and signed Checklist for the Submission of Construction Documents (See Appendix 'B')
 - .2 Original specification; printed one side on 216 mm x 280 mm white bond paper.
 - .3 Index, as per Appendix 'C'
 - .4 Reproducible original drawings; sealed and signed by the design authority.
 - .5 Addenda (if required), as per Appendix 'D;' (to be issued by PWGSC)
- .2 Tender information:
 - .1 Include a description of all units and estimated quantities to be included in unit price table.
 - .2 Include a list of significant trades including costs.
 - .1 PWGSC will then determine which trades, if any, will be tendered through the Bid Depository.
- .3 Government Electronic Tendering System (MERX):
 - .1 Consultants shall 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.
 - .2 The electronic copy of drawings and specifications is for bidding purposes only and do not require to be signed and sealed.

2.9.6 PWGSC ROLE

- .1 PWGSC shall provide:
 - .1 General and Special Instructions to Bidders
 - .2 Bid and Acceptance Form
 - .3 Standard Construction Contract Documents

2.10 SPECIFICATIONS

2.10.1 GENERAL

- .1 In preparing project specifications, the Consultant must use the current edition of the National Master Specification (NMS) in accordance with the "NMS User's Guide".

2.10.2 NATIONAL MASTER SPECIFICATION (NMS)

- .1 In preparing project specifications, the Consultant must use the current edition of the National Master Specification (NMS) in accordance with the "NMS User's Guide".
- .2 The NMS is a master construction specification available in both official languages, which is divided into 48 Divisions (Masterformat 2004) and is used for a wide range of construction and/or renovation projects.
- .3 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 of conflict and ambiguity.

2.10.3 SPECIFICATION ORGANIZATION

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



- .3 For specifications not included in the NMS, but required for the project, follow the number and title recommendations of Masterformat 2004
- .4 Number each page and start each Section on a new page
- .5 Bind specifications
- .6 Include Division I, edited to PWGSC requirements.
- .7 Note: Consultant's name is not to be indicated in the specifications..

2.10.4 TERMINOLOGY

- .1 Use the term "Departmental Representative" instead of Engineer, PWGSC, Owner, Consultant or Architect.
- .2 "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.
- .3 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.
- .4 Specifications must permit bidders to calculate all quantities and bid accurately.
 - .1 If quantities are impossible to identify (i.e. cracks to be repaired) give an estimated quantity for bid purposes (unit prices).
- .5 Ensure that the terminology used throughout the specifications is consistent and does not contradict the applicable standard construction contract documents.

2.10.5 DIMENSIONS

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

2.10.6 STANDARDS

- .1 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.
- .2 Canadian standards should be used wherever possible.

2.10.7 SPECIFYING MATERIALS

- .1 The practice of specifying actual brand names, model numbers, etc., is against departmental policy except for special circumstances.
- .2 The method of specifying materials shall be by using industry recognized standards.
- .3 If the above method cannot be used and where no standards exist, specify by a non-restrictive, non-trade name "prescription" or "performance" specifications.
- .4 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
- .5 Include all known materials acceptable for the purpose intended, and in the case of equipment, identify by type and model number.

2.10.8 ACCEPTABLE PRODUCTS AND MATERIALS

- .1 The term "Acceptable Manufacturers" must not be used, as this restricts competition and does not ensure the actual material or product will be acceptable.
 - .1 A list of words and phrases that should be avoided is included in the NMS User's Guide.
- .2 Listing of acceptable products or materials is to be an exception, due to a unique specification or for the purpose of assisting bidders in identifying lesser known potential products or materials.



- .3 For exceptions, provide justifiable reasons for listing products and materials and submit to the *Departmental Representative* for acceptance.
- .4 When authorized to list acceptable products or materials, list all, with a minimum of three (3), trade names of products and materials acceptable for the intended purpose.

2.10.9 ALTERNATE PRODUCTS AND MATERIALS

- .1 Alternates must be approved by addendum issued by the *Departmental Representative* in accordance with Instructions to bidders.
- .2 Review applications for approval of alternate products and materials and provide recommendations to the *Departmental Representative*.
- .3 Compare products/materials to specifications. Do not compare product-to-product or material-to-material.

2.10.10 SEPARATE AND ALTERNATE PRICES

- .1 Do not include Separate or Alternate Pricing .

2.10.11 SOLE SOURCING

- .1 Sole sourcing for materials and work may be used for proprietary systems (i.e. fire alarm systems, EMCS systems).
- .2 Substantiation and/or justification will be required.
- .3 Prior to including sole source materials and/or work, the Consultant must contact the *Departmental Representative* to obtain the approval for the sole sourcing.

2.10.12 UNIT PRICES

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

2.10.13 CASH ALLOWANCES

- .1 Construction contract documents should be complete and contain all of the requirements for the contractual work.
- .2 Cash allowances are to be used only under exceptional circumstances (i.e. utility companies, municipalities), where no other method of specifying is appropriate.
- .3 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.

2.10.14 WARRANTIES

- .1 It is the practice of PWGSC to have a 12-month warranty and to avoid extending warranties for more than 24 months.
- .2 When it is deemed necessary to extend a warranty beyond the 12 month period provided for in the General Conditions of the contract, obtain approval from the Project Manager.
- .3 Delete all references to manufacturers' guarantees.

2.10.15 SCOPE OF WORK

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

2.10.16 SUMMARY AND SECTION INCLUDES

- .1 In Part -I All Sections; do not use (delete):
 - .1 "Summary" and
 - .2 "Section Includes."

2.10.17 RELATED SECTIONS

- .1 In Part I All Sections; do not use (delete)

2.10.18 INDEX



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

2.10.19 HEALTH AND SAFETY

- .1 Confirm with the Project Manager to determine if there are any instructions to meet regional requirements.

2.10.20 EXPERIENCE AND QUALIFICATIONS

- .1 Remove experience and qualification requirements from specification sections.

2.10.21 PREQUALIFICATION

- .1 Do not include in the specification any mandatory contractor and/or subcontractor prequalification requirements that could become a contract award condition.
- .2 If a prequalification process is required, contact the Project Manager.
- .3 There should be no references to certificates, transcripts or license numbers of a trade or subcontractor being included with the bid.

2.10.22 CONTRACTING ISSUES

- .1 Specifications describe the workmanship and quality of the work.
 - .1 Contracting issues should not appear in the specifications.
- .2 Division 00 of the NMS is not used for PWGSC projects.
- .3 Remove all references within the specifications, to the following:
 - .1 General Instructions to Bidders
 - .2 General Conditions
 - .3 CCDC documents
 - .4 Health and Safety requirements
 - .5 Priority of documents
 - .6 Security clauses
 - .7 Terms of payment or holdback
 - .8 Tendering process
 - .9 Bonding requirements
 - .10 Insurance requirements
 - .11 Alternative and separate pricing
 - .12 Site visit (Mandatory or Optional)
 - .13 Release of Lien and deficiency holdbacks

2.11 DRAWINGS

2.11.1 GENERAL

- .1 Drawings shall be in accordance with PWGSC Western CADD Standards and CSA B78.3.
- .2 Refer to:
 - .1 <http://www.tpsgc-pwgsc.gc.ca/cdao-cadd/ouest-western/tm-toe-eng.html>
 - .2 The above link is subject to change
 - .3 The Consultant shall check with the Project Manager to ensure that the link is current.
- .3 Download and use the Toolkit which includes drawing border templates, layer utility and drawing standards checker.

2.11.2 TITLE BLOCKS

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

2.11.3 DIMENSIONS

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

2.11.4 TRADE NAMES



- .1 Trade names on drawings are not acceptable.
- .2 Refer to SECTON 2.3, SPECIFICATIONS; 2.3.6 Specifying Materials for specifying materials by trade name.

2.11.5 SPECIFICATION NOTES

- .1 No specification type notes are to appear on any drawing.

