

**CARLETON PLACE ARENA  
ADDITION AND RENOVATIONS**  
75 Neelin Street, Carleton Place, Ontario

**SPECIFICATIONS**

11 June 2020  
Tender No. RC01-2020

**LARRY GAINES ARCHITECT**  
Email: [gaines@bellnet.ca](mailto:gaines@bellnet.ca)

<b>OWNER:</b>	<b>Town of Carleton Place</b> 175 Bridge Street Carleton Place, Ontario, K7C 2V8	Contact: Diane Smithson Chief Administrative Officer Tel: (613) 257-6255 Fax: (613) 257-8170 Email: <a href="mailto:dsmithson@carletonplace.ca">dsmithson@carletonplace.ca</a>
<b>BUILDING USER:</b>	<b>Carleton Place Recreation</b> 75 Neelin Street Carleton Place, Ontario, K7C 0C1	Contact: Joanne Henderson Manager of Recreation and Culture Tel: (613) 257-1690 Email: <a href="mailto:jhenderson@carletonplace.ca">jhenderson@carletonplace.ca</a>
<b>ARCHITECT:</b>	<b>Larry Gaines Architect</b> 14 Bridge Street Almonte, Ontario, K0A 1A0	Contact: Larry Gaines Tel: (613) 256-3630 Email: <a href="mailto:gaines@bellnet.ca">gaines@bellnet.ca</a>
<b>STRUCTURAL ENGINEER:</b>	<b>Eastern Engineering Group</b> 100 Strowger Blvd., Suite 207 Brockville ON K6V 5J9	Contact: Brandon Campbell Tel: (613) 345-0400
<b>MECHANICAL AND ELECTRICAL ENGINEER:</b>	<b>Morris Engineering</b> 68 William Street, Suite 200 Brockville, ON K6V 4V5	Contact: M.A. Morris Tel: (613) 499-2077
<b>CIVIL ENGINEER:</b>	<b>Town of Carleton Place</b> 175 Bridge Street Carleton Place, ON K7C 2V8	Contact: Robin Daigle Engineer Tel: (613) 257-6255 Fax: (613) 257-8170 Email: <a href="mailto:rdaigle@carletonplace.ca">rdaigle@carletonplace.ca</a>

**END OF SECTION**

<i>Section No.</i>	<i>Section Title</i>	<i>No. of Pages</i>
<b>DIVISION 00</b>	<b>PROCUREMENT AND CONTRACTING REQUIREMENTS</b>	
00 01 06	Project Directory	1
00 01 10	Table of Contents	1
00 01 15	List of Drawings and Documents	2
00 21 13	Instructions to Bidders	7
00 41 13	Stipulated Price Bid Form	3
00 43 22	Supplement to Bid: Unit Prices	1
00 43 36	Supplement to Bid: Proposed Subcontractors	2
00 50 00	Form of Contract and Supplementary Forms	1
00 73 00	Supplementary Conditions to CCDC 2	9
<b>DIVISION 01</b>	<b>GENERAL REQUIREMENTS</b>	
01 21 13	Allowances	1
01 25 00	Substitution Procedures	3
01 31 13	Project Coordination	2
01 31 19	Project Meetings	3
01 32 16	Construction Progress Schedule	1
01 33 00	Submittal Procedures	3
01 35 29	Health and Safety Requirements	3
01 35 43	Environmental Protection	2
01 41 00	Regulatory Requirements	1
01 45 00	Quality Control	3
01 50 00	Temporary Facilities and Controls	4
01 60 00	Product Requirements	3
01 71 12	Examination and Preparation	2
01 73 00	Execution	3
01 74 13	Progress and Final Cleaning	2
01 74 21	Waste Management and Disposal	1
01 75 16	Start-Up Procedures	2
01 77 00	Contract Closeout Procedures	2
01 78 00	Closeout Submittals	3
01 78 36	Warranties	2
01 79 00	Demonstration and Training	1
<b>DIVISION 02</b>	<b>EXISTING CONDITIONS</b>	
02 41 16	Selective Building Demolition	3

Section 00 01 15  
**LIST OF DRAWINGS AND DOCUMENTS**

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<b>ARCHITECTURAL:</b>	A0	COVER SHEET	
	A1	ASSEMBLIES & SCHEDULES	
	A2	DEMOLITION GROUND FLOOR PLAN	
	A2a	DEMOLITION GROUND FLOOR REFLECTED CEILING PLAN	
	A3	DEMOLITION GROUND FLOOR PLAN	
	A4	PROPOSED GROUND FLOOR PLAN	
	A5	PROPOSED SECOND FLOOR PLAN	
	A6	PROPOSED ELEVATIONS & BUILDING SECTIONS	
	A7	WALL SECTION DETAILS	
	A8	BARRIER FREE PLANS & INTERIOR ELEVATIONS	
A9	MILLWORK DETAILS		
<b>STRUCTURAL:</b>	F1	FOUNDATION PLAN & DETAILS	
	F2	FOUNDATION DETAILS	
	S0	STRUCTURAL NOTES	
	S1	STRUCTURAL FLOOR PLAN ROOF FRAMING PLAN	
	S1A	INTERIOR BEAM AND CONUMNS PLAN & DETAILS	
	S2	STRUCTURAL DETAILS	
	S3	WALL ELEVATIONS & SECTIONS	
	S4	GRID LINE A WALL ELEVATIONS	
	S5	GRID LINE B WALL ELEVATIONS	
	S6	WALL ELEVATIONS SECOND FLOOR PLAN & SECTIONS	
	<b>MECHANICAL:</b>	M001	MECHANICAL, NOTES & LEGENDS
		M002	MECHANICAL, SCHEDULES & DETAILS
		M100	MECHANICAL, GROUND FLOOR PLAN, DEMOLITION
M101		MECHANICAL, PLUMBING, PROPOSED GROUND FLOOR PLAN	
M102		MECHANICAL, HVAC, PROPOSED GROUND FLOOR PLAN	
M103		MECHANICAL, PLUMBING & HAVAC, PROPOSED SECOND FLOOR PLAN	
<b>ELECTRICAL:</b>		E001	ELECTRICAL, NOTES & LEGENDS
	E002	ELECTRICAL, SCHEDULES PANELS & DETAILS	
	E100	ELECTRICAL, GROUND FLOOR PLAN DEMOLITION	
	E101	ELECTRICAL, SECOND FLOOR PLAN DEMOLITION	
	E102	ELECTRICAL, PROPOSED GROUND FLOOR PLAN	
	E103	ELECTRICAL, PROPOSED SECOND FLOOR PLAN	

**LIST OF DRAWINGS AND DOCUMENTS**

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<b>CIVIL</b>	R-1 SG-1	REMOVALS PLAN GRADING & SERVICING PLAN
<b>OTHER:</b>	1. 2.	GEOTECHNICAL REPORT BY HOULE CHEVRIER DESIGNATED SUBSTANCES REPORT BY CM3

**END OF SECTION**

## 1 INVITATION

### .1 Bid Call

- .1 Offers signed under seal, executed on the forms provided, and dated will be received by the Owner, The Town of Carleton Place, at the Carleton Place Town Hall, 175 Bridge Street, Carleton Place, Ontario, K2C 2V8 on or before 2:00 p.m. on Tuesday, the 7th day of July, 2020.
- .2 Submit the required supplementary bid information on the Supplement to Bid forms provided within the times stipulated on the respective forms.
- .3 Offer submitted after the above time will not be considered.
- .4 Due to COVID-19, offers should be sent electronically to Diane Smithson, Chief Administrative Officer by email only [dsmithson@carletonplace.ca](mailto:dsmithson@carletonplace.ca) by the closing date and time.
- .5 There will be no public opening due to COVID-19. Bids will be opened and a final pricing summary emailed to bidders within 24 hours of tender closing.
- .6 Amendments to the submitted offer will be permitted only if received in writing prior to bid closing and if endorsed by the same party or parties who signed and sealed the offer.

## 2 INTENT

- .1 The intent of this bid call is to obtain an offer to perform work to construct a two-storey addition and renovations to the existing Carleton Place Arena at 75 Neelin Street, Carleton Place, Ontario, for a Stipulated Price, in accordance with the Contract Documents.
- .2 The work is to be performed in two (2) phases to allow the Arena and the lobby area to be utilized during the 2020-2021 ice season (September 2020 – March 31, 2021):  
Phase 1 – Addition and Second Floor Renovations  
Phase 2 – Ground Floor Renovations  
By the timing noted below, the intent is that the successful Bidder will move from the completion of Phase 1 to commencing Phase 2.
- .3 Initiate the Work within thirty days of receipt of notice of Contract award and achieve Substantial Performance of the Work for Phase 1 – Addition and Second Floor Renovations by no later than 15 March, 2021 and for Phase 2 – Ground Floor Renovations by 31 July, 2021.
- .4 The lowest or any price shall not necessarily be accepted.

