



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Travaux publics et Services gouvernementaux
Canada

Place Bonaventure, portail Sud-Est
800, rue de La Gauchetière Ouest
7 ième étage

Montréal
Québec

H5A 1L6

FAX pour soumissions: (514) 496-3822

INVITATION TO TENDER

APPEL D'OFFRES

**Tender 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.

**Soumission 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 et sur toute feuille ci-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Vendor/Firm Name and Address

Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution

Travaux publics et Services gouvernementaux Canada
Place Bonaventure, portail Sud-Est

800, rue de La Gauchetière Ouest
7 ième étage

Montréal
Québec

H5A 1L6

Title - Sujet Masonry 715 Peel	
Solicitation No. - N° de l'invitation EF930-170666/A	Date 2016-06-23
Client Reference No. - N° de référence du client R.082014.700	GETS Ref. No. - N° de réf. de SEAG PW-\$MTC-560-13941
File No. - N° de dossier MTC-6-39090 (560)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-07-18	
Time Zone Fuseau horaire Heure Avancée de l'Est HAE	
F.O.B. - F.A.B.	
Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Ghali, Camille	Buyer Id - Id de l'acheteur mtc560
Telephone No. - N° de téléphone (514) 496-3871 ()	FAX No. - N° de FAX (514) 496-3822
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: MINISTERE DES TRAVAUX PUBLICS ET SERVICES GOUVERNEMENTAUX CANADA PL.BONAVENTURE,PORTAIL S-E,BUR.7300 800 RUE DE LA GAUCHETIERE O. MONTREAL Québec H5A1L6 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

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

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INVITATION TO TENDER

IMPORTANT NOTICE TO BIDDERS

TENDER DOCUMENTS: Firms intending to submit tenders on this project should obtain tender documents through the website

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

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 SI10.

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>

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R2710T GENERAL INSTRUCTIONS - CONSTRUCTION SERVICES - BID SECURITY REQUIREMENTS (GI) (2016-04-04)

The following GI's are included by reference and are available at the following Web Site <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

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SPECIAL INSTRUCTIONS TO BIDDERS (SI)

SI01 BID DOCUMENTS

1. The following are the bid documents:
 - a. Invitation to Tender - Page 1;
 - b. Special Instructions to Bidders;
 - c. General Instructions - Construction Services - Bid Security Requirements R2710T (2016-04-04)
 - d. Clauses & Conditions identified in "Contract Documents";
 - e. Drawings and Specifications;
 - f. Bid and Acceptance Form and related Appendix(s); and
 - g. Any amendment issued prior to solicitation closing.

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

2. General Instructions - Construction Services - Bid Security Requirements R2710T is incorporated by reference and is set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>
3. The bidder shall submit WITH his bid his resume (CV) which must demonstrate that he has at least ten (10) years of experience in masonry restoration of historical works in brick and stone. Otherwise, the bid will be deemed non-responsive.

Bids sent by fax will not be accepted

SI02 ENQUIRIES DURING THE SOLICITATION PERIOD

1. Enquiries regarding this bid must be submitted in writing to the Contracting Officer named on the Invitation to Tender - Page 1 as early as possible within the solicitation period. Except for the approval of alternative materials as described in G115 of R2710T, enquiries should be received no later than **ten (10)** calendar days prior to the date set for solicitation 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 shall examine the content of the enquiry and shall decide whether or not to issue an amendment.
3. All enquiries and other communications related to this bid sent throughout the solicitation period are to be directed ONLY to the Contracting Officer named on the Invitation to Tender - Page 1. Failure to comply with this requirement may result in the bid being declared non-responsive.

SI03 MANDATORY/OPTIONAL SITE VISIT

There will be an optional (but highly recommended) site visit on July 8th, 2016 at 10:00 am (local). Interested bidders are to meet at the main entrance of the 715 Peel, Montréal, Québec, H3C 4H6.

SI04 REVISION OF BID

A bid may be revised by letter or facsimile in accordance with G110 of R2710T. The facsimile number for receipt of revisions is (514) 496-3822.

SI05 BID RESULTS

1. A public bid opening will be held in the office designated on the Front Page "Invitation to Tender" for the receipt of bids shortly after the time set for solicitation closing.
2. Following solicitation closing, bid results may be obtained by calling at No. [\(514\) 496-3388](tel:5144963388)

SI06 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).

SI07 BID VALIDITY PERIOD

1. Canada reserves the right to seek an extension to the bid validity period prescribed in BA04 of the Bid and Acceptance Form. Upon notification in writing from Canada, Bidders shall have the option to either accept or reject the proposed extension.
2. If the extension referred to in paragraph 1. of SI07 is accepted, in writing, by all those who submitted bids, then Canada shall continue immediately with the evaluation of the bids and its approvals processes.
3. If the extension referred to in paragraph 1. of SI07 is not accepted in writing by all those who submitted 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 invitation to tender.
4. The provisions expressed herein do not in any manner limit Canada's rights in law or under GI11 of R2710T.

SI08 CONSTRUCTION DOCUMENTS

The successful Contractor will be provided with one paper copy of the sealed and signed drawings, the specifications and the amendments upon acceptance of the offer. Additional copies, up to a maximum five (5), will be provided free of charge upon request by the Contractor. Obtaining more copies shall be the responsibility of the Contractor including costs.

SI09 INDUSTRIAL SECURITY RELATED REQUIREMENTS

N/A

SI10 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.*

SI11 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>

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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 PWGWSC-TPSGC 506)
<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/506.pdf>

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

PWGSC, Industrial Security Services <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/contexte-context-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>

SI12 FINANCIAL BID

The total amount of the bid excludes taxes

SUPPLEMENTARY CONDITIONS (SC)

SC01 SECURITY CLEARANCE RELATED REQUIREMENTS, DOCUMENT SAFEGUARDING

There is no document security requirement applicable to this Contract.

SC02 LIMITATION OF LIABILITY

GC1.6 of R2810D is deleted and replaced with the following:

GC1.6 Indemnification by the Contractor

1. The Contractor shall indemnify and save Canada harmless from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by Canada or in respect of claims 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 in performing the Work, provided such claims are caused by the negligent or deliberate acts or omissions of the Contractor, or those for whom it is responsible at law.

2. The Contractor's obligation to indemnify Canada for losses related to first party liability shall be limited to:

a. In respect to each loss for which insurance is to be provided pursuant to the insurance requirements of the Contract, the Commercial General Liability insurance limit for one occurrence as referred to in the insurance requirements of the Contract .

b. In respect to losses for which insurance is not required to be provided in accordance with the insurance requirements of the Contract, the greater of the Contract Amount or \$5,000,000, but in no event shall the sum be greater than \$20,000,000.

The limitation of this obligation shall be exclusive of interest and all legal costs and shall not apply to any infringement of intellectual property rights or any breach of warranty obligations.

3. The Contractor's obligation to indemnify Canada for losses related to third party liability shall have no limitation and shall include the complete costs of defending any legal action by a third party. If requested by Canada, the Contractor shall defend Canada against any third party claims.

4. 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 Work or any part thereof provided or furnished by the Contractor to Canada infringes any patent, industrial design, copyright trademark, trade secret or other proprietary right enforceable in Canada.

5. Notice in writing of a claim shall be given within a reasonable time after the facts, upon which such claim is based, became known.

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.

CONTRACT DOCUMENTS (CD)

1. The following are the contract documents:

- a. Contract Page when signed by Canada;
- b. Duly completed Bid and Acceptance Form and any Appendices attached thereto;
- c. Drawings and Specifications;
- d. General Conditions and clauses

GC1	General Provisions – Construction Services	R2810D	(2016-04-04);
GC2	Administration of the Contract-	R2820D	(2016-01-28);
GC3	Execution and Control of the Work	R2830D	(2015-02-25);
GC4	Protective Measures	R2840D	(2008-05-12);
GC5	Terms of Payment	R2850D	(2016-01-28);
GC6	Delays and Changes in the Work	R2860D	(2016-01-28);
GC7	Default, Suspension or Termination of Contract	R2870D	(2008-05-12);
GC8	Dispute Resolution	R2880D	(2016-01-28);
GC9	Contract Security	R2890D	(2014-06-26);
GC10	Insurance	R2900D	(2008-05-12);

Allowable Costs for Contract Changes under GC6.4.1 R2950D (2015-02-25);
Supplementary Conditions

- e. Any amendment issued or any allowable bid revision received before the date and time set for solicitation closing;
 - f. Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
 - g. Any amendment or variation of the contract documents that is made in accordance with the General Conditions.
2. 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 Web site:
<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>
3. The language of the contract documents is the language of the Bid and Acceptance Form submitted.

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BID AND ACCEPTANCE FORM (BA)

BA01 IDENTIFICATION

The projected works under the current mandate are to secure the building's masonry facade located at 715 Peel street in Montreal.

BA02 BUSINESS NAME AND ADDRESS OF BIDDER

Name: _____

Address: _____

Telephone: _____ Fax: _____ PBN: _____

E-mail address: _____

BA03 THE OFFER

The Bidder offers to Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the **TOTAL BID AMOUNT INDICATED IN APPENDIX 1**.

BA04 BID VALIDITY PERIOD

The bid shall not be withdrawn for a period of sixty [60] days following the date of solicitation closing.

BA05 ACCEPTANCE AND CONTRACT

Upon acceptance of the Contractor's offer by Canada, a binding Contract shall be formed between Canada and the Contractor. The documents forming the Contract shall be the contract documents identified in Contract Documents (CD).

BA06 CONSTRUCTION TIME

The Contractor shall perform and complete the Work within [forty] [40] weeks from the date of notification of acceptance of the offer.

BA07 BID SECURITY

The Bidder is enclosing bid security with its bid in accordance with GI08 - Bid Security Requirements of R2710T - General Instructions - Construction Services - Bid Security Requirements.

BA08 SIGNATURE

Name and title of person authorized to sign on behalf of Bidder (Type or print)

Signature

Date

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APPENDIX 1 - VENTILATED BID FORM (1 page)

- 1) The prices per unit shall govern in establishing the Total Extended Amount. Any arithmetical errors in this Appendix will be corrected by Canada.
- 2) Canada may reject the bid if any of the prices submitted do not reasonably reflect the cost of performing the part of the work to which that price applies.

The contractor must complete this ventilated bid form and submit it with the bid. These prices must include the provision of materials, labor, general fees, administration & profits of subcontractors and the general contractor. The unit prices established by the contractor when submitting his tender as a basis for measuring purposes, for all work done in excess or below the estimated areas.