2.11.6 TERMINOLOGY

- .1 Use the term "Departmental Representative" instead of Engineer, PWGSC, Owner, Consultant or Architect.
- .2 "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.
- .3 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", may not be indicated on the drawings or in the specifications as this promotes inaccurate and inflated bids.
- .4 Specifications & drawings must permit bidders to calculate all quantities and bid accurately.
- .5 If quantities are impossible to identify (i.e. cracks to be repaired) give an estimated quantity for bid purposes (unit prices).
- .6 Ensure that the terminology used throughout the drawings & specifications is consistent and does not contradict the applicable standard construction contract documents.

2.11.7 INFORMATION TO BE INCLUDED

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

2.11.8 DRAWING NUMBERS

- .1 Number drawings in sets according to the type of drawing and the discipline involved as follows:
 - .1 The requirements of SECTION 2 PWGSC NATIONAL CADD STANDARD will supersede these requirements, where warranted.
- .2 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. |

2.11.9 PRINTS



- .1 Print with black lines on white paper.
- .2 Blue prints are acceptable for document submissions at stages outlined in the TOR.
- .3 Confirm with Departmental Representative the size of prints to be provided for review purposes.

2.11.10 BINDING

- .1 Staple or otherwise bind prints into sets.
- .2 Where presentations exceed 20 sheets, the drawings for each discipline may be bound separately for convenience and ease of handling.

2.11.11 LEGENDS

- .1 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.

2.11.12 SCHEDULES

- .1 Where schedules occupy entire sheets, locate them next to the plan sheets or at the back of each set of drawings for convenient reference.
 - .1 See CGSB 33-GP-7 Architectural Drawing Practices for schedule arrangements.

2.11.13 NORTH POINTS

- .1 On all plans include a north point.
- .2 Orient all plans in the same direction for easy cross-referencing.
- .3 Wherever possible, lay out plans so that the north point is at the top of the sheet.

2.11.14 DRAWING SYMBOLS

- .1 Follow generally accepted drawing conventions, understandable by the construction trades, and in accordance with PWGSC publications.



3 PROJECT ADMINISTRATION

3.1 GENERAL REQUIREMENTS FOR ALL PROJECTS

- .1 The administration requirements outlined in this section are applicable to all PWGSC projects in Western Region, unless otherwise indicated in the TOR.
- .2 “Project Team” refers to key representatives involved in this project.
- .3 All team members must maintain a professional, cordial and collaborative relationship.

3.2 LANGUAGE

- .1 Construction documents must be prepared in English.

3.3 MEDIA

- .1 The Consultant shall not respond to any media inquiry.
- .2 Direct all media requests to the Departmental Representative.

3.4 PROJECT MANAGEMENT

3.4.1 GENERAL

- .1 Public Works and Government Services Canada administers the project on behalf of Canada and exercises continuing control over the project during all phases of development.
- .2 This project is to be organized, managed and implemented in a collaborative manner.
- .3 The PWGSC project management team, the Consultant, the Contractor and the User Department teams are to work cooperatively at every stage of the design and construction process in order to assure the creation of a successful and meaningful work of architecture.
- .4 Under the leadership of the PWGSC Departmental Representative, all team members are responsible for establishing and maintaining a professional and cordial relationship.

3.4.2 NATIONAL PROJECT MANAGEMENT SYSTEM

- .1 PWGSC uses the National Project Management System (NPMS) for management of its building projects in order to align with the Federal Government approvals processes. Refer to the PWGSC NPMS web site for more details.
- .2 <http://www.tpsgc-pwgsc.gc.ca/biens-property/sngp-npms/index-eng.html>
- .3 This GP&S document speaks to services that are normally provided by the professional during the Project Delivery Phase of the NMPS.

3.4.3 DESIGN STAGE

- .1 Pre-design Process
 - .1 The purpose of this phase is to analyze all project requirements including codes, regulations, programming, sustainability, cost, time management and risk to demonstrate a full understanding of the project
 - .2 The approved deliverable will become the formal project work plan and will be utilized throughout the project to guide the delivery.
- .2 Schematic Design Process
 - .1 The purpose of this phase is to explore three distinctly different design options and to analyze them against the project requirements.
 - .2 The Schematic Design will be in sufficient detail to illustrate and communicate the project characteristics.
 - .1 Provide a detailed review and analysis of the project requirements including all updates and amendments to ensure all requirements are fully integrated into the Schematic Design.



- .2 Out of this process the Schematic Design will be accepted and authorization to proceed to Design Development will be based on the accepted Schematic Design.
- .3 The *Departmental Representative*, in concert with others shall choose one option to be further developed.
 - .1 Although the *Consultant* is required to identify a preferred option, the *Departmental Representative* may select another option.
 - .2 The approved deliverable will become the formal project work plan and will be utilized throughout the project to guide the delivery.

3.4.4 IMPLEMENTATION STAGE

- .1 Design Development Process
 - .1 The purpose of this phase is to further develop the design option selected for refinement at the Schematic Design stage.
 - .2 The Design Development documents consist of drawings and other documents to describe the scope, quality and cost of the project in sufficient detail to facilitate design approval, confirmation of code compliance, detailed planning of construction and project approval.
 - .3 This design will be used as the basis for preparation of construction documents.
 - .4 The approved deliverable will become the formal project work plan and will be utilized throughout the project to guide the delivery.
- .2 Commissioning Process
 - .1 “Commissioning” is a quality assurance process, in which the functional requirements of the Owner/occupant and the operational requirements of facility management are tested, verified and proven to function as intended.
 - .2 Commissioning deliverables occur at various phases throughout the project as detailed in section 2.8.
 - .3 Commissioning shall be in accordance with the PWGSC Commissioning Manual CP.1 (2003).
- .3 Construction Document Process
 - .1 The purpose of this phase is to translate design development documents into construction drawings and specifications, for use by the contractor to determine a cost for the work and to construct the building.
- .4 Contract Procurement Process
 - .1 The purpose of this phase is to obtain and evaluate bids/proposals from qualified contractors to construct the project, as per the Construction Contract Documents and to award the construction contract according to government regulations.
- .5 Construction Contract Administration Process
 - .1 The purpose of this phase is to implement the project in compliance with the Construction Contract Documents and to direct and monitor all necessary or requested changes to the scope of work during construction, commissioning and closeout.

3.4.5 CLOSEOUT STAGE

- .1 Post Construction Process
 - .1 The purpose of this phase is to ensure the orderly completion and recording of all aspects of the work during the construction and liaise with the Public Works And Government Services Canada and other agencies as appropriate to close out the project.

3.4.6 ENGINEERING PROJECTS



- .1 Refer to the project specific TOR where the stages for an Engineering Project differs slightly.

3.5 LINES OF COMMUNICATION

- .1 In general, communications will be through the Departmental Representative, unless directed otherwise.
 - .1 This includes formal contact between the Consultant, the Contractor, the PWGSC Project Team and the User Department.
- .2 Direct communication between members of the PWGSC Project Team on routine matters may be required for resolution of technical issues.
 - .1 However, this shall not alter project scope, budget or schedules, unless confirmed in writing by the Departmental Representative.
- .3 During construction tender call, PWGSC will conduct all correspondence with bidders and award the contract.

3.6 MEETINGS

- .1 The Departmental Representative will arrange meetings throughout the project, with representatives from:
 - .1 The User Department;
 - .2 PWGSC
 - .3 The Consultant team; and
 - .4 The Contractor (during the construction phase)
- .2 Standing agenda items shall include:
 - .1 Project Schedule,
 - .2 Cost,
 - .3 Risk,
 - .4 Quality,
 - .5 Health and safety

3.7 CONSULTANT RESPONSIBILITIES

- .1 The “Consultant Team” includes the Consultant’s staff, sub-consultants and specialists.
 - .1 This team must maintain its expertise for the duration of the project.
 - .2 The team must include qualified registered architectural and engineering professionals, with extensive relevant experience, capable of providing all required services.
 - .3 Team members may be qualified to provide services in more than one discipline.
 - .4 The Consultant may expand the team to include additional disciplines.
- .2 The Consultant is responsible for:
 - .1 Obtaining Departmental Representative acceptance for each project phase before proceeding to the next phase.
 - .2 Accurately communicating design, budget, and scheduling issues to staff, sub-consultants and specialists.
 - .3 Co-ordinating input for the Departmental Representative’s Risk Management Plan
 - .4 Co-ordinating the quality assurance process and ensuring that submissions of sub-consultants are complete and signed-off by reviewers;
 - .5 During the design phases:
 - .1 Attend meetings,
 - .2 Record the issues and decisions,
 - .3 Prepare and distribute minutes within two working days of the meeting,



- .4 Ensure all meetings are green i.e. using electronic documents or double-sided hard copies and
- .5 Ensure sub-consultants attend required meetings.
- .6 During the construction phase:
 - .1 Attend meetings and provide site inspection services
 - .2 Ensure sub-consultants provide site inspection services and attend required meetings.
- .3 The Consultant is responsible for:
 - .1 Coordinating and directing the work of all team activities, sub-consultants and specialists
 - .2 Preparing a design that meets project requirements.
 - .3 Obtaining approvals on behalf of the Departmental Representative from the User and other levels of government such as provincial and municipal governments
 - .1 The Consultant shall adjust the documentation to meet the requirements of these authorities.