## 3 CONTRACT DOCUMENTS IDENTIFICATION

- .1 The Contract Documents are identified as:

**Carleton Place Arena  
Addition and Renovations  
Tender No. RC01-2020**

prepared by Larry Gaines Architect and the sub-consultants listed in Document 00 01 06 "Project Directory". The Contract Documents are listed in:

Document 00 01 10 "Table of Contents", and  
Document 00 01 15 "List of Drawings"

#### **4 CONTRACT/BID DOCUMENTS**

.1 Definitions:

- .1 Contract Documents: Defined in the CCDC 2-2008, Definitions.
- .2 Bid Documents:
  - .1 Contract Documents.
  - .2 Document 00 21 13 "Instructions to Bidders".
  - .3 Document 00 31 30 "Information Available to Bidders".
  - .4 Document 00 41 13 "Stipulated Price Bid Form".
  - .5 Document 00 43 36 "Supplement to Bid: Proposed Subcontractors" (to be provided within 24 hours of being notified of contract award).
  - .6 Document 00 50 00 "Form of Contract, Bonds and Declarations"
  - .7 Document 00 73 00 "Supplementary Conditions to CCDC 2.
- .3 Bid: Act of submitting an offer under seal.
- .4 Bid Price: Monetary sum identified in the Bid Form as an offer to perform the Work.

.2 Availability:

- .1 Bid Documents are made available only for the purpose of obtaining offers for this project. Their use does not confer a license or grant for other purposes.

.3 Examination:

- .1 Upon receipt of Bid Documents verify documents are complete. Verify that all the listed drawings and all pages of each specification section are included. Should the documents be incomplete, notify the Consultant immediately.
- .2 Immediately notify the Consultant upon finding discrepancies or omissions in the Bid Documents.

.4 Queries/Addenda:

- .1 Inquiries shall be made only by General Contractors bidding this project. Subcontractors shall make contact only through one of these General Contractors.
- .2 Direct questions to:

**Larry Gaines, Architect**  
**E-mail Only: [gaines@bellnet.ca](mailto:gaines@bellnet.ca)**

- .3 Addenda may be issued during the bidding period. All addenda become part of the Contract Documents. Include costs in the Bid Price.
- .4 Verbal answers are only binding when confirmed by written addenda.
- .5 Clarifications requested by Bidders must be in writing not less than two (2) working days before date set for receipt of bids. Where time permits, the reply will be issued in the form of an addendum, copies of which will be made available to Bidders electronically on the MERX

site.

Section 00 21 13  
**INSTRUCTIONS TO BIDDERS**

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.5 Product / System Options

- .1 Where the bid Documents stipulate a particular product, alternatives will be considered by the Consultant up to four (4) business days before receipt of bids.
- .2 When a request to substitute a product is made, a Consultant may approve the substitution and will issue an Addendum which shall be posted on the MERX site.
- .3 In submission of alternatives to products specified, bidders shall include in their bid, any changes required in the work to accommodate such alternatives. A later claim by the bidder for an addition to the contract price because of changes in work necessitated by use of alternatives shall not be considered.
- .4 The submission shall provide sufficient information to enable the Consultant to determine acceptability of such products.
- .5 Provide complete information on required revisions to other work to accommodate each alternative, the dollar amount of additions to or reductions from the Bid Price, including revisions to other work.
- .6 Unless alternatives are submitted in this manner and subsequently accepted, provide products as specified.

**5 SITE ASSESSMENT AND DOCUMENT EXAMINATION**

- .1 Visit the project site and surrounding area to become fully informed of all the existing conditions, limitations and difficulties which may arise before submitting a bid. Schedule all site visits with Joanne Henderson at 613-257-1690 ext. 6301. Before attending the site visit, carefully examine the Bid Documents to establish the extent of the Work.
- .2 Include in the bid the cost of all labour, materials, equipment and services required to complete the Work. Failure by the Contractor to become fully acquainted with existing conditions under which the Work is to be performed will not be justification for additional compensation.

**6 INTERPRETATION OF BID DOCUMENTS**

- .1 The intent of the Contract Documents is to include the labour, products, services necessary for the performance of the Work by the Contractor in accordance with these documents. It is not intended, however, that the Contractor shall supply products or perform work not consistent with, not covered by, or not properly inferable from the Contract Documents.
- .2 Nothing contained in the Contract Documents shall create any contractual relationship between:
  - .1 The Owner and a Subcontractor, a Supplier, or their agent, employee, or other person performing any of the Work.
  - .2 The Consultant and the Contractor, a Subcontractor, a Supplier, or their agent, employee, or other person performing any of the Work.



- .3 The Contract Documents are complementary, and what is required by any one document shall be as binding as if required by all.
- .4 The sequence and numbering of the drawings and details are established for the convenient ordering of information. It must not be assumed that such ordering of information is intended to define or limit the scope or extent of the work of any particular Subcontractor or Supplier. The drawings and the detail contained therein, as a whole, must be fully read, in detail, to determine the extent of any portion of the work. It is the responsibility of the Contractor to coordinate Subcontractor and supplier prices such that the stipulated Bid Price is all-inclusive, as specified herein.
- .5 Words and abbreviations which have well known technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.
- .6 References in the Contract Documents to the singular shall be considered to include the plural as the context requires.
- .7 If there is a conflict within Contract Documents, the order of priority of documents shall be in accordance with Article 1.1.7 of GC 1.1 of CCDC 2.
- .8 Discrepancies, omissions, ambiguities or conflicts:
  - .1 It shall be assumed that the Bidder has investigated and is fully informed as to the terms and conditions of the Contract Documents.
  - .2 If discrepancies, omissions, ambiguities or conflicts in or among the Contract Documents are discovered, the Bidder shall inform the Consultant in writing prior to submitting a bid.
  - .3 If any discrepancies, omissions, ambiguities or conflicts, which are known to the Bidder prior to bid submission, are not identified and brought to the attention of the Consultant before bid closing , it shall be assumed that the Bidder has accepted the terms and conditions of the Contract Documents as final, legally binding on the Contractor and at no cost to the Owner.
  - .4 The foregoing is not intended to require the Contractor to provide work which is not indicated, or reasonably inferable from the Contract Documents. It is intended to eliminate any future claims for change orders due to discrepancies, omissions, ambiguities or conflicts in or among the Bid Documents, which were known to the Bidder at the time of the bid submission but not brought to the attention of the Consultant.

## **7 SUBSTITUTIONS**

- .1 Refer to Section 01 25 00 "Substitution Procedures".

## **8 QUALIFICATIONS**

- .1 Subcontractors:
  - .1 The Owner reserves right to reject a proposed Subcontractor for reasonable cause.
  - .2 Refer to CCDC 2 Article GC 3.7 of the General Conditions.

## **9 BID SUBMISSION**

- .1 Bid Ineligibility:
  - .1 Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind may, at the Owner's discretion, be declared informal.
  - .2 Bids with Bid Forms and enclosures which are improperly prepared may, at the Owner's discretion, be declared informal.
  - .3 Bids that fail to include bonding or insurance requirements may, at the Owner's discretion, be declared informal.
  
- .2 Submissions:
  - .1 Bidders shall be solely responsible for delivery of their bids in the manner and time prescribed.
  - .2 Submit one copy of the executed offer on the Bid Forms provided, signed and with a corporate seal, in a sealed opaque envelope, clearly identified on the outside with Bidder's name, the project name and the Owner's name.
  
  - .3 Improperly completed information, irregularities in the security deposit or bid bond, may be cause to declare the bid informal.

## **10 BID ENCLOSURES/REQUIREMENTS**

- .1 Bid Security:
  - .1 Bids shall be accompanied by a security deposit in the form of a bid bond for an amount not less than 10 percent of the Bid Price. The bid bond shall be properly executed by a Bonding or an Assurance Company acceptable to the Owner.
  - .2 Endorse the bid bond in the name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.
  - .3 Use latest edition of CCDC approved bond forms.
  - .4 The security deposit will be returned after delivery to the Owner of the required Performance and Labour and Material Payment Bonds by the accepted Bidder.
  - .5 If no contract is awarded, all security deposits will be returned.
  
- .2 Consent of Surety (Agreement to Bond):
  - .1 Submit with the Stipulated Price Bid Form, a "Consent of Surety", stating that a bonding or an assurance company acceptable to the Owner, is willing to supply the Performance and Labour and Material Payment Bond required.
  