Notes :	<p>L'entrepreneur devra indiquer le prix des travaux pour chacune des sections, listées ci-dessous. Chacun de ces prix devra inclure : matériaux, main-d'œuvre, profits, administration et tous les autres frais afférents inclus.</p> <p style="text-align: center;"> <i>materials, labor, profits, administration and all other related costs included.</i></p>
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ITEM ITEM	DESCRIPTION DESCRIPTION	QUANT. APP. QUANT.	UNITÉS UNITY	PRIX UNITAIRE UNIT PRICE	SOUS- TOTAL SUBTOTAL	TOTAL TOTAL
1.0 - Travaux / works						
	Fourniture et pose des ancrages Hélicoïdales / <i>Supply and installation of Helical anchors</i>	2600,0	unit			
	Fourniture et pose des ancrages filetés avec plaques / <i>Supply and installation of threaded anchor with plates</i>	400,0	unit			
	Pierres à ancrer - Détail typique C / <i>Stone anchor - Typical detail C</i>	25,0	unit			
	Pierres à ancrer - Détail typique D / <i>Stone anchor - Typical detail D</i>	25,0	unit			
	Rejointement / <i>Repointing</i>	400,0	ml.			
2.0 - Débours / Outlay						
	Échaffaudage et équipements de levage / <i>Scaffolding and lifting equipment</i>	1,0	ens.	N/A		
	Conteneur / <i>Container</i>	1,0	ens.	N/A		
	Permis d'occupation de la rue / <i>Street occupation permit</i>	1,0	ens.	N/A		
	Signaleur / <i>Signalman</i>	1,0	ens.	N/A		
	Protection piétonnière / <i>Pedestrian protection</i>	1,0	ens.	N/A		
	Conditions générales / <i>Terms and conditions</i>	1,0	ens.	N/A		
	Administration / <i>Administration</i>	1,0	ens.	N/A		
					TOTAL :	

TOTAL BID AMOUNT Excluding applicable tax(es)

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APPENDIX 3 - VOLUNTARY CERTIFICATION TO SUPPORT THE USE OF APPRENTICES

Note; The contractor will be asked to fill out a report every six months or at project completion as per sample "Voluntary Reports for Apprentices Employed during the Contract" provided at Annex B

Name: _____

Signature: _____

Company Name: _____

Company Legal Name: _____

Solicitation Number: _____

Number of company employees: _____

Number of apprentices planned to be working on this contract: _____

Trades of those apprentices:

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APPENDIX 4 – DEPARTMENTAL REPRESENTATIVE'S AUTHORITY

TO BE PROVIDED AT CONTRACT AWARD.

Contracting Authority is :

Name : _____

Title : _____

Department : _____

Division : _____

Telephone : ____ - ____ - _____

e-mail : _____

Technical Authority is :

Name : _____

Title : _____

Department : _____

Division : _____

Telephone : ____ - ____ - _____

e-mail : _____

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File No. - N° du dossier

MTC-6-39090

Buyer ID - Id de l'acheteur

mtc560

CCC No./N° CCC - FMS No/ N° VME

ANNEX A - CERTIFICATE OF INSURANCE (Not required at solicitation closing)**CERTIFICATE OF INSURANCE**

Page 1 of 2

Travaux publics et
Services gouvernementaux
CanadaPublic Works and
Government Services
Canada

Description and Location of Work Stabilization of the masonry of the facade - 715 Peel	Contract No.
	Project No. R. 082014.700

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 <i>Her Majesty the Queen in Right of Canada as represented by the Minister of Public Works and Government Services</i>				

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				\$		
Pollution Liability				\$ <input type="checkbox"/> Per Incident <input type="checkbox"/> Per Occurrence		Aggregate \$
Marine Liability				\$		
Aviation Liability				\$ <input type="checkbox"/> Per Incident <input type="checkbox"/> Per Occurrence		Aggregate \$
Insert other type of insurance as required				\$		

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

Solicitation No. - N° de l'invitation

Amd. No. - N° de la modif.

Buyer ID - Id de l'acheteur

EF930-170666/A

mtc560

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

File No. - N° du dossier

CCC No./N° CCC - FMS No/ N° VME

R. 082014.700

MTC-6-39090

CERTIFICATE OF INSURANCE Page 2 of 2

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>).

Contractors Pollution Liability

The policy must have a limit usual for a contract of this nature, but not less than **\$1,000,000** per incident or occurrence and in the aggregate.

Aviation Liability

The insurance coverage shall include Bodily Injury (including passenger Bodily Injury) and Property Damage, in an amount of not less than **\$5,000,000** per incident or occurrence and in the aggregate.

Marine Liability

The insurance coverage must be provided by a Protection & Indemnity (P&I) insurance policy and must include excess collision liability and pollution liability.

The insurance must be placed with a member of the International Group of Protection & Indemnity Associations or with a fixed market in an amount of not less than the limits determined by the *Marine Liability Act*, S.C. 2001, c. 6. Coverage must include crew liability, if it is not covered by the statutory requirements of the Territory or Province having jurisdiction over such employees.

The policy must waive all rights of subrogation against Canada as represented by Public Works and Government Services Canada for any and all loss of or damage to the watercraft however caused.

Other types of Insurance

To be inserted below according to specifics of project.

Solicitation No. - N° de l'invitation

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mtc560

CCC No./N° CCC - FMS No/ N° VME

ANNEX C - LISTING OF SUBCONTRACTORS

- 1) In accordance with GI07 - Listing of Subcontractors and Suppliers of R2710T- General Instructions - Construction Services - Bid Security Requirements, 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			

Public Services and Procurement Canada (PSPC)

Stabilization of the Facade Masonry at 715 Peel, Montreal (Quebec)

Specifications – For Submission

R.082014.700

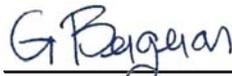
June 16th 2016

M04068C

STRUCTURAL SPECIFICATIONS

ISSUED FOR SUBMISSION

Prepared by:



Guillaume Bergeron-Bibeau, Jr. Eng.
OIQ. No. 5037871

Verified by:



Claude Maillé, Eng.
OIQ. No. 41072



Partners in excellence

740, Notre-Dame Ouest Street, Office 900
Montreal (Quebec) H3C 3X6

Revision n°	Issued for	Date
00	Submission	23-06-2016

STRUCTURE

Pages

DIVISION 00

00 01 07	Seals and Signatures	1
00 01 10	List of Sections	1
00 01 15	List of Drawings	1

DIVISION 01

01 11 00	Summary of Work	3
01 31 19	Project Meetings	2
01 32 16.07	Construction Progress Schedule – Bar (Gantt) Chart	4
01 33 00	Submittal Procedures	4
01 35 29.06	Health and Safety Requirements	9
01 35 43	Environmental Procedures	3
01 45 00	Quality Control	3
01 51 00	Temporary Utilities	2
01 52 00	Construction Facilities	5
01 56 00	Temporary Barriers and Enclosures	2
01 61 00	Common Product Requirements	3
01 73 00	Execution	3
01 74 11	Cleaning	2
01 74 21	Construction/Demolition Waste Management and Disposal	5
01 77 00	Closeout Procedures	2
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DIVISION 04

04 03 07	Historic – Masonry Repointing	7
04 03 08	Historic - Mortaring	4
04 05 10	Comment Work Results for Masonry	5
04 05 23	Masonry Accessories	2

END OF SECTION

STRUCTURE

082014700-S01
IMPLANTATION AND GENERAL NOTES
STRUCTURE

082014700-S02
ELEVATION – RUE ST-JACQUES
STRUCTURE

082014700-S03
ELEVATION – RUE ST-PEEL (1 OF 2)
STRUCTURE

082014700-S04
ELEVATION – RUE ST-PEEL (2 OF 2)
STRUCTURE

082014700-S05
ELEVATION – RUE DE LA CATHÉDRALE (1 OF 2)
STRUCTURE

082014700-S06
ELEVATION – RUE DE LA CATHÉDRALE (2 OF 2)
STRUCTURE

082014700-S07
ELEVATION – RUE ST-ANTOINE
STRUCTURE

082014700-S08
CUT AND DETAILS
STRUCTURE

* An electronic version of the drawings will be provided in image format (PDF) only. No drawing will be provided in DWG format.

END OF SECTION

1. General

1.1 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Work of this contract comprises the stabilization of the masonry on the façades of the heritage building located at 715 Peel Street in Montreal. The work will consist of repointing the brick veneer and adding anchor rods.
- .2 This list of works should not be considered exhaustive or limiting.

1.2 CONTRACT METHOD

- .1 Construct Work under single, lump sum contract, including unit prices, as the terms and conditions specify.

1.3 CONTRACTOR'S USE OF PREMISES

- .1 The site is limited to the exterior of the building.
 - .2 Co-ordinate use of premises under direction of the Ministerial Representative.
 - .3 The use of the site is restricted to the areas necessary to the execution of the works.
 - .4 Obtain and pay for use of additional storage or work zones needed for operations under this Contract.
 - .5 At completion of operations condition of existing work: equal to or better than that which existed before new work started.
 - .6 Work is allowed between 6pm and 6am.
 - .7 Except for emergency repairs, an access demand must be completed by the Ministerial Representative and submitted to the building's security captain 48 hours before the beginning of the works.
 - .8 Security and identification: All employees working on the site must register at the security office at their arrival. Identification cards given by the security service of the building must be visible at all times. They must be given back at the departure of the employees. The attendance list, work hours, names and phone numbers of the contractors or their representatives working on 715 Peel are given to the Ministerial Representative on a daily basis for site observation purposes.
 - .9 Access to the garage and to the delivery platform is prohibited.
 - .10 Access to the building's elevators is prohibited.
-

- .11 Health and security: All workers must conform to the legal obligations in terms of health and safety in accordance with the CSST and to all other additional requirement indicated in the specifications. The locations of the works will be inspected by the Ministerial Representative for the entire duration of the works. The observation reports will be placed in the contractor performance dossier.
- .12 Medical or fire emergency: In the event of an emergency, immediately call 283-7644 and 911
- .13 The use of powder-actuated tools is strictly prohibited.
- .14 Use of tobacco: smoking on the site is prohibited.
- .15 No alcohol or drugs are allowed on site.
- .16 It is strictly prohibited to take photos of the building for any reason without the authorization of the Ministerial Representative.

1.4 MINISTERIAL REPRESENTATIVE'S USE OF PREMISES

- .1 The Ministerial Representative will occupy premises during entire construction period for execution of normal operations.
- .2 Co-operate with Ministerial Representative in scheduling operations to minimize conflict and to facilitate his use of the premises.

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 Other Modifications to Contract.
-

- .8 Field Test Reports.
- .9 Copy of Approved Work Schedule.
- .10 Health and Safety Plan and Other Safety Related Documents.
- .11 Other documents as specified.