3.8 PWGSC RESPONSIBILITIES

- .1 Administration
 - .1 PWGSC administers the project and exercises continuing control over the project during all phases of development.
 - .2 The following administrative requirements apply during all phases of the project delivery.
- .2 Reviews
 - .1 PWGSC will review the work at various stages and reserves the right to reject unsatisfactory work at any stage.
 - .2 If later reviews show that earlier acceptances must be withdrawn, the Consultant shall re-design and re-submit at no extra cost.
- .3 Acceptance
 - .1 PWGSC acceptance of submissions from the Consultant simply indicates that, based on a general review, the material complies with governmental objectives and practices, and meets overall project objectives
 - .2 Acceptance does not relieve the Consultant of professional responsibility for the work and for compliance with the contract.
- .4 PWGSC Project Management
 - .1 The Project Manager assigned to the project is the Departmental Representative.
 - .2 The Departmental Representative is directly responsible for:
 - .1 The progress and administration of the project, on behalf of PWGSC
 - .2 Day-to-day project management and is the Consultant's single point of contact for project direction.
 - .3 Providing authorizations to the Consultant on various tasks throughout the project.
 - .3 Unless directed otherwise by the Departmental Representative, the Consultant obtains all Federal approvals necessary for the work.
- .5 PWGSC Professional & Technical Resources Team
 - .1 Provides professional advice and quality assurance reviews of consultant deliverables by Architectural and Engineering professional disciplines.
 - .2 Offers expert technical advice on related project issues, such as functional programming, options analysis, risk management, cost planning, scheduling, contract interpretation, specifications, terms of reference, commissioning, claims management, project delivery approach and project compliance.



- .3 Participates regularly in design phases and may attend (during construction), contractor meetings and conduct field reviews on behalf of the Departmental Representative.
- .4 Provides a Design Manager for the project, who will coordinate the services of the Professional & Technical Resources Team through the Departmental Representative;
 - .1 The Design Manager is the assembler and coordinator of the Resources Team of Architects, Engineers, Interior Designers, Project Planners, Cost Planners and Commissioning Specialists, all with specific areas of expertise.
- .6 PWGSC Commissioning Specialist represents the Departmental Representative's interests in the commissioning process for buildings by:
 - .1 Providing technical advice on O&M matters, operational criteria and quality assurance on the commissioning process throughout the project life cycle;
 - .2 Coordinating and overseeing internal PWGSC commissioning activities during all project phases to ensure that O&M concerns are addressed;
 - .3 Working closely with the Consultant, the Consultant's Commissioning Manager, the Contractor, and the Departmental Representative for Commissioning activities and,
 - .4 Reviews all documentation and reported results relative to commissioning throughout the project delivery.

3.9 USER DEPARTMENT RESPONSIBILITIES

- .1 The User Department Project Leader
 - .1 Is accountable for the expenditure of public funds and delivery of the project in accordance with terms accepted by the Treasury Board
 - .2 Reports to senior User Department executive management
 - .3 Will play several critical roles for the successful implementation of the project, as follows:
 - .1 Coordinate the quality, timing and completeness of information and decisions relating to issues related to the functional performance of the facility;

3.10 REVIEW AND APPROVAL BY PROVINCIAL AND MUNICIPAL AUTHORITIES

- .1 The federal government generally defers to provincial and municipal authorities for specific regulations, standards and inspections but in areas of conflict, the more stringent authority prevails.
- .2 Municipal authority review
 - .1 The purpose of this review is information and awareness;
 - .2 Submissions will be reviewed at the completion of specific phases as outlined in the Required Services Section of the TOR.

3.11 BUILDING PERMITS AND OCCUPANCY PERMITS

- .1 The Consultant will support the Contractor in applying for building permits by providing the required documentation.
 - .1 These documents will be submitted at phases as requested by the municipal authorities.
 - .2 The Consultant will negotiate and resolve building permit related issues.
- .2 The Consultant shall support the Contractor in its application for an occupancy permit and coordinate the resolution of all outstanding issues relating to the permit.
- .3 The Contractor shall pay for the permits on behalf of PWGSC.

3.12 TECHNICAL AND FUNCTIONAL REVIEWS

- .1 This includes both COE reviews and User Department reviews.



- .1 The Purpose of these reviews is technical and functional quality assurance;
- .2 Submissions will be reviewed at the completion of specific phases as outlined in the Required Services Section of the TOR.
- .2 HRSDC Reviews of building projects
 - .1 The purpose of these reviews is for fire protection, health and life safety;
 - .2 Submissions will be reviewed at the completion of specific phases as outlined in the Required Services Section of the TOR.



APPENDIX A CHECKLISTS

A.1 CHECKLIST FOR THE SUBMISSION OF CONSTRUCTION DOCUMENTS

A1.1 TITLE BLOCK

| | | | |
|---------------------------|----------------------|-------------------------|--|
| Project Title: | | Date: | |
| | | | |
| Project Location: | | Project Number: | |
| | | | |
| Consultant's Name: | | Contract Number: | |
| | | | |
| PWGSC PM: | Review Stage: | | |
| | | | |

A1.2 STANDARDS & GUIDELINES

| ITEM | Checked by: | Progress Submission | Pre-Tender or Tender Ready Submission | Comments: |
|---------------------------------------|--|---------------------|---------------------------------------|-----------|
| I. General | | | | |
| The design meets the requirements of; | | | | |
| .1 | National Building Code - 2005 | | | |
| .2 | National Fire Code - 2005 | | | |
| .3 | National Plumbing Code - 2005 | | | |
| .4 | Canada Labour Code | | | |
| .5 | NFPA 10 - Standard for Portable Fire Extinguishers - 2002 | | | |
| .6 | NFPA 13 - Standard for the Installation of Sprinkler Systems - 2007 | | | |
| .7 | NFPA 14 – Standard for the Installation of Standpipe and Hose Systems - 2003 | | | |
| 2. Treasury Board | | | | |
| The design meets the requirements of; | | | | |
| .1 | Chapter 3-6: Fire Protection Standard for Correctional Institutions. http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13580 | | | |
| .2 | Chapter 3-2: Fire Protection Standard for Design & Construction. http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13581 | | | |
| .3 | Fire Protection Standard for Electronic Data Processing | | | |



| | | | | |
|--|--|--|--|--|
| Equipment. http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=13582 | | | | |
| <p>3. HRSDC Fire Protection Engineer Standards</p> <p>The design meets the requirements of;</p> | | | | |
| .1 Federal Fire Protection Standards. http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/index.shtml | | | | |
| .2 FC-403 Standard for Sprinkler Systems. http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/403/page00.shtml | | | | |
| .3 FC-311-M Standard for Record Storage. http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/commissioner/311/page00.shtml | | | | |
| <p>4. Labour Canada Standards</p> <p>The design meets the requirements of;</p> | | | | |
| .1 Canada Labour Code. http://laws.justice.gc.ca/en/L-2/ | | | | |
| .2 Canada Occupational Health and Safety Regulations. http://laws.justice.gc.ca/eng/SOR-86-304/index.html | | | | |
| .3 Movable Storage Units Standard. http://www.hrsdc.gc.ca/eng/labour/fire_protection/policies_standards/guidelines/mobile.shtml | | | | |
| <p>5. ASHRAE Standards</p> <p>The design meets the requirements of;</p> | | | | |
| .1 ANSI/ASHRAE 55 – 2004 Thermal Environmental Conditions for Human Occupancy | | | | |
| .2 ASHRAE 62.1 – 2007 – Ventilation for Acceptable Indoor Air Quality | | | | |
| .3 ASHRAE Applications Handbook | | | | |
| .4 ASHRAE Fundamentals Handbook | | | | |