- .3 Performance Assurance:
  - .1 The accepted Bidder shall provide a 100% Performance and a 50% Labour and Materials Payment Bond in accordance with Article 11.2 of the General Conditions of the Contract CCDC 2.
  - .2 Include the cost of bonds I the Bid Price.

- .4 Insurance: Provide signed "Undertaking of Insurance" on the standard form provided by the insurance company, stating the intention to provide insurance to the Bidder in accordance with the insurance requirements of the Contract Documents.
- .5 Construction Time Requirements: The Bidder acknowledges by submission of a bid, that, if awarded the Contract, he/she will complete the Work within the time stipulated herein.
- .6 Bid Signing:
  - .1 The Bid Form shall be signed under seal by the Bidder.
  - .2 Sole Proprietorship : Signature of the sole proprietor in the presence of a witness who shall also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
  - .3 Partnership : Signature of all partners in the presence of a witness who will also sign. Insert the word 'Partner' under each signature. Affix seal to each signature.
  - .4 Limited Company : Signature of duly authorized signing officer(s) in normal signatures. Insert the capacity in which the signing officer acts under each signature. Affix the corporate seal. If the bid is signed by officials other than the President and Secretary of the company, or President-Secretary-Treasurer of the company, include with the bid, in the bid envelope, a copy of the by-law resolution of the Board of Directors authorizing them to do so.
  - .5 Joint Venture : Each party of a joint venture must execute the bid under the respective seal in the manner appropriate to such party as described above, similar to the requirements of a Partnership.
- .7 Supplements to the Bid: Submit the following Supplements to the Bid with the bid:
  - .1 Section 00 43 22 "Supplement to Bid: Unit Prices": Include unit prices form including the units rates identified in this supplement.
  - .2 Section 00 43 36 "Supplement to Bid: Proposed Subcontractors": Include the names of all Subcontractors to be employed for the portions of the Work identified in this supplement. This form is to be provided within 24 hours of being notified of contract award.
- .8 Additional Supplementary Bid Information: Selected Bidders may be requested to submit the following supplementary bid information, prior to Contract Award:
  - .1 Preliminary Construction Schedule.
  - .2 Breakdown of the Bid Price.
  - .3 Selected Unit Prices.

## **11 OFFER ACCEPTANCE/REJECTION**

- .1 Duration of Offer:
  - .1 Bids shall remain open to acceptance, and irrevocable for a period of 60 days after the bid closing date.

- .2 Acceptance of Offer:
  - .1 The Owner reserves the right to accept or reject any or all offers.
  - .2 After acceptance by the Owner, a letter of acceptance will be issued to the successful Bidder.
  - .3 After a bid has been accepted, the submitted bid securities will be returned to the unsuccessful Bidders.

## **12 PERMITS AND FEES**

- .1 The Owner will obtain the Building Permit. The cost of the Building Permit will be paid by the Owner.
- .2 The Contractor shall and pay for all other permits, licences, or certificates necessary for the performance of the Work.

## **13 TAXES**

- .1 Include in the Bid Price for cost of all applicable Federal, Provincial and Municipal taxes, except Harmonized Sales Tax (HST). Include an estimate of the HST in the space provided on the Bid Form.

## **14 STAFFING**

- .1 Prior to construction, submit the names and curriculum vitae of the Superintendent and Project Manager to be assigned to the Project.
- .2 The Owner reserves the right to reject a proposed Superintendent or Project Manager if that person's qualifications and/or experience are deemed to be insufficient for the proper discharge of his/her duties.

**END OF SECTION**

**SUBMITTED BY**

\_\_\_\_\_ *(Name of Company)*

\_\_\_\_\_ *(Street Address)*

\_\_\_\_\_ *(City/Town, Province and Postal Code)*

**1 BID TO: Carleton Place Town Hall  
175 Bridge Street  
Carleton Place, Ontario  
K7C 2V8**

**Attention: Chief Administrative Officer**

**2 BID**

.1 I/we, having examined the site and conditions prevailing, agree, for the following Stipulated Sum, to supply all necessary labour, materials, plant, equipment and services for the execution and completion of the Work in accordance with the Contract Documents, including all addenda thereto which are acknowledged hereinafter, for the construction of:

**A NEW ADDITION AND RENOVATIONS TO THE EXISTING  
CARLETON PLACE ARENA AT 75 NEELIN STREET,  
CARLETON PLACE, ONTARIO, K7C 0C1**

for the all-inclusive sum, not including HST, of

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_) in lawful Money of Canada.

.2 The amount of the Ontario Harmonized Sales Tax (HST) applicable to my/our all-inclusive Bid Price is

\_\_\_\_\_ Dollars (\$ \_\_\_\_\_) in lawful Money of Canada.

**3 COMPLETION DATE**

- .1 Subject to receipt within 60 days of instructions to proceed with the Work, I/we agree to achieve substantial performance of the Work for Phase 1 – Addition and Second Floor Renovations by no later than 15 March, 2021 and for Phase 2 – Ground Floor Renovations by 31 July, 2021.

**4 SECURITY DEPOSIT**

- .1 I/we enclose herewith a bid bond in an amount of not less than 10% of the amount of this Bid, payable to the Owner.

**5 BID SURETY**

- .1 I/we enclose herewith a letter from a Surety Company, certifying that I/we can obtain the Labour and Materials Payment Bonds required by the Bid Documents, if successful in obtaining the Contract.

**6 ADDENDA**

- .1 I/we hereby acknowledge receipt of the following addenda issued to me/us during the bidding period:

No. \_\_\_ Dated \_\_\_\_\_ No. \_\_\_ Dated \_\_\_\_\_ No. \_\_\_ Dated \_\_\_\_\_

No. \_\_\_ Dated \_\_\_\_\_ No. \_\_\_ Dated \_\_\_\_\_ No. \_\_\_ Dated \_\_\_\_\_

**7 SUPPLEMENTS TO BID**

- .1 I/we will provide the following within 24 hours of being notified of contract award, the following supplements:
  - .1 Section 00 43 36 "Supplement to Bid: Proposed Subcontractors".
- .2 I/we agree that, if requested, I/we will provide, within twenty-four (24) hours after Bid Closing, such additional supplementary bid information as the Owner may request. I/we further agree that this information will form an integral part of this Bid.



**SUBMISSION**

- .1 The Bidder shall complete and submit this list with the Bid.

**1 UNIT PRICES**

- .1 The following are the Unit Prices I/we propose for the Units of Work described below. I/we agree that these Unit Prices will be used for adjustments to the Contract Price for any additions to or deletions from the Work.
- .2 These Unit Prices are all-inclusive of labour, materials, equipment, services, fabrication and installation, overhead and profit, applicable taxes and all other related charges, regardless of weather conditions or quantity.

ITEM DESCRIPTION	UNIT OF WORK	UNIT OF MEASUREMENT	UNIT PRICE (\$)
EXCAVATION	Rock Removal and Disposal off Site	≥ 10 Cubic Metres	\$200.00 / cu m
	Rock Removal and Disposal off Site	< 10 metres	\$400 / cu m
ASPHALT	HI3 Surface Course Asphalt Estimated 45 Tonnes	Tonnes	\$ Per Tonne
	HL8 Base Course Asphalt Estimated 56 Tonnes	Tonnes	\$ Per Tonne
	Preparation of Granular Base for Asphalt – Estimated at 400 m <sup>2</sup>	Square Metres	\$ Per m <sup>2</sup>
SIDEWALK	Installation of New Sidewalk Estimated at 100 m <sup>2</sup>	Square Metres	\$ Per m <sup>2</sup>

**Note:** For scope of work related to excavation, please refer to Geotechnical report by Houle Chevrier Engineering dated May 17, 2017 a copy of which can be obtained from Joanne Henderson by email at [jhenderson@carletonplace.ca](mailto:jhenderson@carletonplace.ca)

Bidder \_\_\_\_\_

Signature \_\_\_\_\_

**END OF SECTION**



**SUPPLEMENT TO BID: PROPOSED SUBCONTRACTORS**

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**1 SUBMISSION**

- .1 The Contractor shall complete and submit this list within 24 hours of being notified of contract award.
- .2 Where work is to be executed by the Contractor's own forces, so indicate.