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 ADMINISTRATIVE

- .1 Site meetings will take place in the firm CIMA+'s office, located at 740 Notre-Dame West, or at Place Bonaventure, which is where the PSPC's office is located.

1.2 PRECONSTRUCTION MEETING

- .1 Within 15 days after award of contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
 - .2 The Ministerial Representative and the Contractor will be in attendance.
 - .3 Establish time and location of meeting and notify parties concerned minimum five (5) days before meeting.
 - .4 Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
 - .5 Agenda to include:
 - .1 Appointment of official representatives of participants in the Work.
 - .2 Schedule of Work: in accordance with Section 01 32 16.07 - Construction Progress Schedules - Bar (GANTT) Chart.
 - .3 Schedule of submission of shop drawings, samples, colour chips. Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .4 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences in accordance with Section 01 52 00 - Construction Facilities.
 - .5 Site security in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.
 - .6 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.
 - .7 Products provided by the Ministerial Representative.
 - .8 Record drawings in accordance with Section 01 33 00 – Submittal Procedures.
 - .9 Take-over procedures, acceptance, warranties in accordance with Section 01 78 00 - Closeout Submittals.
 - .10 Monthly progress claims, administrative procedures, photographs, hold backs.
 - .11 Appointment of agencies.
 - .12 Insurances, transcript of policies.
-

1.3 PROGRESS MEETINGS

- .1 During course of Work a schedule of progress meetings, which will be bi-weekly, will be established by the Contractor.
- .2 Contractor and Ministerial Representative are to be in attendance.
- .3 Agenda to include the following:
 - .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 of construction schedule.
 - .8 Progress schedule, during succeeding work period.
 - .9 Review submittal schedules of documents and the required samples: expedite as required.
 - .10 Maintenance of quality standards.
 - .11 Review proposed changes for effect on construction schedule and on completion date.
 - .12 Other business.

1.4 WORK SEQUENCE

- .1 The spread of all the masonry stabilization works will have to be confirmed on site with the Ministerial Representative in the presence of the Contractor. This is to be done before the beginning of the works for each work zone.
- .2 The Contractor must optimize the review work in the presence of the Ministerial Representative in order to not delay the works, it is the Contractor's responsibility to advise the Ministerial Representative when he is ready for a new work zone.

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 DEFINITIONS

- .1 Activity: element of Work performed during course of Project. Activity normally has expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (GANTT Chart): graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.
- .3 Baseline: original approved plan (for project, work package, or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Friday, inclusive, will provide five day work week and define schedule calendar working days as part of Bar (GANTT) Chart submission.
- .5 Duration: number of work periods (not including holidays or other nonworking periods) required to complete activity or other project element. Usually expressed as workdays or workweeks.
- .6 Master Plan: summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: significant event in project, usually completion of major deliverable.
- .8 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.
- .9 Project Planning, Monitoring and Control System: overall system operated by the Ministerial Representative to enable monitoring of project work in relation to established milestones.

1.2 REQUIREMENTS

- .1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
 - .2 Plan to complete Work in accordance with prescribed milestones and time frame.
-

- .3 Limit activity durations to maximum of approximately five (5) working days, to allow for progress reporting.
- .4 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

1.3 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit to the Ministerial Representative within ten (10) working days of Award of Contract Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of project progress.
- .3 Submit Project Schedule to Ministerial Representative within five [5] working days of receipt of acceptance of Master Plan.

1.4 PROJECT MILESTONES

- .1 Project milestones form interim targets for Project Schedule.
 - .1 Works completed within 80 working days of Award of Contract date.
 - .2 Interim Certificate (Substantial Completion) within 90 working days of Award of Contract date.

1.5 MASTER PLAN

- .1 Structure schedule to allow orderly planning, organizing and execution of Work in accordance with the Bar Chart (GANTT).
- .2 The Ministerial Representative will review and return revised schedules to the Contractor within five (5) working days.
- .3 Revise impractical schedule and resubmit within (5) five working days.
- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

1.6 PROJECT SCHEDULE

- .1 Develop detailed Project Schedule derived from Master Plan.
-

- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
 - .1 Award of contract.
 - .2 Contractor's prevention program.
 - .3 Shop Drawings, Samples and product data.
 - .4 Permits.
 - .5 Mobilization.
 - .6 Accomplishing the stabilization works on each facade.
 - .7 Completion of the works.

1.7 PROJECT SCHEDULE REPORTING

- .1 Update Project Schedule on a bi-weekly basis reflecting activity changes and completions, as well as activities in progress and at each demand of payment.
- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.
- .3 An additional schedule will have to be submitted to the Ministerial Representative each week in order to present the detailed activities to come in the two following weeks. The fulfilled activity, the affected building sector and the dates of execution will have to be clearly indicated.

1.8 PROJECT MEETINGS

- .1 Update Project Schedule every two (2) weeks (at each meeting) in order for it to reflect the modifications to the activities, their completion as well as the activities in progress.
- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.
- .3 An additional schedule will have to be submitted to the Ministerial Representative each week in order to present the detailed activities to come in the two following weeks. The fulfilled activity, the affected building sector and the dates of execution will have to be clearly indicated

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 RELATED REQUIREMENTS

Not used.

1.2 ADMINISTRATIVE

- .1 Submit to Ministerial 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 Do not proceed with Work affected by submittal until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals and samples prior to submission to Ministerial 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.
- .6 Notify Ministerial Representative, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Ministerial Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Ministerial Representative review.
- .10 Keep one reviewed copy of each submission on site.

1.3 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
-

- .2 Submit drawings stamped and signed by a professional engineer registered or licensed in a Province of Canada.
 - .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 coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
 - .4 Allow five (5) days for Ministerial Representative's review of each submission.
 - .5 Adjustments made on shop drawings by Ministerial Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Ministerial Representative prior to proceeding with Work.
 - .6 Make changes in shop drawings as Ministerial Representative] may require, consistent with Contract Documents. When resubmitting, notify Ministerial Representative in writing of revisions other than those requested.
 - .7 Accompany submissions with transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
 - .8 Submissions include:
 - .1 Preparation date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor'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. The materials and the fabrication details.
 2. Layout, showing dimensions, including identified field dimensions, and clearances.
 3. Setting or erection details.
 1. Performance characteristics.
 2. Standards of reference.
 3. Relationship to adjacent work.
 - .9 After Ministerial Representative's review, distribute copies.
-

- .10 If no shop drawing is required due to the use of a product with standard manufacturing, submit one electronic copy of shop drawings for each requirement requested in specification Sections and as Ministerial Representative may reasonably request.
- .11 Submit 1 electronic copy of manufacturer's instructions for requirements requested in specification Sections and as requested by Ministerial Representative.
- .12 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .13 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .14 Delete information not applicable to project.
- .15 Supplement standard information to provide details applicable to project.
- .16 If upon review by Ministerial 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.
- .17 The review of shop drawings by Public Works and Government Services Canada (PWGSC) is for sole purpose of ascertaining conformance with general concept.
 - .1 This review shall not mean that PWGSC approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor 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, Contractor 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.

1.4 SAMPLES

- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
 - .2 Deliver samples prepaid to the Ministerial Representative's.
 - .3 Notify Ministerial Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
-

- .4 Adjustments made on samples by Ministerial Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Ministerial Representative prior to proceeding with Work.
- .5 Make changes in samples which Ministerial Representative may require, consistent with Contract Documents.
- .6 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

1.5 MOCK-UPS

- .1 Erect mock-ups in accordance with 01 45 00 - Quality Control.

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 SECTION INCLUDES

- .1 Not used.

1.2 REFERENCES

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- .2 Province of Quebec
 - .1 An Act Respecting Occupational Health and Safety, R.S.Q. 1997 (updated 26 July 2005).

1.3 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Submit site-specific Health and Safety Plan: Within seven (7) days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
 - .1 Results of site specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
 - .3 Submit a copy of Contractor's authorized representative's work site health and safety inspection reports to the Ministerial Representative and to authority having jurisdiction, weekly.
 - .4 Submit copies of reports or directions issued by Federal and Provincial health and safety inspectors.
 - .5 Submit copies of incident and accident reports.
 - .6 The Ministerial Representative will review the Contractor's site-specific Health and Safety Plan and provide comments to Contractor within seven (7) days after receipt of plan. Revise plan as appropriate and resubmit plan to the Ministerial Representative within seven (7) days after receipt of comments from the Departmental Representative.
 - .7 The Ministerial Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
-

- .8 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

1.4 SAFETY ASSESSMENT

- .1 Perform site specific safety hazard assessment related to project.

1.5 MEETINGS

- .1 Schedule and administer Health and Safety meeting with the Ministerial Representative prior to commencement of Work.

1.6 GENERAL REQUIREMENTS

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 The Ministerial Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.7 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.8 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Act, Industrial and Commercial Establishments Regulation, R.R.Q.
 - .2 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.
-

1.9 UNFORSEEN HAZARDS

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise the Ministerial Representative verbally and in writing.

1.10 HEALTH AND SAFETY CO-ORDINATOR

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Coordinator. Health and Safety Coordinator must:
 - .1 Have at least ten (10) years of site-related working experience specific to activities associated with masonry work.
 - .2 Have working knowledge of occupational safety and health regulations.
 - .3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work.
 - .4 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.
 - .5 Be on site during execution of Work and report directly to and be under direction of site supervisor.

1.11 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with the Ministerial Representative.

1.12 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by the Ministerial Representative.
- .2 Provide the Ministerial Representative with a written report of action taken to correct non-compliance of health and safety issues identified.
- .3 The Ministerial Representative may stop Work if the Contractor does not correct the conditions in non-compliance of health and safety regulations.

1.13 WORK STOPPAGE

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.
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1.14 WORK IN SILICA EXPOSURE

1. Source reduction methods

1. Work in wet environment or use tools with inflow of water in order to reduce dustiness, if not, collect dust at the source and retain it with a high efficiency filter not to propagate dust in the environment.
2. Clean surfaces and tools with water, never with compressed air.
3. Sand and pickle surfaces by using an abrasive containing less than 1 % of silica (also called amorphous silica).
4. When required, install shields or other containment device to prevent silica dust from migrating toward other workers or the public.

2. Individual protection equipments

1. Wear individual respiratory protection equipments (mask) during all the operations that could generate silica dust. Select respiratory protection in accordance with the « *Guide des appareils de protection respiratoire utilisés au Québec* »

http://www.prot.resp.csst.qc.ca/Guid_APR.pdf

2. Wear an ocular protection (glasses or visors).
3. Wear a coveralls to prevent contamination outside the worksite.

3. Personal hygiene

1. Do not eat, drink, or smoke in a dusty environment.
2. Wash the hands and the face before drinking, eating or smoking.