| 6. PWGSC MD Standards | | | | | |
|---------------------------------------|--|--|--|--|--|
| The design meets the requirements of; | | | | | |
| .1 | MD 15116 – Computer Room Air Conditioning Systems - 2006 | | | | |
| .2 | MD 15128 – Minimum Guidelines for Laboratory Fume Hoods – March 2004 | | | | |
| .3 | MD 15129 – Perchloric Acid Fume Hoods - 2006 | | | | |
| .4 | MD 15161 – Guidelines for the control of Legionella in mechanical systems | | | | |
| .5 | MD 250005 – Energy Monitoring and Control Systems Design Guidelines - 2009 | | | | |

AI.3 SPECIFICATIONS – ALL DISCIPLINES

| ITEM | Checked by: | Progress Submission | Pre-Tender or Tender Ready Submission | Comments: |
|--|---|----------------------------|--|------------------|
| 1. General | | | | |
| The Specifications meet the requirements of; | | | | |
| .1 | The NMS Users Guide. . | | | |
| .2 | Masterformat 2004 | | | |
| .3 | The current edition of the NMS database | | | |
| .4 | Deletion of “Related Sections” and “Section Includes” throughout. | | | |
| .5 | PWGSC GCs for projects tendered through PWGSC | | | |
| .6 | Consistent use of CCDC or other for privately tendered projects. | | | |
| .7 | Non-proprietary Specifications. | | | |
| .8 | Being completely edited with removal of all square choice brackets and Spec Notes. | | | |
| .9 | Including all relevant Sections as evident by the by the scope of work indicated by the drawings. | | | |
| .10 | Not referring to the Tender Submission (Contract B) | | | |
| .11 | Use of command imperative style of language. | | | |
| .12 | Formatting in either the NMS | | | |



| | | | | | |
|-----|---|--|--|--|--|
| | 1/3 - 2/3 page format or the Construction Specifications Canada full page format. | | | | |
| .13 | Each Section starting on a new page and the Project Number, Section Title, Section Number and Page Number show on the header of each page only. | | | | |
| .14 | Specification headers not including date or consultant's name. | | | | |
| .15 | Departmental Representative being used throughout instead of Engineer, PWGSC, Owner, Consultant or Architect. (That is; the contractual entity) | | | | |
| .16 | Non use of notations such as: "verify on site", "as instructed", "to match existing", "example", "equal to", "equivalent to" and "to be determined on site by". | | | | |
| .17 | Dimensions being provided in metric only. | | | | |
| .18 | Indicating the latest edition of all references noted in Part 1 of each Section and that un-used reference Standards are deleted. | | | | |
| .19 | No bolding of text. | | | | |
| .20 | Use of Western Regions standard payments procedures clause. | | | | |

AI.4 DRAWINGS GENERAL – ALL DISCIPLINES

| ITEM | Checked by: | Progress Submission | Pre-Tender or Tender Ready Submission | Comments: |
|--|-------------|---------------------|---------------------------------------|-----------|
| 1. General The Drawings meet the requirements of; | | | | |
| .1 PWGSC Western Region AutoCAD drafting standards. | | | | |
| .2 Using the "toolkit" and the "drawing checker". | | | | |
| .3 All dimensions in SI. No dual dimensioning has been used. | | | | |
| .4 Providing a north arrow. | | | | |
| .5 Providing a legend on all relevant sheets. | | | | |
| .6 Indicating grid lines on all | | | | |



| | | | | | |
|-----|---|--|--|--|--|
| | sheets. | | | | |
| .7 | Using standard scales. (1:50, 1:100 etc.) | | | | |
| .8 | Cross referencing and detailing is consistent. | | | | |
| .9 | No Specifications on drawings. | | | | |
| .10 | All notes being written in the command imperative style of speech. | | | | |
| .11 | Not naming the "Contractor" or "sub trades" in the notes. | | | | |
| .12 | Numbering all rooms on all floor plans. | | | | |
| .13 | Using appropriate line weights to differentiate new versus existing versus demolition. | | | | |
| .14 | Using font sizes and types following PWGSC drafting standards. | | | | |
| .15 | Providing separate drawings for demolition and new work. | | | | |
| .16 | Drawing acceptance by the FPE of HRSDC. | | | | |

AI.5 DRAWINGS - DISCIPLINE SPECIFIC

| ITEM | Checked by: | Progress Submission | Pre-Tender or Tender Ready Submission | Comments: |
|--|----------------|------------------------|--|-----------|
| 1. Architectural The Drawings meet the requirements of; | | | | |
| .1 Providing a Building Code Analysis. | | | | |
| .2 Indicating fire separations and firewalls and rating. | | | | |
| .3 Providing a complete site plan with all related details. | | | | |
| .4 Providing a fully detailed reflected ceiling plan showing lighting, diffusers, sprinkler heads, etc. | | | | |
| .5 Wall sections being coordinated with the structural and other disciplines drawings. | | | | |
| .6 Building elevations showing all mechanical and electrical ancillaries. | | | | |
| .7 Sub surface drainage being shown on the foundation plans and coordinated with all other disciplines. | | | | |



| | | | | | |
|--|--|--|--|--|--|
| .8 | Accessibility conforming to CAN/CSA 651-04. | | | | |
| .9 | Coordination of door, finish, hardware schedules in conjunction with fire separations and other disciplines. | | | | |
| .10 | All conflict points identified by BIM have been resolved. | | | | |
| 2. Structural | | | | | |
| The Drawings meet the requirements of; | | | | | |
| .1 | Ensuring that General Notes provide additional information that is NOT covered in Specifications. | | | | |
| .2 | Remove all information that is or should be covered by the Specifications. | | | | |
| .3 | Note loads used for design. | | | | |
| .4 | PWGSC policy of using general product descriptions, not proprietary product names followed. | | | | |
| .5 | Table of Abbreviations used provided. | | | | |
| .6 | Section bubbles properly cross referenced. | | | | |
| .7 | Coordination with all other disciplines. | | | | |
| 3. Mechanical | | | | | |
| The Drawings meet the requirements of; | | | | | |
| .1 | Separate drawings for Plumbing, HVAC, Fire Suppression, etc. | | | | |
| .2 | Provision for humidification with a clean source of water and no standing water | | | | |
| .3 | Provision of separate HVAC zoning for each unique thermal zone. | | | | |
| .4 | Providing Ventilation to ASHRAE 62.1. | | | | |
| .5 | Meets all requirements of ASHRAE 62.1, Section 5. | | | | |
| .6 | All thermostats are wall mounted. | | | | |
| .7 | The building and systems and equipment meeting all requirements of Section 5 of ASHRAE 62.1. | | | | |
| .8 | Conformance to ASHRAE 55 for; | | | | |
| .1 | Operative | | | | |