**2 PRINCIPAL SUBCONTRACTORS**

- .1 The following is a list of the principal subcontractors I/we propose to use. I/we have worked with these subcontractors and/or have verified their credentials and are satisfied that they can fully meet the requirements of the contract documents.
- .2 I/we have carefully checked the Specifications and Addenda and have included, thereafter, only those Subcontractors, suppliers or items who/which are permitted in the Specification or Addenda:

Selective Demolition \_\_\_\_\_

Cast-in-Place Concrete \_\_\_\_\_

Brick Masonry \_\_\_\_\_

Rough Carpentry \_\_\_\_\_

Finish Carpentry \_\_\_\_\_

Melamine Board Casework \_\_\_\_\_

Self-Adhered Sheet Waterproofing \_\_\_\_\_

Aluminum Fascias, Soffits and Flashings \_\_\_\_\_

Steel Door Frames \_\_\_\_\_

Aluminum Doors and Frames \_\_\_\_\_

Integrated Composite Door/Frame Assembly \_\_\_\_\_

Door Hardware \_\_\_\_\_

Gypsum Board Assemblies \_\_\_\_\_

Resilient Tile Flooring \_\_\_\_\_

Painting \_\_\_\_\_

**SUPPLEMENT TO BID: PROPOSED SUBCONTRACTORS**

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Mechanical:

Plumbing \_\_\_\_\_

HVAC \_\_\_\_\_

Electrical \_\_\_\_\_

Bidder \_\_\_\_\_

Signature \_\_\_\_\_

**END OF DOCUMENT**

**FORM OF CONTRACT AND SUPPLEMENTARY FORMS**

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**1 FORM OF CONTRACT**

- .1 The Form of Contract, including the Agreement, Definitions, and General Conditions is the Standard Construction Document, CCDC 2-2008 - Stipulated Price Contract.
- .2 The Definitions forming part of CCDC 2 in Document 00 73 00 are hereby made a part of these Documents to the same extent as if bound herein.
- .3 The General Conditions of CCDC 2-2008, Articles GC 1.1 to GC 12.3, inclusive and the Supplementary Conditions in Section 00 73 00 shall govern the work of the Contract.
- .4 The insurance requirements for this Contract shall be in accordance with CCDC 41 - CCDC Insurance Requirements which is included with CCDC 2.

**2 DISPUTE RESOLUTION**

- .1 Mediation and arbitration of disputes between the Contractor and the Owner shall be conducted in accordance with the Standard Construction Document, CCDC 40-2018 - Rules for Mediation and Arbitration of Construction Industry Disputes.

**3 BONDS**

- .1 The form of the Bid Bond that Tenderers are required to submit with their Tender is CCDC 220-2002 - Bid Bond.
- .2 The form of the Bonds that the successful Tenderer will be required to submit after the award of Contract are:
  - .1 CCDC 221-2002 - Performance Bond
  - .2 CCDC 222-2002 - Labour and Material Payment Bond

**4 STATUTORY DECLARATIONS**

- .1 The Statutory Declarations that the Contractor will be required to submit with all progress payment billing submissions during the duration of the Work, except the first submission, are:
  - .1 CCDC 9A-2018 - Statutory Declaration of Progress Payment Distribution by Contractor.
  - .2 CCDC 9B-2018 - Statutory Declaration of Progress Payment Distribution by Subcontractor.

**5 CCDC DOCUMENT AVAILABILITY**

- .1 The CCDC Documents referred to herein were prepared by The Canadian Construction Documents Committee and can be obtained from:

Construction Specifications Canada  
Phone: (416) 777-2198  
E-mail: [www.csc-dcc.ca](http://www.csc-dcc.ca)

**END OF SECTION**

**Part 1 General**

**.1 GENERAL**

- .1 These Supplementary Conditions shall apply to the Work of this project.
- .2 They shall be read in conjunction with the General Conditions of the Stipulated Price Contract CCDC 2 (2008).

**Part 2 Agreement**

**.1 ARTICLE A-3 CONTRACT DOCUMENTS**

*.1 Add:*

- \* The Specifications listed in Document 00 01 10 - Table of Contents
- \* The Drawings listed in Document 00 01 15 - List of Drawings
- \* Addenda issued during the bidding period

**.2 ARTICLE A-5 PAYMENT**

- .1 *Amend 5.1 to read: ".... subject to a holdback of ten percent (10%), the Owner shall ....."*

**.3 ARTICLE A-7 LANGUAGE OF THE CONTRACT**

- .1 *Amend 7.1 to read: " ....the English language shall prevail."*

**.4 NEW ARTICLE A-9 EXECUTION OF AGREEMENT**

.1 *Add new Article:*

"ARTICLE A-9 EXECUTION

9.1 This agreement shall be executed in triplicate by both parties."

**Part 3 Definitions**

**.1 DEFINITIONS 4 AND 12:**

.1 *Add to Definition 4:* "... The *Consultant* is Larry Gaines, Architect. Wherever in the specifications or on the drawings, the word "Engineer", "Architect", or "Consultant" is used, it shall mean the *Consultant* as defined above."

.2 *Add to Definition 4:* "... The *Owner* or *Owners* means The Town of Carleton Place.

**.2 NEW DEFINITIONS**

.1 *Add Definition 10a:*

**"10a. Furnish/Supply**

*Furnish or supply* means procure or fabricate materials, equipment or components, or perform services to the extent indicated. Where used with respect to materials, equipment or components, the term shall include delivery to the *Place of Work* but is not intended to include the installation of the item, either temporary or final.

.2 *Add Definition 10b:*

**"10b. Install**

*Install* means place materials, including fastenings and adhesives, equipment or components, including the receiving, unloading, transporting, storage, uncrating and installing, and the performance of such testing and final work as is compatible with the degree of installation specified."

.3 *Add Definition 19a:*

**"19a. Submittals**

*Submittals* are documents or items required by the *Contract Documents* to be provided by the *Contractor*, such as:

- *Shop Drawings*, samples, models, mock-ups to indicate details or characteristics, before the portion of the *Work* that they represent can be incorporated into the *Work*; and
- As-built drawings and manuals to provide instructions to the operation and maintenance of the *Work*.

**Part 4 The General Conditions of the Stipulated Price Contract**

**.1 GENERAL**

- .1 Where a General Condition or paragraph of the General Conditions of the Stipulated Price Contract is deleted by these Supplementary Conditions, the numbering of the remaining General Conditions or paragraphs shall remain unchanged, and the numbering of the deleted item will be retained, unused.

**.2 GC 1.1 CONTRACT DOCUMENTS**

- .1 *Add to the end of subparagraph 1.1.2.2:*

"..... except where the *Consultant* shall be indemnified as a third-party beneficiary as provided in subparagraphs 9.2.7.4, 9.5.3.4 and in 12.1.3."

- .2 *Add new subparagraph 1.1.7.5:*

"1.1.7.5 In case of discrepancies, noted materials and annotations shall take precedence over graphic indications in the *Contract Documents*."

**.3 GC 2.2 ROLE OF THE CONSULTANT**

- .1 *In paragraph 2.2.9, add at the end: "...The Owner and the Contractor shall waive any claims against the Consultant arising out of the making of such interpretations and findings in accordance with paragraphs 2.2.7., 2.2.8. and 2.2.9".*
- .2 *In paragraph 2.2.14, delete the comma after the word "....submittals...." and add the words "....which are provided...." before the words "....in accordance...."*

**.4 GC 2.4 DEFECTIVE WORK**

- .1 *Add new subparagraphs 2.4.1.1 and 2.4.1.2:*

2.4.1.1 The *Contractor* shall rectify, in a manner acceptable to the *Owner* and the *Consultant*, all defective work and deficiencies throughout the *Work*, whether or not they are specifically identified by the *Consultant*.

2.4.1.2 The *Contractor* shall prioritize the correction of any defective work which, in the sole discretion of the *Owner*, adversely affects the day to day operation of the *Owner*.

**.5 GC 3.1 CONTROL OF THE WORK**

**.1 Add new paragraph 3.1.3:**

"3.1.3 Prior to commencing individual procurement, fabrication and construction activities, the *Contractor* shall verify, at the *Place of the Work*, all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the *Work* and shall further carefully compare such field measurements and conditions with the requirements of the *Contract Documents*. Where dimensions are not included or exact locations are not apparent, the *Contractor* shall immediately notify the *Consultant* in writing by email and obtain written instructions by email from the *Consultant* before proceeding with any part of the affected work."

**.6 GC 3.4 DOCUMENT REVIEW**

**.1 Delete paragraph 3.4.1 in its entirety and substitute new paragraph 3.4.1:**

"3.4.1 The *Contractor* shall review the *Contract Documents* and shall report promptly to the *Consultant* any error, inconsistency or omission the *Contractor* may discover. Such review by the *Contractor* shall comply with the standard of care described in paragraph 3.14.1 of the *Contract*. Except for its obligation to make such review and report the result, the *Contractor* does not assume any responsibility to the *Owner* or to the *Consultant* for the accuracy of the *Contract Documents*. The *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the *Contract Documents*, which the *Contractor* could not reasonably have discovered. If the *Contractor* does discover any error, inconsistency or omission in the *Contract Documents*, the *Contractor* shall not proceed with the work affected until the *Contractor* has received corrected or missing information from the *Consultant*."