1.15 PROTECTION AGAINST FALLS FROM HEIGHT

1. Guardrails

1. Installation of guardrails is mandatory. PWGSC may specify certain restrictions with regard to anchoring, in which case the Contractor must make sure that the guardrails meet all of the requirements in section 3.8 of the Safety Code for the Construction Industry (L.R.Q., S-2.1, r. 6)
2. The Contractor agrees not to remove the guardrails until the project is completed. The Engineer will authorize their removal when he is able to attest that all of the work, inspections and corrections required have been carried out.

2. Harnesses

1. Workers installing the guardrails shall wear safety harnesses.
2. Workers installing and modifying guardrails or flashing shall wear safety harnesses in the event guardrails must be moved temporarily.

3. Workers shall wear safety harnesses when receiving material and giving directions to the crane operator next to a drop.
4. Safety harnesses shall be worn when carrying out work next to a drop where collective protection is not sufficiently safe.
5. The Contractor shall provide a fastening method and safety cable system compliant with section 2.10.12 of the Safety Code for the Construction Industry (L.R.Q.,S-2.1, r. 6) for each work site or location.

3. Scaffolding

1. All scaffolding must be inspected and assembled as outlined in the Safety Code for the Construction Industry (L.R.Q.,S-2.1, r. 6).
2. As needed, plans and compliance certifications must be provided to the Engineer before work begins.
3. The Contractor shall make sure that all workers are always protected from falls during scaffolding assembly, as provided in article 3.9.4.5 of the Safety Code for the Construction Industry (L.R.Q.,S-2.1, r. 6).

4. Lifting Material

1. The Contractor shall provide the Engineer with a mechanical service inspection certificate for each lifting device. Inspections must be carried out just prior to the delivery of the equipment to the work site.
2. For all winch installations, the Contractor shall provide the Engineer with the installation method recommended by the manufacturer. If unavailable, the Contractor shall then provide an installation procedure signed and sealed by an engineer. The installation procedure must take into account loadbearing capacity, the amount, weight and location of counterweight and any other detail that may affect the capacity and stability of the device.
3. In addition to the mechanical service inspection certificate, the annual inspection certificate and the crane logbook must be aboard all crane and crane-truck cabs.
4. Lifting devices shall be positioned in such a way that loads are not carried over workers, occupants or the public.
5. The entire lifting area shall be closed off to prevent non-authorized people from entering it.
6. The Contractor shall obtain all of the permits at his own expense, in the event the thoroughfare must be temporarily closed off to meet the requirement stipulated in the preceding paragraph or for any other reason pertaining to the safety of workers, occupants or the public.
7. The Contractor shall carefully inspect all of the slings and lifting accessories and make sure that those in poor condition are destroyed or scrapped.
8. Compressed-gas cylinders shall be lifted with a basket specially designed for this purpose.

5. Protection against fire

1. Work on construction sites must be carried out in compliance with Fire Commissioner of Canada Standard CI 301, Standard for Construction Operations, June 1982. This standard is available at the following website:
http://info.load-otea.hrhc-drhc.gc.ca/fire_prevention/standards/301.shtml
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2. At the beginning of each shift on every site, the Contractor shall obtain a Hot Work Permit issued by the person in charge of the work location (or the person he/she appoints).
3. A working portable fire extinguisher suitable to the fire risk shall be available and easily accessible within a 5 m radius from any flame, spark source or intense heat.
4. An individual shall be appointed to go on rounds (fire) for a period of two hours after the end of the shift. This individual shall countersign the permit and give it to the person in charge of the work site (or the individual he/she appoints) after the two-hour period.
 - i. The storage of propane cylinders shall comply with the CAN/CSA-B149.2-F00 Propane Storage and Handling Code and meet the specific conditions outlined in this document. The cylinders shall be stored outdoors, in a safe place, away from any unauthorized handling, in a storage cabinet specially designed for this purpose. The cylinders shall be securely kept upright and locked at all times in a place where no vehicles are allowed, unless the cylinders are protected by bars or the equivalent.
5. Compressed gas, fuel tanks or containers must be stored at least 10 m from any buildings.
6. The number of propane cylinders on the roof shall not exceed the number of cylinders necessary for a day's work, and cylinders shall at all times be secured upright or held in a cart designed for this purpose.
7. All of the cylinders used or stored on the work site shall be equipped with a collar designed to protect the valve.
8. Filling the cylinders on the work site is forbidden, unless a procedure compliant with the CAN/CSA B149.2 standard is approved and authorized by the Engineer.

6. Material and waste management

1. On the roof, light material and sheet material shall be kept in containers or be securely fastened. In the event this requirement is disregarded in the slightest way, the Engineer may disallow the storage of materials on the roof.
2. The preceding paragraph also applies to waste.
3. Waste shall be discarded as produced using a waste chute or appropriate containers.
4. All waste must be removed from the roof at the end of shifts.

7. General protection and work site organization

1. Regardless of the circumstances and the nature of the work, individuals with access to the work site must wear protective footwear and hard hats. The Contractor shall provide chin cups or ratchet suspension helmets to workers who must bend over or crouch down.
 2. Covered passageways shall be set up to protect all entrances and exits.
 3. A safety perimeter on the ground must be placed under the work zone in order to protect the public and the occupants.
 4. The ground work site, material handling area and boiler area shall be clearly sealed off to prevent occupants or the public from accessing the site and areas.
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5. Before installing any device that may emit gas or fumes, the Contractor shall receive authorization from the person in charge of the work site, who shall make sure that there is no risk of gas or fumes infiltrating the building's ventilation system.
6. The Contractor shall make sure that the work site is kept clean and tidy for the duration of the work.
7. Copies of material safety data sheets of all controlled products shall be forwarded to the Engineer and to the person responsible of the work site before work begins.
8. The Contractor shall provide sanitary facilities and rest areas compliant with requirements of the Safety Code for the Construction Industry.

1.16 WORK IN HEIGHT

1. The Contractor must ensure that any person carrying out work that poses a risk of falling more than 2,4 m use fall protection equipment.
2. Plan and organize work so as to eliminate the danger at source or ensure collective protection, thereby minimizing the use of personal protective equipment. When personal fall protection is required, workers must use a safety harness that complies with CSA standard CAN/CSA Z-259.10 M90. A safety belt must not be used as fall protection.
3. Wearing of safety harness is obligatory in any elevating platform with telescopic, articulated or rotary boom.
4. Delimit a danger zone in any place where equipment for work in height is used.

1.17 SCAFFOLDING

1. Foundation:
 1. Scaffolding shall be installed on a solid foundation so that it does not slip or rock.
 2. Contractors wishing to install scaffolding on a roof, overhang, canopy or awning shall submit their calculations and loads to the Engineer and shall obtain permission from the Engineer before beginning installation.
 2. Assembly, bracing and mooring:
 1. All scaffolding shall be assembled, braced and moored in accordance with the manufacturer's instructions and the provisions of the *Safety Code for the construction industry*.
 2. Where a situation requires the removal of part of the scaffolding (e.g., crosspieces), the Contractor shall submit an assembly procedure signed and sealed by an engineer certifying that the scaffolding assembled in that manner will allow the work to be done safely given the loads to which it will be subject.
 3. For scaffolding where the span between two supports is greater than 3 m, the Contractor shall provide an assembly plan signed and sealed by an engineer.
 3. Protection against falls during assembly:
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1. Workers working above the ground shall be protected against falls at all times during assembly.
 2. Before the work begins, the Contractor shall submit to the Engineer a procedure stating the protective measures used and, if applicable, identifying the anchor points for the safety cables or moorings. This procedure shall be in accordance with sections 3.9.4.5, 2.9.1 and 2.10.12 of the *Safety Code for the construction industry* (amended on August 2, 2001).
 4. Platforms:
 1. Scaffolding platforms shall be designed and installed in accordance with the provisions of the *Safety Code for the construction industry*.
 2. If planks are used, they shall be approved and stamped in accordance with section 3.9.8 of the *Safety Code for the construction industry* (in force January 1, 2002).
 3. The platforms shall cover the entire surface protected by the guardrails.
 4. The above notwithstanding, scaffolding 4 sections (or 6 metres) high or higher shall have a full platform covering the entire surface of the putlogs every 3 m or fraction thereof, and the components of that platform shall not be moved at any time to create an intermediate landing.
 5. Guardrails:
 1. A guardrail shall be installed on every landing.
 2. Cross braces shall not be considered guardrails.
 3. Where scaffolding 4 sections (or 6 metres) high or higher requiring full platforms is used, guardrails shall be installed on each landing at the start of work and shall remain in place until the work is completed.
 6. Access:
 1. The Contractor shall ensure that access to the scaffolding does not compromise worker safety.
 2. Where the platforms of the scaffolding are comprised of planks, ladders shall be installed in such a way that planks extending beyond the platform do not block the way up or down.
 3. Notwithstanding the provisions of the *Safety Code for the construction industry*, stairs shall be installed on all scaffolding that has 6 or more rows of uprights or is 6 sections (or 9 metres) high or higher.
 7. Protection of the public and occupants:
 1. The Contractor shall identify the boundaries of and barricade the work area so as to limit access to authorized workers only.
 2. The Contractor shall install covered walkways, nets or other similar devices to protect the public or the occupants against falling objects.
 8. Use of public thoroughfares:
 1. Where it is necessary to encroach on a public thoroughfare, the Contractor shall obtain at the Contractor's expense any authorizations and permits required by the competent authority.
 2. The Contractor shall install at the Contractor's expense any signage, barricades or other devices needed to ensure the safety and security of the public and the Contractor's own facilities.
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2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 REFERENCES

- .1 Definitions:
 - .1 Environmental Pollution and Damage: presence of chemical, physical, biological elements or agents which adversely affect human health and welfare; unfavourably alter ecological balances of importance to human life; affect other species of importance to humankind; or degrade environment aesthetically, culturally and/or historically.
 - .2 Environmental Protection: prevention/control of pollution and habitat or environment disruption during construction. Control of environmental pollution and damage requires consideration of land, water, and air; biological and cultural resources; and includes management of visual aesthetics; noise; solid, chemical, gaseous, and liquid waste; radiant energy and radioactive material as well as other pollutants.
- .2 Reference Standards:
 - .1 .U.S. Environmental Protection Agency (EPA)/Office of Water
 - .1 EPA 832/R-92-005-[92], Storm Water Management for Construction Activities, Chapter 3.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Prior to commencing construction activities or delivery of materials to site, provide Environmental Protection Plan for review and approval by the Ministerial Representative.
 - .3 Ensure Environmental Protection Plan includes comprehensive overview of known or potential environmental issues to be addressed during construction.
 - .4 Address topics at level of detail commensurate with environmental issue and required construction tasks.
 - .5 Include in Environmental Protection Plan:
 - .1 Names of persons responsible for ensuring adherence to Environmental Protection Plan.
 - .2 Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
 - .3 Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, are contained on project site.
 - .4 Contaminant Prevention Plan identifying potentially hazardous substances to be used on job site; intended actions to prevent introduction of such materials into air, water, or ground; and detailing provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and
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handling of these materials.