| | | | | | |
|--|---|--|--|--|--|
| | temperature .2 Air motion .3 Radiant Temperature Asymmetry .4 Draft .5 Vertical Temperature Difference .6 Floor Surface Temperature .7 Temperature Variations with Time .8 Cyclic Variations .9 Drifts and Ramps | | | | |
| .9 | Providing building cross-sections at all key locations showing clearances for the mechanical installation and access for maintenance. | | | | |
| .10 | Providing sufficient access to mechanical equipment for maintenance. | | | | |
| .11 | Providing mechanical schematics showing design pressure and temperatures as well as all instrumentation and control points labels. | | | | |
| .12 | Design complies with all referenced PWGSC MD Standards. | | | | |
| .13 | Equipment schedules on the drawings coordinate and agree with the Book Specifications. | | | | |
| .14 | Duct attenuation is designed to conform to the STC requirements shown on the architectural drawings. | | | | |
| .15 | Coordination with all other disciplines. | | | | |
| 4. Electrical | | | | | |
| The Drawings meet the requirements of; | | | | | |
| .1 | Separate drawings for Lighting, Power, Fire Alarm System, Communication and Data, Security & CCTV etc. | | | | |
| .2 | Verification and acceptance of the Grounding condition for this project. | | | | |
| .3 | The Overcurrent and Short Circuit Study and confirming all components are fully coordinated. | | | | |
| .4 | The Arch-Flash Study and confirming all components are fully coordinated. | | | | |
| .5 | Providing Arch protection | | | | |



| | | | | | |
|-----|---|--|--|--|--|
| | warning signs and labeling. | | | | |
| .6 | Providing lighting Levels in accordance with the National Building Code and IESNA recommendations. | | | | |
| .7 | Not using Armored Cable. Using Armored Cable will be allowed only for jumping from one light fixture to the other in a distance up to 3m. | | | | |
| .8 | Providing identification for each circuit including: .1 Name .2 Voltage, .3 Phase, .4 Amps, .5 Circuit-s .6 Fed from Panel, Destination. | | | | |
| .9 | The Voltage Drop Calculation for each circuit and conformance to CEC requirements. | | | | |
| .10 | Providing phase load and total load for each panel and ensuring proper balance of the Electrical System. | | | | |
| .11 | Coordination with all other disciplines. | | | | |
| | 5. Civil The Drawings meet the requirements of; | | | | |
| .1 | The design criteria. (e.g. design vehicle for surface structures, design period and other data for WM.WW, SW and other systems including data and calculations showing design requirements and provided capacities) | | | | |
| .2 | The reference standards. (e.g. minimum service connection pipe or minimum WM size, etc have been used for municipal works, name the local authority whose standards are used.) | | | | |
| .3 | Indicating existing sub-grade soil properties and strength that has been used for the design is indicated on drawings or in a report. | | | | |
| .4 | Indicating Bench Marks used for the Topographic Survey are shown with Northing, Easting and elevation data. | | | | |
| .5 | Indicating the Final | | | | |



| | | | | | |
|----|--|--|--|--|--|
| | Geometric layout for existing and new infrastructures and facilities including centerline of all access roads and pipes. The data provided includes Northing and Easting of all points including start and end point and for all other points wherever there is change in direction, and all horizontal curve data | | | | |
| .6 | Providing typical X-sections for all structures, including type, thickness of various materials for pavement structures, and pipe diameter, material types and thickness and SDR values. | | | | |
| .7 | Providing design grades and slopes. | | | | |
| .8 | Providing details for all infrastructures and facilities indicating all works and type of materials and all geometrics and dimensions.. | | | | |
| .9 | Coordination with all other disciplines. | | | | |



APPENDIX B SPECIFICATION TOC STANDARDS

B.1 GENERAL

BI.1 SPECIFICATIONS

.1 List all Divisions, Sections (by number and title) and number of pages.

BI.2 DRAWINGS

.1 List all Drawings by number and title.

B.2 SAMPLE OF TABLE OF CONTENTS

| Project No: R.xxxxxx | Table of Contents | Index Page I of xx |
|-------------------------|-------------------|-----------------------|
|-------------------------|-------------------|-----------------------|

SPECIFICATIONS:

- .3
- .4
- No. Pages
- .5 Division 01 – GENERAL REQUIREMENTS
- .6 01 11 00 – Summary of Work xx pages
- .7 01 14 00 – Work Restrictions xx pages
- .8 01 29 00 – Payment Procedures xx pages
- .9 Division 02 – EXISTING CONDITIONS
- .10 ETC.
- .11

DRAWINGS:

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



APPENDIX C ADDENDUM FORMAT STANDARD

C.1 SAMPLE OF ADDENDUM FORMAT

CI.1 DRAWINGS

- .1 Indicate drawing number and title, then list changes or indicate revision number and date, and re-issue drawing with addendum.

CI.2 SPECIFICATIONS

- .1 Indicate section number and title.
- .2 List all changes (i.e. delete, add or change) by article or paragraph

| | |
|---|------------------------|
| Project Title: | Addendum No: |
| | |
| Project Location: | Project Number: |
| | |
| Consultant's Name: | Date: |
| | |
| The following changes in the bid documents are effective immediately. This addendum will form part of the contract documents | |
| Drawings | |
| 1 AI Architectural | |
| Specifications | |
| 1 Section 01 00 10 - General Instructions | |
| .1 Delete article (xx) entirely. | |
| .2 Refer to paragraph (xx) and revise "xxx", to read "xxxx".. | |
| 2 Section 23 05 00 - Common Work Results - Mechanical | |
| .1 Add new article (x.xx) as follows: | |



APPENDIX D DIGITAL TENDER DOCUMENTS STANDARDS

D.1 CONVENTION STANDARDS FOR TENDER DOCUMENTS

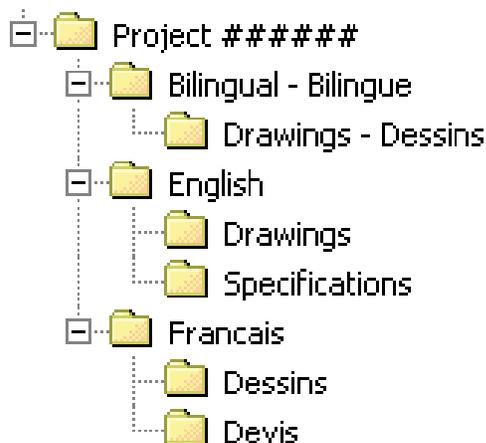
DI.1 USER MANUAL

- .1 Refer to the User manual on directory structure and naming convention standards for construction tender documents on CD ROM.
 - .1 Issued by: Real Property Contracting Directorate, PWGSC,
 - .2 Version 1.0, May 2005.

DI.2 PREFACE

- .1 The Government of Canada (GoC) has committed to move towards an electronic environment for the majority of the services it offers.
- .2 This covers the advertisement and distribution of contract opportunities, including construction solicitations.
- .3 As a result, it is now 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).
- .4 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.
- .5 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.
- .6 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.
- .7 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.

DI.3 DIRECTORY STRUCTURE



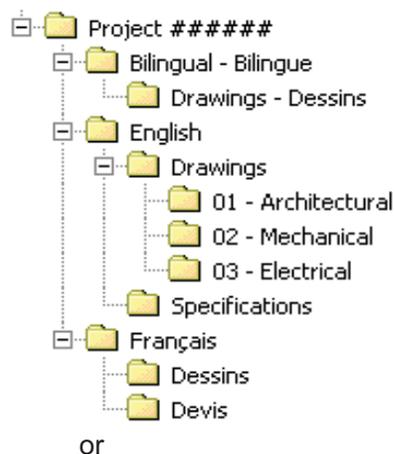


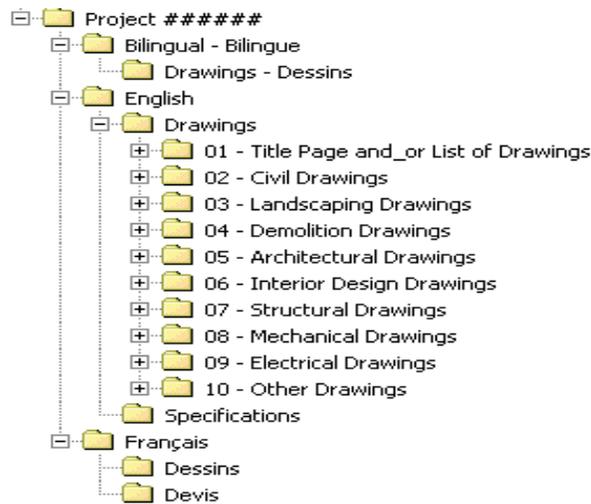
DI.4 1ST, 2ND AND 3RD TIER SUB-FOLDERS

- .1 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:
- .2 The following important points are to be noted about the Directory Structure:
 - .1 The “Project #####” folder is considered the 1st Tier of the Directory Structure where ##### represents each digit of the Project Number.
 - .2 The Project Number must always be used to name the 1st Tier folder and it is always required.
 - .3 Free text can be added following the Project Number, to include such things as a brief description or the project title;
- .3 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;
- .4 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.
- .5 IMPORTANT NOTE:
 - .1 The applicable elements of the Directory Structure (1st, 2nd and 3rd Tier folders) are always required and cannot be modified.