**.7 GC 3.8 LABOUR AND PRODUCTS**

**.1 Add new paragraph 3.8.4:**

"3.8.4 The *Contractor* is responsible for the safe on-site storage of *Products* and their protection (including *Products* supplied by the *Owner* and other contractors to be installed under the *Contract*) in such ways as to avoid dangerous conditions or contamination to the *Products* or other persons or property and in locations at the *Place of the Work* to the satisfaction of the *Owner* and the *Consultant*. The *Owner* shall provide all relevant information on the *Products* to be supplied by the *Owner*."

**.8 GC 3.10 SHOP DRAWINGS**

**.1 Add the words "... AND OTHER SUBMITTALS" to the title after "SHOP DRAWINGS".**

- .2 *In paragraphs 3.10.1, 3.10.2, 3.10.4, 3.10.7, 3.10.8, 3.10.8.2, 3.10.9, 3.10.10, 3.10.11, and 3.10.12., add " .... and Submittals" after the words "Shop Drawings".*
- .3 *Delete 3.10.3 in its entirety and substitute new paragraph 3.10.3:*

"3.10.3 Prior to the first application for payment, the *Contractor* and the *Consultant* shall jointly prepare a schedule of the dates for submission and return of *Shop Drawings* and any *Submittals*.

*In paragraph 3.10.9, delete the last sentence.*

*In paragraph 3.10.12, delete the words " .... with reasonable promptness so as to cause no delay in the performance of the Work." and replace with " .... within 10 working days or such longer period as may be reasonably required."*

**.9 GC 3.14 PERFORMANCE BY CONTRACTOR**

*Add new General Conditions 3.14.1 and 3.14.2:*

"3.14.1 In performing its services and obligations under the *Contract*, the *Contractor* shall exercise a standard of care, skill and diligence that would normally be provided by an experienced and prudent contractor supplying similar services for similar projects. The *Contractor* acknowledges and agrees that throughout the *Contract*, the *Contractor's* obligations, duties and responsibilities shall be interpreted in accordance with this standard. The *Contractor* shall exercise the same standard of due care and diligence in respect of any *Products*, personnel, or procedures which it may recommend to the *Owner*.

3.14.2 The *Contractor* further represents, covenants and warrants to the *Owner* that:

- .1 The personnel it assigns to the *Project* are appropriately experienced;
- .2 It has a sufficient staff of qualified and competent personnel to replace its designated supervisor and project manager, subject to the *Owner's* approval, in the event of death, incapacity, removal or resignation.

**.10 GC 6.4 CONCEALED OR UNKNOWN CONDITIONS**

- .1 *Add new subparagraph 6.4.5:*

"6.4.5 The *Contractor* confirms that, prior to bidding the *Project*, it carefully investigated the *Place of the Work* and applied to that investigation the degree of care and skill described in paragraph 3.14.1, given the amount of time provided



between the issue of the bid documents and the actual closing of bids, the degree of access provided to the *Contractor* prior to submission of bid, and the sufficiency and completeness of the information provided by the *Owner*. The *Contractor* is not entitled to compensation or to an extension of the *Contract Time* for conditions which could reasonably have been ascertained by the *Contractor* by such careful investigation undertaken prior to the submission of the bid.

**.11 GC 6.5 DELAYS**

.1 *At the end of paragraph 6.5.1, delete the period and substitute the following words:*

" , but excluding any consequential, indirect or special damages."

.2 *Add new subparagraph 6.5.6:*

"6.5.6 If the *Contractor* is delayed in the performance of the *Work* by an act or omission of the *Contractor* or anyone employed or engaged by the *Contractor* directly or indirectly, or by any cause within the *Contractor's* control, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may decide in consultation with the *Contractor*. The *Owner* shall be reimbursed by the *Contractor* for all reasonable costs incurred by the *Owner* as the result of such delay, including all services required by the *Owner* from the *Consultant* as a result of such delay by the *Contractor* and, in particular, the cost of the *Consultant's* services during the period between the date of *Substantial Performance of the Work* stated in Article A-1 herein as the same may be extended through the provisions of these General Conditions and any later, actual date of *Substantial Performance of the Work* achieved by the *Contractor*.

**.12 GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE**

.1 *In paragraph 6.6.5. add the words ".....as noted in paragraph 6.6.3....." after the words " .... of the claim....." and at the end of paragraph 6.6.5, delete the period and add the words ".....and the Consultant."*

"6.6.5. The *Consultant's* findings, with respect to a claim made by either party will be given by *Notice in Writing* by the *Consultant* to both parties within reasonable time after receipt of the claim information noted in paragraph 6.6.3.

**.13 NEW GC 6.7 OVERHEAD AND PROFIT MARGINS**

*.1 Add new GC6.7:*

"6.7 CONTRACTOR'S FEE FOR CHANGES IN THE CONTRACT PRICE

6.7.1 For authorized changes in the Work the following maximum fees shall be charged:

- .1 *Contractor, Own Forces* - Hire of equipment, labour and material cost plus 10% overhead and profit for the *Contractor*.
- .2 *Contractor, Work Performed by Subcontractor* - *Subcontractor's* hire of equipment, labour and materials cost plus 5% overhead and profit for *Contractor*.
- .3 *Subcontractor* - Hire of equipment labour and materials cost plus 10% overhead and profit for *Subcontractor*.

6.7.2 The mark-ups referred to in 6.7.1 above shall be all inclusive of administration and implementation costs attending changes in the *Work* at the *Contractor's* and/or *Subcontractor's* principal place of business and at the site.

6.7.3 No supervision costs by the *Contractor* for his superintendent or foremen shall be charged on extra work which is done before the *Substantial Performance of the Work*.

6.7.4 No extra charge shall be made for the hire of equipment for extra work if said equipment was required for the original work and the extra work can be performed in the same time period.

6.7.5 Charges for any item or items over and above the demonstrated actual costs plus the maximum percentage markups specified will not be considered by the *Consultant* in the valuation assessment.

6.7.6 In the computation of the value of changes which include both extras and credits, all credits shall be deducted from the total sum of the extra before statutory charges or overhead and profit are added."

**.14 GC 9.1 PROTECTION OF WORK AND PROPERTY**

*.1 Delete subparagraph 9.1.1.1 in its entirety and substitute new subparagraph 9.1.1.1:*

"9.1.1.1 errors in the *Contract Documents* which the *Contractor* could not have discovered applying the standard of care described in paragraph 3.14.1;"

.2 *Delete paragraph 9.1.2 in its entirety and substitute the following new paragraph 9.1.2:*

"9.1.2 Before commencing any *Work* , the *Contractor* shall determine the locations of all underground utilities and structures indicated in the *Contract Documents*, or that are discoverable by applying to an inspection of the *Place of Work* to the degree of care and skill described in paragraph 3.14.1."

**.15 GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES**

.1 *Add to paragraph 9.2.6 after the word "responsible", the following new words:*

"....or whether any toxic or hazardous substances or materials already at the *Place of the Work* (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damage to the property of the *Owner* or others, "

.2 *In subparagraph 9.2.7.4., add "....and the Consultant ... " after the word "Contractor".*

.3 *Add to paragraph 9.2.8 after the word "responsible", the following new words:*

" , or that any toxic or hazardous substances or materials already at the *Place of the Work* (and which were then harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damage to the property of the *Owner* or others, "

**.16 GC 9.5 MOULD**

.1 *In subparagraph 9.5.3.4., add "....and the Consultant ...." after the word "Contractor".*

**.17 GC 10.2 LAWS, NOTICES, PERMITS, AND FEES**

.1 *Delete from the first line of paragraph 10.2.5 the word, "The...." and substitute the words: "Subject to paragraph 3.14.1, the ...."*

**.18 GC 12.1 INDEMNIFICATION**

.1 *Add new subparagraph 12.1.1.3:*

"12.1.1.3 The *Contractor* shall indemnify and hold harmless the *Consultant*, its agents and employees from and against claims, demands, losses, costs, damages, actions, suits or proceedings by third parties that arise out of, or are attributable to, the *Contractor's* performance of the *Contract*, provided such claims are attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property, and caused by negligent acts or omissions of the *Contractor* or anyone for whose acts the *Contractor* may be liable, and made in writing within a period of 6 years from the date of *Substantial Performance of the Work* as set out in the certificate of *Substantial Performance of the Work*, or within such shorter such period as may be prescribed by any limitation statute of the province or territory of the *Place of Work*.