- .5 Waste Water Management Plan identifying methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as mortar curing water and clean-up water.

1.3 FIRES

- .1 Fires and burning of rubbish on site are not permitted.

1.4 POLLUTION CONTROL

- .1 Maintain temporary erosion and pollution control features installed under this Contract.
- .2 Control emissions from equipment and plant to local authorities' emission requirements.
- .3 Wet down dry materials and cover rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

1.5 NOTIFICATION

- .1 The Ministerial Representative will notify the Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws or regulations, permits, and other elements of Contractor's Environmental Protection plan.
- .2 Contractor: after receipt of such notice, inform the Ministerial Representative of proposed corrective action and take such action for approval to the latter.
 - .1 Do not take action until after receipt of written approval by the Ministerial Representative.
- .3 The Ministerial Representative will issue stop order of work until satisfactory corrective action has been taken.
- .4 No time extensions granted or equitable adjustments allowed to Contractor for such suspensions.

2. Products

Not used.

3. Execution

3.1 CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
- .2 Waste Management: separate waste materials in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal.
- .3 Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.

END OF SECTION

1. General

1.1 REFERENCES

Not used.

1.2 INSPECTION

- .1 Allow the Ministerial 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 timely notice requesting inspection if Work is designated for special tests, inspections or approvals by the Ministerial Representative's instructions, or law of Place of Work.
- .3 If Contractor 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 The Ministerial 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, the Contractor must correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, the Ministerial Representative shall pay cost of examination and replacement.

1.3 ACCESS TO WORK

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co-operate to provide reasonable facilities for such access.

1.4 PROCEDURES

- .1 Notify appropriate agency and the Ministerial 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.
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- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.5 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 the Ministerial Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- .3 If in opinion of the Ministerial 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 the Ministerial Representative.

1.6 REPORTS

- .1 Submit a copy of inspection and test reports to the Ministerial Representative.
- .2 Provide copies to the subcontractor of work being inspected or tested.

1.7 TESTS AND MIX DESIGNS

- .1 Furnish test results and mix designs as requested.
- .2 Cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work will be appraised by the Ministerial Representative and may be authorized as recoverable.

1.8 MILL TESTS

- .1 Submit mill test certificates as required of specification Sections.
-

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 SUBMITTALS

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

1.2 INSTALLATION AND REMOVAL

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

1.3 WATER SUPPLY

- .1 The Contractor will provide continuous supply of potable water for construction use.

1.4 TEMPORARY HEATING AND VENTILATION

- .1 Provide temporary heating required during construction period, including attendance, maintenance and fuel.
- .2 Maintain temperatures of minimum 10 degrees Celsius in areas where construction is in progress.
- .3 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

1.5 TEMPORARY POWER AND LIGHT

- .1 The Contractor must provide temporary power during construction for temporary lighting and operating of power tools.
- .2 Provide and maintain adequate temporary lighting throughout project, ensure network maintenance.

1.6 TEMPORARY COMMUNICATION FACILITIES

- .1 The Contractor must provide and pay for temporary installations for telecommunications such as telephones, data treatment systems, including the lines and equipment necessary for own use and use for the Ministerial
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Representative. Contractor must ensure the connection of these installations the main networks and assume the cost of all these services.

1.7 FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.
- .2 Burning rubbish and construction waste materials is not permitted on site.

2. Produits

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 REFERENCES

- .1 U.S. Environmental Protection Agency (EPA) / Office of Water
 - .1 EPA 832R92005, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices.

1.2 SUBMITTALS

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

1.3 INSTALLATION AND REMOVAL

- .1 Prepare site plan indicating proposed location and dimensions of area to be fenced and used by Contractor, number of trailers to be used, avenues of ingress/egress to fenced area and details of fence installation. No permanent zone on site can be attributed, thus the Contractor is responsible to find a space that can hold his equipment and installations.
- .2 Indicate use of supplemental or other staging area.
- .3 Provide construction facilities in order to execute work expeditiously.
- .4 Remove from site all such work after use.

1.4 SCAFFOLDING

- .1 Scaffolding in accordance with CAN/CSA-S269.2.
- .2 Provide and maintain scaffolding and swing staging. Ensure its maintenance and assembly design, including the professional expertise required for its installation. Provide the documents of an engineer that validates the anchoring method of the swing staging (see CSST requirements).

1.5 HOISTING

- .1 Provide, operate and maintain hoists, cranes and nacelle required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for their use of hoists.
 - .2 Hoists and cranes to be operated by qualified operator.
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- .3 Provide for approval the anchoring document certified by an engineer that is a member of the ordre des ingénieurs du Québec (OIQ).

1.6 ELEVATORS

- .1 Permanent elevators are not to be used by construction personnel or for transporting materials.

1.7 SITE STORAGE/LOADING

- .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .2 Do not load or permit to load any part of Work with weight or force that will endanger Work.

1.8 CONSTRUCTION PARKING

- .1 Parking will not be permitted at the Federal Building.
- .2 Provide and maintain adequate access to project site.
- .3 Clean runways and taxi areas where used by Contractor's equipment.

1.9 SECURITY

- .1 Provide and pay for responsible security personnel to guard site and contents of site after working hours and during holidays.
- .2 Provide a resting area for site workers.

1.10 OFFICES

- .1 Provide office heated to 22 degrees Celsius, lighted 750 lux and ventilated, of sufficient size to accommodate site meetings and furnished with drawing laydown table.
 - .2 The office must be outside the construction site, in an area determined by the Contractor and at his own expense.
 - .3 Provide marked and fully stocked first-aid case in a readily available location.
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- .4 Subcontractors to provide their own offices as necessary. Direct location of these offices.
- .5 Inside dimensions minimum 3.6 m long x 3 m wide x 2.4 m high, with floor 0.3 m above grade, complete with 4 50% opening windows and one lockable door.
- .6 Insulate building and provide heating system to maintain 22 degrees Celsius inside temperature at -20 degrees Celsius outside temperature.
- .7 Finish inside walls and ceiling with plywood, hardboard or wallboard and paint in selected colours. Finish floor with 19 mm thick plywood.
- .8 Install electrical lighting system to provide min 750 lx using surface mounted, shielded commercial fixtures with 10 % upward light component.
- .9 Provide private washroom facilities adjacent to office complete with flush or chemical type toilet, lavatory and mirror and maintain supply of paper towels and toilet tissue.
- .10 Equip office with 1 x 2 m table, 6 chairs, 6 m of shelving 300 mm wide, 3 drawer filing cabinet, one plan rack and one coat rack and shelf.
- .11 Maintain in clean condition.

1.11 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.

1.12 SANITARY FACILITIES

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
 - .2 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.
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1.13 PROTECTION AND MAINTENANCE OF TRAFFIC

- .1 Provide access and temporary relocated roads as necessary to maintain traffic and assume the costs.
- .2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by the Ministerial Representative.
- .3 Provide measures for protection and diversion of traffic, including provision of watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs
- .4 Protect travelling public from damage to person and property.
- .5 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .6 Verify adequacy of existing roads and allowable load limit on these roads.
Contractor: responsible for repair of damage to roads caused by construction operations.
- .7 Construct access and haul roads necessary.
- .8 Haul roads: constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided.
- .9 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.
- .10 Dust control: adequate to ensure safe operation at all times.
- .11 Location, grade, width, and alignment of construction and hauling roads: subject to approval by the Ministerial Representative.
- .12 Lighting: to assure full and clear visibility for full width of haul road and work areas during night work operations.
- .13 Provide snow removal during period of Work.

1.14 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.
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- .3 Store materials resulting from demolition activities that are salvageable.
- .4 Stack stored new or salvaged material not in construction facilities.

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 REFERENCES

- .1 Not used.

1.2 INSTALLATION AND REMOVAL

- .1 Provide temporary access and protection structures necessary in order to execute Work expeditiously.
- .2 Remove from site all such work after use.

1.3 GUARD RAILS AND BARRICADES

- .1 Provide secure, rigid and secure guard rails and barricades in order to block access to the work zone.
- .2 Provide and install as required by governing authorities.

1.4 PEDESTRIAN PROTECTION

- .1 Build a temporary structure that protects pedestrians on the sidewalk, near the façades being worked on, from falling objects. This structure must include a rigid roof and a net, which protects the public against any type of falling object (heavy and large or fine and light). Provide scaffolding and swing stage necessary for the execution of work. Ensure the maintenance and design of work, including professional expertise.
- .2 Obtain the necessary permits from the City of Montreal and assume the expenses.

1.5 PUBLIC TRAFFIC FLOW

- .1 Provide and maintain competent signal flag operators, if required. Provide traffic signals, barricades and flares, lights, or lanterns as required to perform Work and protect public.
 - .2 Obtain the necessary permits from the City of Montreal and assume the expenses.
-

1.6 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY

- .1 Protect surrounding private and public property from damage during performance of Work.
- .2 Be responsible for damage incurred.
- .3 Obtain the necessary permits from the City of Montreal.

1.7 PROTECTION OF BUILDING FINISHES

- .1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
- .2 Provide necessary screens, covers, and hoardings.
- .3 Confirm with Ministerial Representative locations and installation schedule five (5) days prior to installation.
- .4 Be responsible for damage incurred due to lack of or improper protection.

1.8 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 QUALITY

- .1 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve the Contractor of his responsibilities, but is precaution against oversight or error. The Contractor will have to ensure the removal and replacement of the defective products at his own expense and be responsible for delays and expenses caused by the rejection.
- .2 Should disputes arise as to quality or fitness of products, decision rests strictly with the Ministerial Representative based upon requirements of Contract Documents.
- .3 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.

1.2 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 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.
- .5 Remove and replace damaged products at own expense and to satisfaction of the Ministerial Representative.

1.3 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work.
 - .2 Transportation cost of products supplied by Owner will be paid for by the Ministerial Representative. Unload, handle and store such products.
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1.4 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 the Ministerial Representative in writing, of conflicts between specifications and manufacturer's instructions, so that he will establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes the Ministerial Representative.

1.5 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 the Ministerial 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. The Ministerial 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 the Ministerial Representative, whose decision is final.