DI.5 4TH TIER SUB-FOLDERS FOR DRAWINGS

- .1 The “Drawings – Dessins”, “Drawings” and “Dessins” folders must have 4th Tier sub-folders created to reflect the various disciplines of the set of drawings.
- .2 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.
- .3 Note:
 - .1 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.
- .4 Examples of 4th Tier sub-folders for drawings:





DI.6 NAMING CONVENTION - 4TH TIER DRAWINGS

- .1 The 4th Tier sub-folders for drawings must adhere to the following standard naming convention.
 - .1 For the “Drawings” and “Dessins” folders:
 - 1 ## - Y, Where:
 - 1 ## = A two digit number ranging from 01 to 99 (leading zeros must be included)
 - 2 Y = The title of the folder
 - 2 Example: 03 – Mechanical
 - .2 For the “Drawings - Dessins” folder:
 - 1 ## - Y – Z, Where:
 - 1 ## = A two digit number ranging from 01 to 99 (leading zeros must be included)
 - 2 Y = The English title of the folder
 - 3 Z = The French title of the folder
 - 2 Example: 04 - Electrical – Électricité
- .2 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.
- .3 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:
 - .1 The alphanumerical sorting is done on an ascending order;
 - .2 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...);
 - .3 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



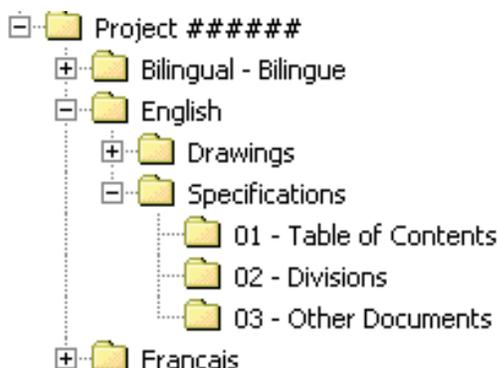
(i.e. Drawing A001 will be printed before Drawing A002, Drawing M02 before Drawing M03, etc...).

DI.7 4TH TIER SUB-FOLDERS FOR SPECIFICATIONS

- .1 The “Specifications” and “Devis” folders must have 4th Tier sub-folders created to reflect the various elements of the specifications.
- .2 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.
- .3 Examples of 4th Tier sub-folders for specifications:



or



DI.8 NAMING CONVENTION - 4TH TIER SPECIFICATIONS

- .1 The 4th Tier sub-folders for specifications must adhere to the following standard naming convention.
 - .1 For the “Specifications” and “Devis” folders:
 - 1 ## - Y, Where:
 - 1 ## = A two digit number ranging from 01 to 99 (leading zeros must be included)
 - 2 Y = The title of the folder
 - 2 Example: 02 – Divisions
 - .2 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.



- .3 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:
- .4 The alphanumerical sorting is done on an ascending order;
 - .1 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...);
 - .2 Each specifications PDF file within each sub-folder will also be sorted alphanumerically.
 - 1 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...).

DI.9 NAMING CONVENTION FOR PDF FILES

- .1 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.

DI.10 DRAWINGS

- .1 Each drawing must be a separate single page PDF file.
- .2 The naming convention of each drawing must be:
 - .1 X### - Y, Where;
 - 1 X = The letter or letters from the drawing title block ("A" for Architectural or "ID" for Interior Design for example) associated with the discipline,
 - 2 ### = The drawing number from the drawing title block (one to three digits),
 - 3 Y = The drawing name from the drawing title block (for bilingual drawings, the name in both English and French is to appear).
 - .2 Example; A001 - First Floor Details.
- .3 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.
- .4 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).
- .5 The following important points about drawings are to be noted:
 - .1 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.
 - 1 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);
 - .2 If drawing PDF files are included in the "Bilingual - Bilingue" folder, these cannot be included as well in the "English" and/or "Français" folders;
 - .3 If drawings not associated with a particular discipline are not numbered (Title Page or List of Drawings for example), these will be sorted alphabetically.
 - 1 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

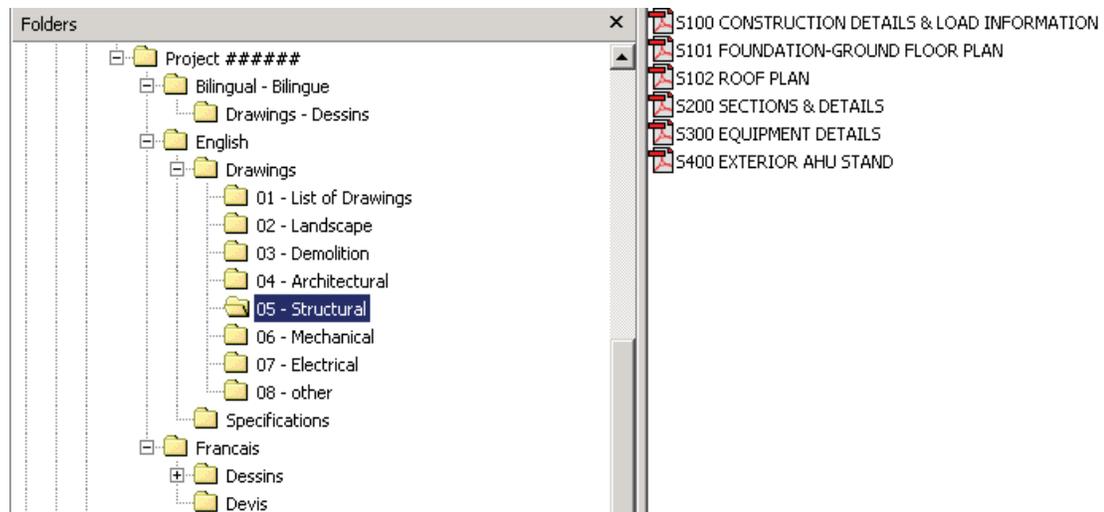


hard copy set, the drawings are to be named as per the following standard convention when converted in PDF format to ensure proper display and printing order.

- 1 ## - Y, Where:
 - 1 ## = A two digit number ranging from 01 to 99 (leading zeros must be included)
 - 2 Y = The name of the drawing
- 2 Example:
 - 1 01 - Title Page
 - 2 02 - List of Drawings

- .4 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.

DI.11 EXAMPLE OF A 4TH TIER DRAWINGS SUBFOLDER’S CONTENT:



DI.12 SPECIFICATIONS

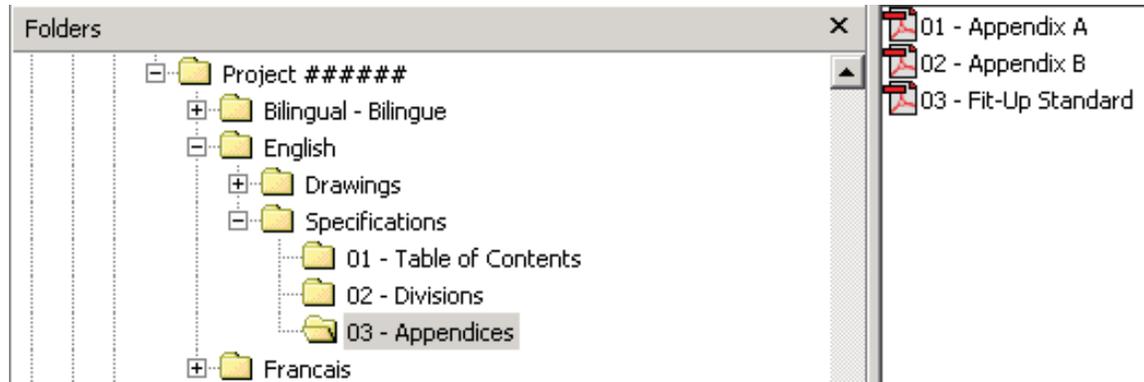
- .1 Each Specifications Division must be a separate PDF file and all pages contained in each PDF file must have the same physical size (height, width).
- .2 The Plans and Specifications Index must also be a separate PDF file.
- .3 If there are other documents that are part of the Specifications (e.g. Appendix or other) these are to be separate PDF files as well.