**.19 GC 12.3 WARRANTY**

.1 *Delete from the first line of paragraph 12.3.2 the word, "The ..." and substitute the words: "Subject to paragraph 3.14.1, the ...".*

.2 *Add new paragraphs 12.3.7, 12 3.8 and 12.3.9:*

"12.3.7 Warranty periods shall recommence on remedy of defective work.

12.3.8 The carrying out of replacement work and making good of defects shall be executed at times convenient to the *Owner* and this may require work outside of normal working hours at the *Contractor's* expense.

12.3.9 Prior to the expiry of the warranty period, the *Owner* reserves the right to carry out a detailed and exhaustive inspection of the *Work* with regard to all work performed under the *Contract*."

**END OF DOCUMENT**

**1 CASH ALLOWANCES**

- .1 Refer to the General Conditions of the Contract.
- .2 Include in the Contract Price, the cash allowances stated herein.
- .3 Cash allowances, unless otherwise specified, cover the net cost to the Contractor of services, products, construction machinery and equipment, freight, handling, unloading, storage, installation where specified, and other authorized expenses incurred in performing the work.
- .4 The Contract Price, and not the cash allowance, includes the Contractor's overhead and profit in connection with such cash allowance.
- .5 The Contract Price will be adjusted by written order to provide for an excess or deficit to each cash allowance.
- .6 Where costs under a cash allowance exceed amount of the allowance, the Contractor will be compensated for any excess incurred and substantiated, plus an allowance for overhead and profit as set out in the Contract Documents.
- .7 Progress payments on accounts of work authorized under cash allowances shall be included in the Consultant's monthly certificate for payment.
- .8 A schedule shall be prepared jointly by the Departmental Representative and the Contractor to show when items called for under cash allowances must be authorized by the Departmental Representative for ordering purposes so that the progress of the Work will not be delayed.
- .9 The amount of each allowance is as follows:

There are no cash allowances associated with this Tender \$ .00

**3 TOTAL OF ALLOWANCES:** \$ .00

**END OF SECTION**

## **1 SUBSTITUTIONS DURING THE BIDDING PERIOD**

- .1 Generally, specific materials, products and systems are specified in the Contract Documents to provide a standard of acceptance. Except where substitutions are specifically excluded in the individual Sections of the specification, equivalent materials, products or systems by other manufacturers are acceptable as substitutions, provided that the properties and compliances of the substitutions meet or exceed the properties and compliances of the specified materials, products and systems in all respects and that items exposed to sight are of the same appearance as the specified items.
- .2 Substitutions which do not satisfy the above requirements may be rejected by the Owner or the Consultant. Materials, products and systems which are so rejected shall be replaced by the specified items at no cost to the Contract.
- .3 In the event that, prior to closing of bids, the Bidder wishes to offer a substitution or a proposal of work, materials or methods as an alternative to those described in the Contract Documents, he shall submit a request in writing by email no later than the time specified herein.
- .4 The request shall include the following:
  - .1 A description of the proposed substitution.
  - .2 In the case of materials, products or systems, a direct comparison between the properties and compliances of the specified materials, products or systems with the properties and compliances of the proposed substitution, arranged in tabular form, in the same sequence as specified in the applicable specification section or in the sequence listed in the specified manufacturer's published literature, as appropriate.
  - .3 In the case of materials or products, country of manufacture.
  - .4 Shop drawings, product data, and certified test results attesting to the proposed material or product equivalence.
  - .5 If requested by the Consultant, a list of no less than five projects of comparable size and complexity, where the proposed substitution has been used in a similar application. Such projects shall have been in service for at least five (5) years and, where applicable, shall have been subjected to climatic conditions similar to those experienced at the location of the Project. The list shall include the name and current telephone number of the Owner or the Prime Consultant for each project.
- .5 The burden of proof is on the proposer. In the event that the Consultant deems the information provided with the request for approval of a substitution to be inadequate, the request may be rejected.
- .6 A request constitutes a representation that the Bidder:
  - .1 Has investigated proposed Product and determined that it meets or exceeds the quality level of the specified Product.
  - .2 Will provide the same warranty for the Substitution as for the specified Product.
  - .3 Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to the Owner. (A later claim by Bidder for an addition to Contract Price because of changes in work necessitated by use of substitutions shall not be considered).

- .4 Waives claims for additional costs or time extension which may subsequently become apparent.
- .5 Will reimburse the Owner and the Consultant for the cost of review of the request for substitution.
- .6 Will reimburse the Owner and the Consultant for the cost of review or redesign services necessitated by:
  - .1 changes to the building design required to properly accommodate the substitute; and
  - .2 re-approval by authorities.
- .7 Substitutions will not be considered in either of the following circumstances:
  - .1 When they are indicated or implied on shop drawing or product data submittals, without a separate written request having been made.
  - .2 When acceptance will require revision to the Contract Documents.
- .8 Where the terms "or equal", "or equivalent" or terms of similar meaning are used in the specifications, this shall not be construed as acceptance of any alternative material, product or system to those specified. The use of these terms does not relieve the Subcontractor from his responsibility to follow the procedures for approval of substitutions specified herein.
- .9 When a request to substitute a Product is accepted, the Consultant will issue an Addendum to known bidders.

## **2 SUBSTITUTIONS AFTER CONTRACT AWARD**

- .1 No substitutions will be permitted after award of the Contract without the prior approval of the Owner and the Consultant by means of a letter of acceptance of the specific substitution.
- .2 In the event that the Contractor wishes to offer a substitution or a proposal of work, materials or methods as an alternative to those described in the Contract Documents, he shall submit a request in writing.
- .3 The request shall include the following:
  - .1 Reasons for the proposed substitution.
  - .2 A description of the proposed substitution.
  - .3 The amount of any credit offered for the substitution.
  - .4 In the case of materials, products or systems, a direct comparison between the properties and compliances of the specified materials, products or systems with the properties and compliances of the proposed substitution, arranged in a form acceptable to the Consultant.
  - .5 In the case of materials or products, country of manufacture.
  - .6 Shop drawings, product data, and certified test results attesting to the proposed material or product equivalence.
  - .7 If requested by the Consultant, a list of no less than five projects of comparable size and complexity, where the proposed substitution has been used in a similar application. Such projects shall have been in service for at least five (5) years and, where applicable, shall have been subjected to climatic conditions similar to those experienced at the location of the Project. The list shall include the name and current telephone number of the Prime Consultant for each project.

Section 01 25 00  
**SUBSTITUTION PROCEDURES**

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- .4 The Consultant reserves the right to request such additional information as the Consultant deems necessary prior to acceptance or rejection of a proposed substitution.
- .5 A request constitutes a representation that the Contractor:
  - .1 Has investigated proposed Product and determined that
    - .1 it meets or exceeds the quality level of the specified Product; or
    - .2 the request describes accurately and completely the specific ways in which it fails to meet the quality level of the specified Product.
  - .2 Will provide the same warranty for the Substitution as for the specified Product.
  - .3 Will coordinate installation and make changes to other Work which may be required for the Work to be complete with no additional cost to the Owner. (A later claim by Bidder for an addition to Contract Price because of changes in work necessitated by use of substitutions shall not be considered).
  - .4 Waives claims for additional costs or time extension which may subsequently become apparent.
  - .5 Will reimburse the Owner and the Consultant for the cost of review of the request for substitution.
  - .6 Will reimburse the Owner and the Consultant for the cost of review or redesign services necessitated by:
    - .1 changes to the building design required to properly accommodate the substitute; and
    - .2 re-approval by authorities.
- .6 When a request to substitute a Product is accepted, the Consultant will issue to the Contractor a formal letter of acceptance.

**END OF SECTION**



## **1 COORDINATION AND PROJECT CONTROL**

- .1 Coordinate the progress of the Work, progress schedules, submittals, the use of the site, temporary utilities, construction facilities and controls and the work of the various sections of the specifications to ensure the efficient and orderly installation of interdependent construction elements.
- .2 Coordinate the work of the various sections having interdependent responsibilities for installing, connecting to and placing in service utilities and equipment.
- .3 Coordinate space requirements, supports and the installation of mechanical and electrical work which is indicated schematically on the drawings. Follow the routing shown for pipes, ducts and conduits as closely as possible; place runs parallel with lines of the building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance and for repairs.
- .4 Except where indicated otherwise, in finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings. Coordinate locations of fixtures and outlets with finished elements. Before installation, inform the Consultant if there is a contradictory situation. Install as directed by the Consultant.
- .5 Coordinate the completion and clean-up of the work of separate sections in preparation for Substantial Completion.
- .6 After Owner occupancy of the premises, coordinate access to the site for correction of defective work and work not in accordance with the Contract Documents, to minimize disruption of the Owner's activities.