1.6 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.

1.7 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.
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1.8 LOCATION OF FIXTURES

- .1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.
- .2 Inform the Ministerial Representative of conflicting installation. Install as directed.

1.9 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 the Ministerial Representative.

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 SUBMITTALS

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit written request in advance of cutting or alteration which affects:
 - .1 Structural integrity of elements of project.
 - .2 Integrity of weather-exposed or moisture-resistant elements.
 - .3 Efficiency, maintenance, or safety of operational elements.
 - .4 Visual qualities of sight-exposed elements.
 - .5 Work of Owner or separate contractor.
- .3 Include in request:
 - .1 Identification of project.
 - .2 Location and description of affected Work.
 - .3 Statement on necessity for cutting or alteration.
 - .4 Description of proposed Work, and products to be used.
 - .5 Alternatives to cutting and patching.
 - .6 Effect on Work of Owner or separate contractor.
 - .7 Written permission of affected separate contractor.
 - .8 Date and time work will be executed.

1.2 MATERIALS

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

1.3 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 cutting or patching 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.
- .5 Provide protection from elements for areas which are to be exposed by uncovering work; maintain excavations free of water.

1.4 EXECUTION

- .1 Execute cutting, fitting, and patching necessary 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 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- .6 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- .7 Restore work with new products in accordance with requirements of Contract Documents.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by Owner or other Contractors.
- .2 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by the Ministerial Representative. Do not burn waste materials on site.
- .3 Clear snow and ice from access to building.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Provide off site containers for collection of waste materials and debris. The location of the containers will have to be off site and determined by the Contractor, at his own expenses.
- .6 Provide and use marked separate bins for recycling. Refer to Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .7 Dispose of waste materials and debris off site.
- .8 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .9 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .10 Schedule cleaning operations so that resulting dust, debris and other contaminants will not contaminate building systems.

1.2 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 other Contractors, and leave Work clean and suitable for occupancy.
 - .3 Prior to final review remove surplus products, tools, construction machinery and equipment.
 - .4 Remove waste products and debris other than that caused by Owner or other Contractors.
-

- .5 Remove waste materials from site at regularly scheduled times or dispose of as directed by the Ministerial Representative. Do not burn waste materials on site.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- .8 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls and all exterior elements affected.
- .9 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .10 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .11 Remove dirt and other disfiguration from exterior surfaces.
- .12 Remove snow and ice from access to building.

1.3 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 WASTE MANAGEMENT GOALS

- .1 Waste Management Goal: 90 percent of total Project Waste to be diverted from landfill sites. Provide the Ministerial Representative documentation certifying that waste management, recycling, reuse of recyclable and reusable materials have been extensively practiced.

1.2 DEFINITIONS

- .1 Materials Source Separation Program (MSSP): consists of series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.
 - .2 Recyclable: ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse.
 - .3 Recycle: process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
 - .4 Recycling: process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
 - .5 Reuse: repeated use of product in same form but not necessarily for same purpose. Reuse includes:
 - 1. Salvaging reusable materials from re-modelling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.
 - 2. Returning reusable items including pallets or unused products to vendors.
 - .6 Salvage: removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
 - .7 Separate Condition: refers to waste sorted into individual types.
 - .8 Source Separation: acts of keeping different types of waste materials separate beginning from first time they became waste.
-

1.3 SUBMITTAL

- .1 Materials Source Separation Program:
 - .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Submit one paper copy and one electronic copy of Materials Separation Program (MSSP) description.

1.4 MATERIALS SOURCE SEPARATION PROGRAM (MSSP)

- .1 Implement MSSP for waste generated on project in compliance with approved methods and as reviewed by the Ministerial Representative.
- .2 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and recyclable materials.
- .3 Provide containers to deposit reusable and recyclable materials.
- .4 Place containers off-site.
- .5 Locate separated materials in areas which minimize material damage.
- .6 Collect, handle, store on-site, and transport off-site, salvaged materials in separate condition.
- .7 Transport to approved and authorized recycling facility.

1.5 WASTE PROCESSING SITES

- .1 The Contractor is responsible in finding the resources in terms of valorizing waste and service providers. Recovered rubbish must be transported to recycling installation approved and/or authorized, or to material recyclers.

1.6 STORAGE, HANDLING AND PROTECTION

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by the Ministerial Representative.
 - .2 Unless specified otherwise, materials for removal become the Contractor's property.
 - .3 Protect, stockpile, store and catalogue salvaged items.
-

- .4 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.
- .5 Protect surface drainage, mechanical and electrical from damage and blockage.
- .6 Separate and store materials produced during dismantling of structures in designated areas.
- .7 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.

1.7 DISPOSAL OF WASTES

- .1 Do not bury rubbish or waste materials.
- .2 Do not dispose of waste 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 Remove materials from deconstruction as deconstruction/disassembly Work progresses.

1.8 USE OF SITE AND FACILITIES

- .1 Execute work with least possible interference or disturbance to normal use of premises.
 - .2 Provide temporary security measures approved by the Ministerial Representative.
 - .3 No storage or containers are allowed on the site.
-

1.9 SCHEDULING

- .1 Co-ordinate Work with other activities at site to ensure timely and orderly progress of Work.

2. Products

Not used.

3. Execution

3.1 GENERALITIES

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

3.2 DIVERSION OF MATERIALS

- .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.

3.3 VALORIZATION OF RUBBISH

- .1 Separate materials from general waste stream and stockpile in separate piles or containers, as reviewed by the Ministerial Representative and consistent with applicable fire regulations.
 - .1 Mark containers or stockpile areas, off-site.
 - .2 Provide instruction on disposal practices.
 - .2 On-site sale of reusable or recyclable material is not permitted.
-

3.4 VALORIZATION OF RUBBISH REPORT

- .1 At the end of the project, prepare a written diversion of materials report indicating the quantity of materials reused, recycled or eliminated as what follows:
 - .1 Indicate the results of the final diversion and measure the reaching of the objectives of the waste reduction plan.
 - .2 Compare the final quantity/percentage of diverted matter with the initial projections of the waste audit and of the waste reduction plan. Explain the discrepancies.
 - .1 Supporting documents
 - .2 Waybills and tracking forms.

END OF SECTION

1. General

1.1 ADMINISTRATIVE REQUIREMENTS

- .1 Acceptance of Work Procedures:
 - .1 Contractor's Inspection: Contractor: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Ministerial Representative in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
 - .2 Request the Ministerial Representative to inspect the work.
 - .2 Ministerial Representative's Inspection:
 - .1 The Ministerial Representative and Contractor to inspect Work and identify defects and deficiencies.
 - .2 The Contractor is to correct Work as directed.
 - .3 Completion Tasks: submit written certificates in English and French that tasks have been performed as follows:
 - .1 Work: completed and inspected for compliance with Contract Documents.
 - .2 Defects: corrected and deficiencies completed.
 - .3 Work: complete and ready for final inspection.
 - .4 Final Inspection:
 - .1 When all of the previously mentioned tasks are done, request final inspection of Work by the Ministerial Representative and the Contractor.
 - .2 When Work incomplete according to Ministerial Representative, complete outstanding items and request re-inspection.

1.2 FINAL CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.
-

- .2 Waste Management: separate waste materials in accordance with Section 01 74 21
- Construction/Demolition Waste Management and Disposal.

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 A copy commented by the Ministerial Representative will be submitted following the end of substantial work.
- .3 Before the final submission of documents, revise their content as required.
- .4 Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.
- .5 Provide evidence, if requested, for type, source and quality of products supplied.
- .6 Defective products will be rejected, regardless of previous inspections. These products will have to be replaced by the Contractor at his own expense.
- .7 Pay the transporting fees.

1.2 FORMAT

- .1 Organize data as instructional manual.
 - .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and pockets. Each will be accompanied with a DVD containing a numerical version (PDF) and an editable version (DOC and XLS) of each of the documents.
 - .3 When multiple binders are used correlate data into related consistent groupings. Clearly identify contents of each binder on spine.
 - .4 Cover: identify each binder with type or printed title 'Project Record Documents' typewritten or in print; list title of project and identify subject matter of contents.
 - .5 Arrange content by 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.
-

1.3 CONTENTS - PROJECT RECORD DOCUMENTS

- .1 Table of Contents for Each Volume: provide title of project;
 - .1 Date of submission;
 - .2 Names.
 - .3 Addresses, and telephone numbers of the Contractor and the Ministerial Representative, with name of responsible parties.
 - .4 A list of products and systems, indexed to content of volume.
- .2 For each product or system:
 - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
 - .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
 - .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
 - .5 Typewritten Text: as required to supplement product data.
 - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.

1.4 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS

- .1 Record information on set of black line opaque drawings, and in copy of Project Manual, provided by the Ministerial Representative.
 - .2 Use felt tip marking pens, maintaining separate colours for each major system, for recording information.
 - .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
 - .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
 - .1 Field changes of dimension and detail.
 - .2 Changes made by change orders.
 - .3 Details not on original Contract Drawings.
-

- .4 References to related shop drawings and modifications.
- .5 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 or change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, and field test records, required by individual specifications sections.

2. Products

Not used.

3. Execution

Not used.

END OF SECTION

1. General

1.1 REFERENCES

- .1 Definitions:
 - .1 Raking: removal of loose/deteriorated mortar to a depth suitable for repointing until sound mortar, and/or four (4) times joint thickness and/or a specified depth is reached.
 - .2 Repointing: filling and finishing of masonry joints from which mortar is missing has been raked out or has been omitted.
 - .3 Low-pressure water cleaning: water soaking of masonry using less than 350 kPa water pressure, measured at nozzle tip of hose.
 - .2 References :
 - .1 CSA International
 - .1 CAN/CSA A23.1/A23.2-F04, Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete.
 - .2 CAN/CSA A179, Mortar and Grout for Unit Masonry.
 - .2 ASTM Standards
 - 1. C207 Standard Specification for hydrated Lime for Masonry Purposes.
 - 2. C270 Standard Specification for Mortar for unit Masonry.
 - 3. C1713 Standard Specification for mortar for the Repair of Historic Masonry.
 - 4. C10 Standard Specification for Natural Cement.
 - .3 L'institut de la Maçonnerie du Québec (IMQ) Documents
 - 1. Travaux de maçonnerie pour les bâtiments.
 - 2. Bulletins techniques No -8R
 - .4 National Research Council Canada (CNRC-NRC)
 - 1. Construction Technology Updates No. 68
-

1.2 EXISTING CONDITIONS

- .1 Identify the structural weaknesses susceptible to cause issues and signal them before the beginning of the works
- .2 Study the profile of the joints and the ways to reproduce them before starting the repointing.
- .3 Examine the vertical and horizontal joints to establish which were done first and if they all have the same profile. Take into account all other details of execution that define the authenticity of the original work.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Provide manufacturer's printed product literature and data sheets and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Samples:
 - .1 Provide labelled samples of materials used on the repointing of the masonry for approval before work commences.
- .4 Test and Evaluation Reports:
 - .1 Provide certified test reports showing compliance with specified performance characteristics and physical properties.
 - .2 Provide laboratory test reports certifying compliance of mortar ingredients with specifications requirements.