DI.13 DOCUMENTS OTHER THAN SPECIFICATIONS DIVISIONS

- .1 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:
 - .1 ## - Y, Where:
 - 1 ## = Two digit number ranging from 01 to 99 with leading zeros required
 - 2 Y = Name of the document
 - .2 Example: 01 - Plans and Specifications Index



D1.14 EXAMPLE OF A SUB-FOLDER CONTENT (SUB-FOLDER OTHER THAN “DIVISIONS”):



D1.15 SPECIFICATIONS DIVISIONS

- .1 The Specifications Divisions must be named as follows:
 - .1 Division ## - Y, Where:
 - 1 Division ## = The actual word “Division” followed by a space and a two digit number ranging from 01 to 99 (with leading zeros required)
 - 2 Y = Name of the Specifications Division as per CSC/CSI MasterFormat™
 - .2 Example: Division 05 – Metals
- .2 The following important point about specifications is to be noted:
 - .1 The Numbering of the Divisions cannot be altered from CSC/CSI MasterFormat™ even if some Divisions are not used in a given project.
 - 1 For example, Division 05 will always remain Division 05 even if Division 04 is not used for a given project.

D1.16 EXAMPLE OF A “DIVISIONS” SUB-FOLDER CONTENT:





DI.17 CD-ROM LABEL

- .1 Each CD-ROM is to be labelled with the following information:
 - .1 Project Number;
 - .2 Project Title;
 - .3 Documents for Tender;
 - .4 CD X of X.
- .2 Example:
 - .1 Project 123456;
 - .2 Repair Alexandra Bridge;
 - .3 Documents for Tender;
 - .4 CD 1 of 1.



APPENDIX E PDF CREATION STANDARDS

E.1 CONVERTING CONSTRUCTION DRAWINGS INTO PDF

EI.1 REFERENCE GUIDE

- .1 Refer to the basic reference guide on converting construction drawings into portable document format (PDF), Issued by Real Property Contracting Directorate. PWGSC, Version 1.0, May 2005.

EI.2 PREFACE

- .1 Portable Document Format (PDF) is the standard format for documents that are posted on the Government Electronic Tendering System (GETS).
- .2 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.
- .3 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.
- .4 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.
 - .1 It actually should not take any longer than it would take to create a plot file or to send a drawing to a printer.
 - .2 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.
 - .3 The conversion of specifications is not covered in this basic reference guide since it does not require any special configuration or setting.
- .5 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.
 - .1 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.

EI.3 PRINTER DRIVERS

- .1 Adobe Acrobat provides two different printer drivers that are able to convert CADD drawing into PDF format, Acrobat PDF Writer and Acrobat Distiller.
- .2 Before creating a PDF file from a CADD drawing, a choice must be made as to which one will be used.
- .3 Acrobat PDF Writer is a non-PostScript printer driver that works best with documents that don't contain complex graphics.
- .4 Acrobat Distiller is a PostScript printer driver that works best with documents that contain PostScript fills, Encapsulated PostScript (EPS) graphics, or other complex elements.
- .5 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.



EI.4 PRINTER CONFIGURATION

- .1 Before converting a CADD drawing to PDF, an Acrobat printer configuration file for the PDF paper size needs to be created.
- .2 This function can be done in the CADD software rather than using a custom paper size defined for the Acrobat distiller feature.
- .3 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.
- .4 The configuration can then be re-used to simplify the conversion process for future files that use the same page size.
- .5 As an alternative, although not recommended, a custom-defined size can be created in Acrobat Distiller in the *properties* menu.

EI.5 CREATING PDF FILES

- .1 Once the printer configuration has been done in the CADD software, open Acrobat Distiller and make the necessary settings in the *preferences* and *job options* sub-menu.
 - .1 Ensure that the page size match the sheet size selected in the CADD software to create the file.
 - .2 Particular settings can be saved under different names for future use.
- .2 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.
- .3 A progress bar will show during the conversion and the newly converted PDF file should open up and be displayed for verification.

EI.6 PDF FILES SETTINGS

- .1 Security
 - .1 Adobe Acrobat contains security features that can be used to secure the files by restricting any changes to the files.
 - .2 Since the files will be posted on MERX and will be used for printing copies, the files must not be password protected and must allow printing.

EI.7 DRAWING ORIENTATION

- .1 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.

EI.8 FONT TYPE

- .1 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.

EI.9 RESOLUTION

- .1 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).

EI.10 SCALE

- .1 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.

EI.11 SCANNING



- .1 Scanning is not recommended and should be done only when the drawing is not available electronically.
- .2 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.
- .3 It is recommended that each scanned drawing be opened and verified to ensure that the resolution, scale and border are of an acceptable quality.

EI.12 FINAL CHECKLIST

- .1 When the drawing file has gone through the PDF conversion, it is recommended to open it and verify the following:
 - .1 That the sheet size displayed is what was intended to be created (the size is viewable in the lower left corner of the drawing);
 - .2 That the orientation of the sheet is correct;
 - .3 That the line types, line weights and fonts match the CADD drawing.
 - .4 That the PDF file is in black and white;
 - .5 That each drawing is a single PDF file;
 - .6 That the PDF file is not password protected and printable.
- .2 If all the items are verified, the PDF file is useable.

EI.13 ADDITIONAL INFORMATION

- .1 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.



APPENDIX F DEFINITIONS

F.1 TERMINOLOGY

| TERMS | DESCRIPTION |
|-----------------------------|--|
| As-builts/Record Drawings | See Record Drawings |
| Base Building | Refers to the building shell, as opposed to the tenant fit-up. It includes finished floors, exterior walls, interior core, finished ceilings with lighting, and other building systems for the planned general use of the building. Generally, the work for the base building is separate from the work for tenant-fit-ups |
| Circulation | Space used, primarily by people, to move from one area to another. It includes major as well as secondary aisles. |
| Client | A term that refers to the client, the client department or user department |
| Co-location | Placing items together for better organization |
| Consultant | The word refers both to an individual consultant, or a consultant team. The consultant is generally selected by PWGSC using a Request for Proposal. |
| Contractor | The company, organization or firm who is responsible for the construction of the project |
| Consolidation | Reducing the number of co-located items by placing them in a common floor facility to eliminate duplication of space. |
| Constant dollar estimate | This is an estimate expressed in terms of the dollars of a particular base fiscal year. |
| Cost Specialist | Refers to the cost estimating, planning and control team or an individual performing these functions. |
| Current dollar estimate | Refer to: <i>budget year dollars</i> |
| Budget-year dollars | This is an estimate based on costs arising in each FY of the project schedule, which is escalated to account for inflation and other economic factors affecting the period covered by the estimate Budget year dollars is also be referred to as Nominal dollars or Current dollars |
| Departmental Representative | The person designated in the contract, or by written notice to the Consultant or Contractor, to act for PWGSC for the purposes of the contract. It can also be a person designated in writing by the Departmental Representative to act on his/her behalf. In most cases, the PWGSC Project Manager is the Departmental Representative |
| EMV | Expected monetary value of risk event (i.e. cost or saving to the project if risk event occurs) |