## **2 DOCUMENTS REQUIRED**

- .1 Maintain at the Project Site, one copy each of the following:
  - .1 Approved drawings forming part of the Site Plan Agreement with the Town of Carleton Place.
  - .2 Contract drawings.
  - .3 Specifications
  - .4 Addenda
  - .5 Reviewed shop drawings.
  - .6 Change orders.
  - .7 Other modifications to the Contract.
  - .8 Field test reports.
  - .9 The latest approved version of the construction progress schedule specified in Section 01 32 16.
  - .10 The latest approved version of the site-specific Health and Safety Plan specified in Section 01 35 29.
  - .11 Manufacturers' installation and application instructions.
- .2 Ensure that all trades and all subcontractors are in possession of a complete set of Contract Documents and the latest edition of all codes, regulations and standards that are applicable to their portion of the Work.

### **3 INTERFERENCE DRAWINGS**

- .1 When directed by the Consultant, prepare interference and equipment placing drawings to ensure that all components will be properly accommodated within the spaces provided.
- .2 Where the relationship of a system with other systems is critical, prepare drawings to indicate coordination and methods of installation. Ensure that all details of equipment apparatus and connections are coordinated.
- .3 Ensure that clearances required by authorities having jurisdiction and clearances for proper maintenance are indicated on the drawings.
- .4 Provide all line and layout from the information provided on the Contract Drawings.

### **4 EQUIPMENT ELECTRICAL CHARACTERISTICS AND COMPONENTS**

- .1 Power requirements: Coordinate the Work of the individual specification sections with Division 16 to ensure the provision of required electrical power with the appropriate electrical characteristics.
- .2 Wiring terminations: Provide terminal lugs to match branch circuit conductor quantities, sizes and materials indicated. Size terminal lugs to NFPA 70. Include lugs for terminal boxes.
- .3 Cord and plug: Where not otherwise specified in the individual specification Sections, provide minimum 1.8 m cord and plug, including grounding connector for connection to electric wiring system.

**END OF SECTION**

## **1 PRECONSTRUCTION MEETING**

- .1 Schedule a preconstruction meeting after award of Contract. Attendance by:
  - .1 The Owner's Representatives
  - .2 The Contractor
  - .3 The Consultant
  - .4 Other interested parties on the invitation of the Owner, the Contractor and/or the Consultant.
  
- .2 Agenda:
  - .1 Execution of Project Contract Agreement.
  - .2 Submission of executed bonds and insurance certificates.
  - .3 Distribution of Contract Documents.
  - .4 Submission of List of Subcontractors, Price Breakdown, Contract Price, Unit Prices, Construction Schedule and Proposed Product List.
  - .5 Designation of the personnel representing the parties in the Contract.
  - .6 Procedures and processing of field decisions, submittals, substitutions, applications for payments, Proposal Change Requests, Change Orders and Contract closeout.
  - .7 Scheduling.
  - .8 Scheduling of activities of independent inspection and testing laboratories.
  - .9 Terms of Payment and proposed cash flow for the project.
  - .10 Project meeting procedures.
  
- .3 Record minutes and distribute copies to meeting participants and affected parties not in attendance within 48 hours of the meeting.

## **2 SITE MOBILIZATION MEETING**

- .1 Schedule a mobilization meeting at the Project Site, prior to Contractor occupancy. Attendance by:
  - .1 The Owner's Representative
  - .2 The Consultant
  - .3 Specialized sub-consultants.
  - .4 The Contractor
  - .5 Major subcontractors.
  
- .2 Agenda:
  - .1 Use of the premises by the Contractor.
  - .2 Construction facilities and controls.
  - .3 Temporary facilities.
  - .4 Survey and building layout.
  - .5 Security and housekeeping procedures.
  - .6 Health and safety procedures.
  - .7 Construction Schedule.
  - .8 Application for payment procedures.
  - .9 Procedures for testing.
  - .10 Procedures for maintaining record documents.
  - .11 Requirements for start-up of equipment.
  - .12 Inspection and acceptance of equipment put into service during the construction period.

- .3 Record minutes and distribute copies to meeting participants and affected parties not in attendance within 48 hours of the meeting.

### **3 PROGRESS MEETINGS**

- .1 In consultation with the Owner and the Consultant, schedule progress meetings at the Project Site, at the same time and day of the week, at two-weekly intervals, throughout the progress of the Work. By agreement, additional meetings may be held if circumstances require.
- .2 Attendance required (as appropriate to agenda topics for each meeting):
  - .1 The Owner's Representative
  - .2 The Consultant
  - .3 Specialized sub-consultants.
  - .4 Contractor.
  - .5 Contractor's superintendent.
  - .6 Other contractors affected by the Work.
  - .7 Major subcontractors.
- .3 Subcontractors and/or suppliers shall be invited only by prior agreement with the Consultant.
- .4 The Contractor shall:
  - .1 Distribute written notices of meetings to all affected parties.
  - .2 Provide physical space and make arrangements for meetings.
- .5 Agenda:
  - .1 Review of minutes of previous meetings.
  - .2 Review of Work progress.
  - .3 Field observations, problems and decisions. progress.
  - .4 Identification of problems which impede planned progress.
  - .5 Review of Schedule of Submittals and status of submittals.
  - .6 Review of off-site fabrication and delivery schedules.
  - .7 Maintenance of Progress Schedule.
  - .8 Corrective measures to regain projected schedules.
  - .9 Planned progress during succeeding work period.
  - .10 Coordination of projected progress.
  - .11 Maintenance of quality and work standards.
  - .12 Effect of proposed changes on the Progress Schedule and coordination.
  - .13 Other business relating to the Work.
- .6 Record minutes. Minutes shall include significant proceedings and decisions and will identify "action by" parties.
- .7 Distribute copies to meeting participants and affected parties not in attendance within 48 hours of the meeting.

#### **4 PREINSTALLATION MEETINGS**

- .1 When required by individual Sections of the Specification, the Contractor shall:
  - .1 Convene a preinstallation meeting at the site or at an appropriate location, prior to commencing the work of the Section.
  - .2 Require the attendance of parties directly affecting or affected by the work of the Section.
  - .3 Distribute written notice of the meeting to all parties required to attend.
  - .4 Prepare the agenda and preside at the meeting:
    - .1 Review conditions of installation, preparation and installation procedures.
    - .2 Review coordination with related work.
- .5 Record minutes and distribute copies to meeting participants and affected parties not in attendance within 48 hours of the meeting.

**END OF SECTION**

Section 01 32 16  
**CONSTRUCTION PROGRESS SCHEDULE**

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**1 SCHEDULES REQUIRED**

- .1 Submit a Construction Progress Schedule within 10 days of contract award.
- .2 Include the following supplementary schedules, coordinated with the Construction Progress Schedule:
  - .1 Submittal Schedule for Shop Drawings and Product Data.
  - .2 Submittal Schedule for Samples.
  - .3 Product Delivery Schedule.
  - .4 Cash Allowance Schedule for purchasing products.

**2 FORMAT**

- .1 Prepare schedules in the form of a horizontal bar chart.
- .2 Provide a separate bar for each major item of work or operation.
- .3 Split horizontally for projected and actual performance.
- .4 Provide a horizontal time scale identifying first workday of each week.
- .5 Format for listings: chronological order of start of each item of work.

**3 SUBMITTAL SCHEDULES**

- .1 Include schedules for submitting shop drawings, product data, samples, and other submittals called for in the individual specification sections.
- .2 Include in the submittal schedule a complete list of all submittals required for the project.
- .3 Indicate dates for submitting, review time, resubmission time, last date for meeting fabrication schedule.

**4 MAINTENANCE OF SCHEDULES**

- .1 Update the progress schedules for every progress meeting and submit an updated schedule with each monthly progress billing.

**END OF SECTION**

## **1 GENERAL**

- .1 Submit to the Consultant for review, shop drawings, product data and samples specified in the respective specification Sections.
- .2 Until a submission is reviewed, work involving the relevant product may not proceed.
- .3 Generally, submittals shall be in .pdf digital format. For shop drawings, scanned documents are not acceptable.
- .4 For submittals that cannot be transmitted digitally (i.e. samples), arrange and pay for all deliveries and pick-ups to and from the office of the Consultant.
- .5 Maintain an email inbox capable of accepting minimum 20 Mb of data.