1.4 QUALITY ASSURANCE

- .1 Masonry Contractor:
 - .1 Use single Masonry Contractor for masonry work.
 - .2 Masonry contractor to have ten (10) years of experience minimum in historic stone and brick masonry work on projects of similar size and complexity to Work of this Contract.
 - .3 The Masonry Contractor must present three (3) accomplishments in historic stone masonry restoration. These must be of a similar complexity as the one of the present contract and done within the past ten (10) years.
-

- .4 Masonry contractor to have good level of understanding of structural behaviour of masonry walls when masonry work involves replacing or repairing stones and brick which are part of structural masonry work.
- .2 Masons:
 - .1 Masons to have a certificate of qualification and have a minimum of ten [10] years of experience in historic stone brick masonry work.
 - .2 Masons to have proof of license certification for propriety restoration mortars.
- .3 Obtain approval from the Ministerial Representative for changes to qualified personnel.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Delivery and Acceptance Requirements:
 - .1 Deliver materials to site in original factory packaging, labelled with manufacturer's name, address.
 - .2 Store cementitious materials and aggregates in accordance with CAN/CSA A23.1.
 - .3 Store lime putty in plastic lined sealed drums.
 - .4 Keep material dry. Protect from weather, freezing and contamination.
 - .5 Ensure that manufacturer's labels and seals are intact upon delivery.
 - .6 Remove rejected or contaminated material from site.
- .3 Packaging Waste Management: remove for reuse in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.6 AMBIENT CONDITIONS

- .1 The Contractor will have to maintain a work pace in order to work in a mild climate, meaning at a temperature between 10 and 25 degrees Celsius for the entirety of the works.

2. Products

2.1 MOTAR

- .1 Mortar: in accordance with CAN/CSA A179.
- .2 Sand: Fine grained sand granulometry in accordance with Table 1 of the CSA A179.
- .3 Water: Only use drinkable water. Clean and exempt of harmful substances such as oils, acids, salts and organic matter.
- .4 It is strictly forbidden to use any type of additive to modify the setting times, the manoeuvrability, the fluidity or any property of the mortar and of the grout in the plastic or harden state.
- .5 Proportion Specification:
 - .1 In accordance with CAN/CSA A179.
- .6 Property Specification:
 - .1 Refer to Section 04 03 08 - Historic - Mortaring

3. Execution

3.1 SITE VERIFICATION OF CONDITIONS

- .1 Report in writing to the Ministerial Representative areas of deteriorated masonry not previously identified.
- .2 Stop work in that area and report to the Ministerial Representative immediately evidence found of hazardous materials.

3.2 PROTECTION OF IN-PLACE CONDITIONS

- .1 Protection requirements are specified in Section 04 05 00 - Common Work Results for Masonry.

3.3 SPECIAL TECHNIQUES

- .1 Examine mortar joints.
 - .1 Examine horizontal and vertical joints to determine which were struck first and whether they are the same style, as well as aspects of workmanship which establish authenticity of original work.
-

- .2 Replicate the style selected by the Ministerial Representative, which is the present type.
- .3 Test mortar joints.
 - .1 Procedure of testing: examine joints visually for obvious signs of deteriorated masonry.
 - .2 Test joints not visually deteriorated as follows:
 - .1 Test for voids and weakness by using hammers or other approved means. Report to Ministerial Representative if any found.
 - .2 Perform testing in co-operation with Ministerial Representative so that unsound joints can be marked and recorded.

3.4 RAKING JOINTS

- .1 Use manual raking tool to obtain clean masonry surfaces.
- .2 Remove deteriorated and adhered mortar from masonry surfaces to two (2) times the joint thickness leaving square corners and flat surface at back of cut.
- .3 Clean out voids and cavities encountered.
- .4 Remove mortar without chipping, altering or damaging masonry units.
- .5 Clean surfaces of joints with non-ferrous brush without damaging texture of exposed joints or masonry units.
- .6 Flush open joints and voids; clean open joints and voids with low pressure water and if not free draining blow clean with compressed air.
- .7 Leave no standing water.

3.5 REPORTING

- .1 Dampen joints.
 - .2 Keep masonry damp while pointing is being performed.
 - .3 Completely fill joint with mortar.
 - .1 If surface of masonry units has worn rounded edges keep pointing back from surface to keep same width of joint
-

- .2 Avoid feather edges.
- .3 Pack mortar solidly into voids and joints.
- .4 Build-up pointing in layers not exceeding 12 mm in depth.
 - .1 Allow each layer to set before applying subsequent layers.
 - .2 Maintain joint width.
- .5 Tool joints to match existing profile and as directed by the Ministerial Representative.
 - .1 Tool, compact and finish using jointing tool to force mortar into joint.
- .6 Remove excess mortar from masonry face before it sets.

3.6 PROTECTION DURING CURING PROCESS

- .1 Cover completed and partially completed work not enclosed or sheltered at end of each work day.
 - .1 Membranes should extend to 0.5 m over surface area of work and be tightly installed to prevent finished work from drying out too rapidly.
 - .2 Cover with waterproof tarps to prevent weather from eroding recently repointed material.
 - .1 Maintain tarps in place for minimum of two (2) weeks after repointing.
 - .2 Ensure that bottoms of tarps permit airflow to reach mortar in joints.
 - .3 Anchor coverings securely in position.
 - .4 Damp cure:
 - .1 Provide damp cure for pointing mortars.
 - .2 Install and maintain wetted burlap protection during the curing process:
 - .1 Minimum three (3) days.
 - .3 Wet mist burlap only - ensure no direct spray reaches surface of curing mortar.
 - .4 Shade areas of work from direct sunlight and maintain constant dampness of burlap.
 - .5 Protect from drying winds. Pay particular attention at corners of structure.
-

- .6 Maintain ambient temperature of minimum 10 degrees Celsius after repointing masonry for:
 - .1 Minimum seven (7) days in summer.

3.7 CLEANING

- .1 Clean surfaces of mortar droppings, stains and other blemishes resulting from work of this contract as work progresses.
- .2 Remove droppings and splashings using clean sponge and water.
- .3 Do further cleaning using stiff natural bristle brushes after mortar has attained its initial set and has not fully cured.
- .4 Clean masonry with stiff natural bristle brushes and plain water only if mortar has fully cured.
- .5 Clean masonry with low pressure 100 to 310 kPa clean water and soft natural bristle brush.
- .6 Obtain approval of Ministerial Representative prior to using other cleaning methods for persistent stains.
- .7 Waste Management: separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .8 Divert 50% of construction waste from landfill.

3.8 PROTECTION OF COMPLETED WORK

- .1 Protect adjacent finished work against damage which may be caused by on-going work.

END OF SECTION

1. General

1.1 ALTERNATES

- .1 Obtain the Ministerial Representative's approval before changing manufacturer's brands or sources of supply of mortar materials during entire contract or other methods of mixing mortar specified elsewhere in this specification.

1.2 REFERENCES

- .1 CAN/CSA-A179, Mortar and Grout for Unit Masonry.
- .2 CAN/CSA-A3000, Cementitious Materials Compendium (Consists of A3001, A3002, A3003, A3004 and A3005).

1.3 DESIGN/PERFORMANCE REQUIREMENTS

- .1 Mortar compressive strength minimum 3.0 Mpa at 7 days.
- .2 Mortar compressive strength minimum 5.0 Mpa at 28 days.
- .3 Mortar compressive strength to maximum 25% of compressive strength of bonded masonry units.
- .4 Mortar bond strength minimum 0.4 MPa at 28 days.

1.4 SAMPLES

- .1 Provide samples in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide samples in quantity and size in accordance with CAN/CSA-A179.

1.5 TESTING STANDARDS

- .1 Flow and cube strength: to ASTM C 270.
 - .2 Vicat cone test: to ASTM C 780.
 - .3 Cube strength: to CAN/CSA-A179, Appendix B.
 - .4 Flexural bond strength: to ASTM C 1072.
-

1.6 QUALITY ASSURANCE

- .1 Qualifications:
 - .1 Provide and construct mock-ups in accordance with Section 01 45 00 - Quality Control.
 - .2 Submit methods of reproducing existing mortar colour, texture and pointing styles, and samples.
 - .3 Construct mock-up 1000 x 1000 mm
 - .4 The sample will be used:
 - .1 To judge workmanship, substrate preparation, operation of equipment and material application.
 - .2 For testing to determine compliance with performance requirements.
 - .3 Do the work sample at a location indicated by Ministerial Representative.
 - .4 Allow 24 hours for inspection of mock-up before proceeding with work.
 - .5 When accepted, mock-up will demonstrate minimum standard of quality required for this work. Approved mock-up will remain as part of finished work.

1.7 AMBIENT CONDITIONS

- .1 Execute work when ambient temperature is above 0 degrees Celsius. When ambient temperature is below 0 degrees Celsius cover and heat work as directed by Ministerial Representative.
- .2 Prepare and maintain temperature of mortar between 5 degrees Celsius and 50 degrees Celsius until used.

2. Products

2.1 MATERIALS

- .1 Mortar 1 :1 :6 Type N.

2.2 ACCESSOIRES

- .1 Prepare mortars in:
 - .1 A mortar mill comprising mortar pan with adjustable cast iron sprung rollers on cranked roller shaft, steel scrapers and blades.
-

- .2 A spiral paddle mill comprising a mechanically driven rotating barrel with integral internal paddles.
 - .1 To each batch add up to 6 big beach stones to tumble and pound mortar during mixing process.
- .3 Plasterer's metal troughs.
- .4 The Ministerial Representative will have to approve the use of any other device.

2.3 MORTAR MIXES

- .1 Proportion requirements:
 - .1 Obtain written approval of the Ministerial Representative before changing mix proportions. Change mix proportions only as directed by the Ministerial Representative.
- .1 Property requirements:
 - .1 Mixes: as required to achieve specified performance criteria, functionally compatible with adjacent materials and components.