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| Final Certificate of Completion | A document issued by the Project Manager after the final inspection by the Project Acceptance Board. The final payment to the Contractor by PWGSC is based on the final certificate of completion |
| Final Inspection | The inspection performed by the Project Acceptance Board after project completion and after correction of deficiencies identified during Interim Inspection |
| Fit-up for initial occupancy | The preparation of accommodation for initial occupancy, in accordance with the federal Fit-up Standards. This fit-up may include alternations to the base building and its building systems. |
| Fit-up of existing space for reuse, Refit | Work required to alter space previously occupied by one organization to meet the requirements of a different organization. |
| Fit-Up Cost Limits | The funding limits for the fit-up of office accommodation. The limits are based on the average cost per useable square meter, for fit-up elements in specific urban centres across Canada, and are updated from time to time. The limits do not include soft costs or items funded by clients or under base building costs. |
| Fit-Up Items | Components that are installed removed or relocated to prepare the space for occupancy. They include partition walls, doors, frames, hardware, counters and cabinetry, modifications to base building systems, etc. as detailed in the Fit-up standards. Some base building components are included in consultant scope of work, such as the flooring and the ceiling finishes or telecommunications spaces and related environmental controls. |
| Focus Group | Group sessions held to establish qualitative requirements. They are most effective at the strategic planning level. They are used primarily to translate the Client Department's mission statement into organizational requirements and to assess planning alternatives |
| Full-time equivalent. | It measures of labour utilization in the federal government which approximates the actual number of persons "employed" by the government for carrying out the unit of work |
| Functional space equation | Identifies space requirements (in usable m2) by group along with summary of the total space required for all groups. |
| Gross Space | The total floor space |
| High risk | A project (or element of a project) may be assessed as high risk if one or more hazards exist in a significant way and, unless mitigated, would result in probable failure to achieve project objectives |
| Impact | The result of the occurrence of an event on the project either positive or negative (i.e. a schedule delay as a result of late delivery of a piece of equipment may have a high negative impact on a project; increased access to a construction site due to early departure of occupants in an office space may have positive |



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| | <p>impact on a project).</p> <p>The Impact of individual Risk Events can be qualified as low, medium, high or quantified in terms of time, cost (immediate cost or in-service cost (O&M)) or performance.</p> |
| Interim Certificate of Completion | The certificates issued by Project manager following the Interim Inspection. Interim payment to the Contractor by PWGSC is based on the interim certificates. This payment takes place of a regular progress claim. |
| Interim Inspection | The inspection performed by the Project Acceptance Board after substantial completion of the project. A list of deficiencies is prepared, and subject to the Contractor's agreement to correct these, the Project Manager accepts the work and prepares the interim certificates |
| LEED® | Leadership in Energy & Environmental Design; an environmental rating system |
| Low risk | A project (or element of a project) should be assessed as low risk if hazards do not exist or have been reduced to the point where routine project management control should be capable of preventing any negative effect on the attainment of project objectives |
| Medium risk | A project (or element of a project) may be assessed as medium risk if some hazards exist but have been mitigated to the point that allocated resources and focused risk management planning should prevent significant negative effect on the attainment of project objectives |
| National Project Management System | The system used by PWGSC for management of its projects. It replaces the earlier Project Delivery System (PDS). |
| PI Forms | Product Information forms; used in commissioning documentation |
| Probability | The likelihood that an event will occur (i.e. Low, Medium, High) |
| Project Acceptance Board | A team assembled by the Project Manager to perform interim and final inspections of the Client Department's improvements. |
| PV Forms | Performance Verification forms; used in commissioning documentation |
| Record drawings | Drawings used to record field deviations, dimensional data, and changes or deviations from the 'Construction Document-Issued for Construction'. They indicate the work as 'actually' installed. They are also called as-builts |
| Rentable Space | Usable space plus space occupied by columns, convectors, elevator lobbies and washrooms. It also includes some common base building areas such as telephone and janitorial closets. |
| Request for Proposal | The document used for requesting consultant services. It includes the Terms of Reference as well as other contracting documents |



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| Risk management | The art and science of identifying, analysing, and responding to risk factors throughout the life of a project and in the best interests of its objectives |
| Risk Event | A discrete occurrence that may affect the project for better or worse (i.e. late delivery of a piece of equipment is a “risk event” that may cause a schedule delay) |
| Scheduler | Refers to the Time Scheduler; also referred to as Time Specialist |
| Space Equation | A spreadsheet that reflects the Client’s organizational structure, functional requirements, and proposed planning alternatives. It is used to determine the total usable area required to accommodate the following: Open and enclosed workstations/worksettings; Support space; Special purpose space circulation factor; Building loss factor; Total population; and Total space required; and Summary by group |
| Space Optimization | Maximizing the utilization of space. |
| Special Purpose Spaces | Non-standard spaces required to accommodate activities that are essential to departmental programs. This space is often not suitable for conversion to office accommodation because of its special requirements. Examples include: laboratories, health units or clinics, meeting or training complexes which serve outside groups, processing space, departmental libraries, gymnasiums, warehouses, file or storage areas not allowed by the PWGSC Fit-Up Standards, trade shops, mailrooms, computer training rooms, cash offices and similar spaces requiring special service and security features and hearing rooms. |
| Support Space | Space for typical office support functions not included in workstation or circulation space but necessary for office operation. The Fit-Up Standards identify specific sizes and ratios for kitchenette / recycling centre / lunchroom / resource areas, shared equipment spaces, meeting rooms, quiet / touch down rooms, printer stations, reception / mail drop / waiting / display areas and coat / storage closets. Limited allowances for “Other” support spaces including non-dedicated workstations, storage rooms, LAN rooms, breakout rooms, interview rooms, training rooms, reading rooms etc. are also identified in the Fit-Up Standards. |
| Terms of Reference | A document prepared by PWGSC when requesting Consultant services, which forms part of the RFP and is also included in the Consultant Agreement with PWGSC. |
| Universal Footprint | One standard module which can be multiplied to accommodate |



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|-------------------------------|---|
| | all office functions including workstations, support space and special purpose space |
| Usable space, “Walk-on” Space | The space, in M ² , that is actually usable by the occupant. Measurement calculations do not include columns and convectors, building service areas and accessory areas. |
| Worksettings | Common work areas that support both collaboration and privacy. They include: teaming areas, non-dedicated workstations, privacy nooks, resource areas and multipurpose areas. |
| Workstations | An enclosed or open area dedicated for the use of individual employees. |

F.2 ACRONYMS

| ACRONYM | DESCRIPTION |
|---------|---|
| A&E | Architecture & Engineering |
| AHJ | Authorities Having Jurisdiction |
| AMP | Asset Management Report |
| ASAE | American Society of Agricultural Engineers |
| ASHRAE | American Society of Heating, Refrigeration and Air Conditioning Engineers |
| ASPE | American Society of Plumbing Engineers |
| BCC | Building components and connectivity |
| BCR | Building Condition Report |
| BMM | Building Maintenance Manual |
| CAD | Computer aided drawing |
| CCDC | Canadian Construction Document Committee |
| CBIP | Commercial building incentive program |
| COE | PWGSC Centre of Expertise |
| EMCS | Energy Monitoring & Control System |
| EPA | Effective Project Approval |
| FHBRO | Federal Heritage Building Restoration Office |
| FOBS | Federal Office Building Standards (PWGSC) |
| FTE | Full-time equivalent |
| HCP | Heritage Conservation Program |
| HRSDC | Human Resources and Skills Development Canada |
| IT/MM | Information Technology/Multi-media |
| MMS | Maintenance management system |
| NBC | National Building Code |
| NCA | National Capital Area; |
| NCR | National Capital Region; |
| NFBC | National Farm Building Code |
| NGMA | National Greenhouse Manufacturers' Association |
| NMS | The National Master Specification used by PWGSC |



| | |
|-------|---|
| NPMS | National Project Management System |
| OAA | Ontario Association of Architects |
| O&M | Operation and Maintenance |
| P&S | General Procedures and Standards |
| PA | Project administration |
| PI | Product Information |
| PD | Project Description |
| PM | Project Manager |
| PV | Performance verification |
| PWGSC | Public Works and Government Services Canada |
| RAIC | Royal Architectural Institute of Canada |
| RAS | Requirements and Standards |
| RS | Required Services |
| RSR | Resident site services |
| RPCD | Real Property Contracting Directorate |
| TOR | Terms of Reference |