3. Execution

3.1 GENERAL PREPARATIONS

- .1 Special Techniques:
 - .1 Examine horizontal and vertical joints to determine which were struck first and whether they are same style, as well as aspects of workmanship which establish authenticity of original work.
 - .2 Prepare measuring boxes to ensure accurate proportioning of materials.
 - .3 Maintain separate measuring boxes for each component.
 - .4 Ensure sand is tested and volume corrected for bulking.
 - .5 Ensure air entraining agent is available together with a graduated container for accurate volume measurements.
 - .6 Ensure testing equipment is ready and in working order.
-

3.2 CLEANING

- .1 Remove droppings and splashings using clean sponge and water.
- .2 Clean masonry with low pressure, 100 to 310 kPa, clean water and soft natural bristle brush.
- .3 Obtain approval of the Ministerial Representative prior to using other cleaning methods for persistent stains.

3.3 PROTECTION OF COMPLETED WORK

- .1 Cover completed and partially completed work not enclosed or sheltered at end of each work day.
- .2 Enclose and protect work using wetted burlap as directed in, AMBIENT CONDITIONS of this Section.
- .3 Cover with waterproof tarps to prevent weather from eroding recently laid material.
 - .1 Maintain tarps in place for minimum of 2 weeks after laying.
 - .2 Ensure that bottoms of tarps permit airflow to reach mortar in joints.
- .3 Anchor coverings securely in position.

END OF SECTION

1. General

1.1 DESCRIPTION

- .1 The present section applies to general masonry work.
- .2 The structural works are the works concerned by this section. Without being limited by them, these works include:
 - .1 Stabilization works on the façades
 - .2 All masonry work indicated in the structural documents.

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CAN/CSA A179-14, Mortar and Grout for Unit Masonry.
 - .2 CAN/CSA A371-14, Masonry Construction for Buildings.
 - .3 CSA S304-14, Design of Masonry Structures.
- .2 Institut de maçonnerie du Québec
 - .1 Bulletin technique #12 – Joints de mouvement.
 - .2 Bulletin technique #26 – Liste de vérification pour la surveillance de travaux de maçonnerie.

1.3 ACTION SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Samples:
 - .1 Submit samples required in related sections in accordance with Section 01 33 00 – Submittal Procedures.

1.4 INSPECTION OF WORK

- .1 Proceed with the inspection of different components of the masonry works at their reception on the site and submit the inspection reports in accordance with the section 01 61 00 – Common Product Requirements
-

- .2 Proceed to inspection of masonry work at each step of the works and at the end of the masonry works. At each inspection, submit an inspection report including, without limiting itself to, the following information and verifications:
 - .1 The extent of the verified works
 - .2 The level and alignment of vertical joints
 - .3 The continuity of the device
 - .4 The cavity if the walls
 - .5 The seat height
 - .6 The type of joint
 - .7 The width of the joints
 - .8 The gaps in flatness
 - .9 The homogeneity of the work (uniform colour and texture)
 - .10 The junctions of works
 - .11 The cutting works
 - .12 The embedding of items to be incorporated
 - .13 The thickness and uniformity of mortar plastering
 - .14 Horizontal movement joints
 - .15 Vertical movement joints
 - .16 The installation of non-structural lintels
 - .17 The cleaning of the masonry
-

1.5 QUALITY ASSURANCE

- .1 Realize the activities in the following table and submit the required documents:

Prescriptions	Moment (Frequency)	Enregistrement Points d'arrêt/ de surveillance
.1 Work samples,	Before the beginning of the works, in accordance with the requirements of Section 01 33 00 - Submittal Procedures.	Notice to the Ministerial Representative Record the review of the work samples.
.2 Inspections of different components of the masonry works.	At each reception.	Inspection report.
.3 Inspection of the masonry works.	According to the frequency determined with the Ministerial Representative	Inspection reports in accordance with the "le bulletin technique 26 – Liste de vérification pour la surveillance des travaux de maçonnerie de l'IMQ"

1.6 DELIVERY, STORAGE, AND HANDLING

- .1 Delivered materials to site must be dry. Keep materials dry until use except where wetting of bricks is specified.
- .2 Store under waterproof cover on pallets or plank platforms held off ground by means of plank or timber skids.

2. Products

2.1 MATERIALS

- .1 Use materials that are specified in the related Sections:
-

3. Execution

3.1 CONDITIONS OF EXECUTION

- .1 Execution in cold temperature:
 - .1 The Contractor must establish a schedule that avoids any repointing from being done at temperatures below 5 degrees Celsius.
- .2 Execution in warm temperature:
 - .1 Cover the work with a waterproof tarp that does not stain the fresh masonry work in order to avoid the drying rate from being too rapid.
- .3 As long as the masonry work is not completed or protected by flashings or any other permanent construction, they must remain continually dry with the help of waterproof tarps which will not stain the work.

3.2 QUALITY OF EXECUTION

- .1 Do masonry work in accordance with CAN/CSA-A371 except where specified otherwise.
- .2 Build masonry plumb, level, and true to line, with vertical joints in alignment, respecting construction tolerances permitted by CSA-A371.
- .3 Layout coursing and bond to achieve correct coursing heights, and continuity of bond above and below openings, with minimum of cutting.
- .4 Prevent the mortar from falling in the air space of the cavity wall.
- .5 All the minor works that are not written or present and/or not indicated in the plans related to masonry work must be executed in accordance with the common rules and practices of the art in order to obtain a quality and complete result.

3.3 SITE TOLERANCES

- .1 Gap in the thickness of the joints: ± 3 mm.

3.4 APPARENT MASONRY

- .1 Replace chipped, fissured and otherwise damaged elements of apparent masonry work.

3.5 JOINTING

- .1 Concave joints: when concave joints must be made, let the mortar dry enough first in order to eliminate any water surplus and pass a rounded faced brick jointer to obtain smooth joints, compacted and uniformly concave.
- .2 Weathered joint: when weathered joints must be made, let the mortar dry enough first in order to eliminate any water surplus and then work the joints to obtain a 30 degree slope with the wall. Uniformly compact the joint with a flat iron.
- .3 Raked joints: when raked joints must be made, let the mortar dry enough first in order to eliminate any water surplus and then rake the joints with the help of a flat brick jointer to compact the mortar and make joints with a smooth surface and a uniform depth of 6 mm.
- .4 Flush Joints: ensure that the joints of hidden walls or walls destined to receive a coating, tiles, insulating or any other similar material with the exception of paint or an analogous thickness top coating.
- .5 The type of joint to do is the same as the one actually present.

3.6 PROTECTION

- .1 Keep masonry dry using waterproof, non-staining coverings that extend over walls and down sides sufficient to protect walls from wind driven rain, until completed and protected by flashing or other permanent construction.
- .2 Protect the masonry work and the adjacent work against scratches and any type other type of damage. Protect the finished works against mortar splashings. Use non-staining coverings.

END OF SECTION

1. General

1.1 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CAN/CSA A371, Masonry Construction for Buildings.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Provide manufacturer's printed product literature, specifications and datasheets. Include product characteristics, performance criteria, and limitations.
- .3 Shop Drawings:
 - .1 Provide shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Provide drawings stamped and signed by professional engineer registered or licensed in the Province of Quebec, Canada.
- .4 Samples:
 - .1 Provide masonry accessory samples in accordance with Section 01 33 00 - Submittal Procedures, supplemented as follows:
 - .1 Materials: 1 sample. Include:
 - .1 Helical rod
- .5 Quality Assurance Submittals:
 - .1 Test reports: submit certified test reports in accordance with Section 04 05 10 - Common Work Results for Masonry.
 - .2 Certificates: submit in accordance with Section 04 05 10 - Common Work Results for Masonry.

1.3 FIELD MEASUREMENTS

- .1 Make field measurements necessary to ensure proper fit of members.
-

1.4 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, store and handle masonry accessories in accordance with, Section 01 61 00 - Common Product Requirements supplemented as follows:
 - .1 Store packaged materials off ground and in accordance with manufacturer's written instructions.
 - .2 Packaging Waste Management:
 - .1 Separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

2. Products

2.1 MATERIALS

- .1 Mechanical fixation of masonry with the galvanized helical rods.
- .2 Threaded galvanized rods with plates and nuts glued with and adhesive epoxy with strainer.

3. Exécution

3.1 APPLICATION

- .1 Manufacturer's Instructions: comply with manufacturer's written recommendations, including product technical bulletins, handling, storage and installation instructions, and datasheets

3.2 INSTALLATION MATERIALS

- .1 Mechanical fasteners: install fasteners to suit application and in accordance with manufacturer's written installation instructions.

3.3 CLEANING

- .1 Clean in accordance with Section 01 74 11 – Cleaning.
 - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.
- .2 Waste Management: separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

END OF SECTION



Projet : SPAC - 715 Peel - Stabilisation de la maçonnerie / <i>Masonry stabilization</i>		No dossier : M04068C					
Objet : Bordereau de soumission des travaux / <i>Works bid form</i>							
Notes : L'entrepreneur devra indiquer le prix des travaux pour chacune des sections, listées ci-dessous. Chacun de ces prix devra inclure : matériaux, main-d'œuvre, profits, administration et tous les autres frais afférents inclus. <i>The contractor has to indicate the price of the work for each of the sections listed below. Each cost has to include : materials, labor, profits, administration and all other related costs included.</i>							
ITEM ITEM	DESCRIPTION DESCRIPTION	QUANT. APP. APP. QUANT.	UNITÉS UNITY	PRIX UNITAIRE UNIT PRICE	SOUS-TOTAL SUBTOTAL	TOTAL TOTAL	%
1.0 - Travaux / works							
	Fourniture et pose des ancrages Hélicoïdales / <i>Supply and installation of Helical anchors</i>	2600.0	un.				
	Fourniture et pose des ancrages filetés avec plaques / <i>Supply and installation of threaded anchor with plate</i>	400.0	un.				
	Pierres à ancrer - Détail typique C / <i>Stone anchor - Typical detail C</i>	25.0	un.				
	Pierres à ancrer - Détail typique D / <i>Stone anchor - Typical detail D</i>	25.0	un.				
	Rejointement / <i>Repointing</i>	400.0	ml.				
2.0 - Débours / Outlay							
	Échafaudage et équipements de levage / <i>Scaffolding and lifting equipment</i>	1.0	ens.	N/A			
	Conteneur / <i>Container</i>	1.0	ens.	N/A			
	Permis d'occupation de la rue / <i>Street occupation permit</i>	1.0	ens.	N/A			
	Signaleur / <i>Signalman</i>	1.0	ens.	N/A			
	Protection piétonnière / <i>Pedestrian protection</i>	1.0	ens.	N/A			
	Conditions générales / <i>Terms and conditions</i>	1.0	ens.	N/A			
	Administration / <i>Administration</i>	1.0	ens.	N/A			
TOTAL :							