## **2 SHOP DRAWINGS AND PRODUCT DATA**

- .1 Shop drawings to be originals prepared by the Contractor, Subcontractor, Supplier or Distributor, which illustrate the appropriate portion of the Work; showing fabrication, layout, setting or erection details, as specified in the appropriate Sections.
- .2 Identify details by reference to sheet and detail numbers shown on the Contract Drawings.
- .3 Drawing Format Submissions:
  - .1 Digital files in .pdf format.
  - .2 Upon return to the Trade Contractor of reviewed digital submissions, the Trade Contractor shall be responsible for printing and distribution of reviewed submissions to the appropriate Subcontractors and affected parties.
- .4 Product Data:
  - .1 Certain specification Sections specify that manufacturer's standard schematic drawings, catalogue sheets, illustrations and other standard descriptive data will be accepted in lieu of shop drawings.
  - .2 The above will be accepted only if they conform to the following:
    - .1 Delete information which is not applicable to project.
    - .2 Supplement standard information to provide additional information applicable to project.
    - .3 Show dimensions and clearances required.
    - .4 Show performance characteristics and capacities.
    - .5 Show wiring diagrams (where applicable) and controls.
  - .3 Submit as .pdf files.

## **3 SAMPLES AND MOCK-UPS**

- .1 Submit samples in sizes and quantities specified.
- .2 Where colour, pattern or texture is a criterion, submit the manufacturer's full range of samples.

- .3 Construct field samples and mock-ups at locations acceptable to the Consultant.
- .4 Construct each sample or mock-up complete, including work of all trades required to finish work.
- .5 Reviewed samples or mock-ups will become the standards of workmanship and material against which installed work will be checked on the project.

#### **4 COORDINATION OF SUBMISSIONS**

- .1 Review and stamp shop drawings, product data and samples prior to submission.
- .2 Verify:
  - .1 Field measurements.
  - .2 Field construction criteria.
  - .3 Catalogue numbers and similar data.
- .3 Coordinate each submission with the requirements of the Work and the Contract Documents. Individual shop drawings will not be reviewed until all related drawings are available.
- .4 The Contractor's responsibility for errors and omissions in submission is not relieved by the Consultant's review of submittals.
- .5 The Contractor's responsibility for deviations in submission from the requirements of the Contract Documents is not relieved by the Consultant's review of the submission, unless the Consultant gives written acceptance of specified deviations.
- .6 Notify the Consultant, in writing at the time of submission, of deviations from the requirements of the Contract Documents.
- .7 After the Consultant's review, the .pdf file will be returned to the Contractor who shall distribute copies.
- .8 Originators preparing more than one submission, shall prepare a list of all shop drawings, complete with submission dates to the Consultant. Include this list with the first submission.

#### **5 SUBMISSION REQUIREMENTS**

- .1 Schedule submissions at least 30 days before the dates reviewed submissions will be needed.
- .2 Accompany each electronic submission with an email.
- .3 Submissions shall include:
  - .1 Date and revision dates.
  - .2 Project title and number.
  - .3 Name of:
    - .1 Contractor.
    - .2 Subcontractor.



- .3 Supplier.
- .4 Manufacturer.
- .5 Separate detailer when pertinent.
  
- .4 Identification of product or material.
- .5 Relation to adjacent structure or materials.
- .6 Field dimensions, clearly identified as such.
- .7 Specification section number.
- .8 Applicable standards, such as CSA or CGSB numbers.
- .9 Where applicable, the code used in the Contract Documents to identify the product
  - .10 Originator's stamp and signature, certifying review of submission, verification of field measurements and compliance with the Contract Documents.
- .11 Contractor's stamp and signature, certifying review of submission.
- .12 Professional engineer's stamp and signature, where specific sections of the specification so direct. Note that drawings will not be reviewed unless the Professional Engineer's stamp and signature is present.
- .13 CSA/CGSB/ASTM or other conformance certificates where applicable.
  
- .4 The Contractor's stamp and signature, certifying review of the Submission shall be interpreted to mean that the Contractor has reviewed the drawings and coordinated them with the work of other trades. Drawings which have not been so reviewed and coordinated by the Contractor will be returned for resubmission before Consultant review will be undertaken.

## **6 SHOP DRAWINGS REVIEW**

- .1 The review of shop drawings by the Consultant is for the sole purpose of ascertaining conformance with the general concept. This review shall not mean that the Consultant approves the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the construction and contract documents.
  
- .2 Without restricting the generality of the foregoing, the Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for coordination of the work of all subtrades.

**END OF SECTION**

## **1 REFERENCES**

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2 Health Canada / Workplace Hazardous Materials Information System (WHMIS):
  - .1 Material Safety Data Sheets (MSDS).
- .3 Province of Ontario
  - .1 Occupational Health and Safety Act, R.S.O. 1990 Updated 2014.

## **2 SUBMITTALS**

- .1 General: Submit each item in this Article according to the Conditions of the Contract and the applicable Division 01 Specification Sections.
- .2 Submit a site-specific Health and Safety Plan within 7 days after the date of Notice to Proceed and prior to commencement of Work. The Health and Safety Plan must include:
  - .1 Results of a site-specific safety hazard assessment.
  - .2 Results of a safety and health risk or hazard analysis for site tasks and operations.
- .3 Submit, weekly, 2 copies of the Contractor's authorized representative's work site health and safety inspection reports to the Consultant and, when required, to the authority having jurisdiction.
- .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 Submit WHMIS MSDS - Material Safety Data Sheets for all applicable products used on the Project.
- .7 The Consultant will review the Contractor's site-specific Health and Safety Plan and provide comments to the Contractor within 5 working days after receipt of the plan. Revise the plan as appropriate and resubmit the plan to the Consultant within 5 working days after receipt of comments from the Consultant.
- .8 The Consultant's review of the 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.
- .9 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations. Include site-specific requirements.

## **3 FILING OF NOTICE**

- .1 File Notice of the Project with Provincial authorities prior to beginning of Work.

#### **4 SAFETY ASSESSMENT**

- .1 At the start of the project, perform a site-specific safety hazard assessment related to the Project. Conduct a monthly review the assessment during the course of the project and update as required.

#### **5 MEETINGS**

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

#### **6 GENERAL REQUIREMENTS**

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

#### **7 RESPONSIBILITY**

- .1 Be responsible for health and safety of persons on site, safety of property on site and for the protection of persons adjacent to site and the environment to the extent that they may be affected by the conduct of the Work.
- .2 Assume the role of "Constructor" as defined and regulated by legislation of the Province of Ontario.
- .3 Comply with and enforce compliance by employees with the safety requirements of the Contract Documents, applicable federal, provincial, and local statutes, regulations, and ordinances, and with the site-specific Health and Safety Plan.

#### **8 COMPLIANCE REQUIREMENTS**

- .1 Comply with Ontario Health and Safety Act, R.S.O.
- .2 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

#### **9 HAZARDOUS MATERIAL DISCOVERY**

- .1 Asbestos: Demolition of spray or trowel-applied asbestos is hazardous to health. Stop work immediately when material resembling spray or trowel-applied asbestos is encountered during demolition work. Notify the Consultant.
- .2 PCB: Polychlorinated Biphenyl: Stop work immediately when material resembling Polychlorinated Biphenyl is encountered during demolition work. Notify the Consultant.

**HEALTH AND SAFETY REQUIREMENTS**

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- .3 Mould: Stop work immediately when material resembling mould is encountered during demolition work. Notify the Consultant.

**10 UNFORSEEN HAZARDS**

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

**11 POSTING OF DOCUMENTS**

- .1 Ensure applicable items, articles, notices and orders are posted in a conspicuous location on site in accordance with the Acts and Regulations of the Province of Ontario, and in consultation with the Consultant.

**12 CORRECTION OF NON-COMPLIANCE**

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

**13 BLASTING**

- .1 Blasting or other use of explosives is not permitted without prior receipt of written instructions by the Consultant.

**14 POWDER ACTUATED DEVICES**

- .1 Use powder actuated devices only after receipt of written permission from the Consultant.

**15 FIRE HYDRANTS**

- .1 Maintain fire hydrants in operating condition, free of snow and ice, accumulations, readily available and unobstructed for use in accordance with the Ontario Fire Code, O. Reg. 213/07, as amended and the requirements of the Town of Carleton Place.

**16 WORK STOPPAGE**

- .1 Give precedence to safety and health of the public and site personnel and protection of the environment over cost and schedule considerations for the Work.

**END OF SECTION**

## **1 DEFINITIONS**

- .1 *Environmental Pollution and Damage:* The 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 the 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 FIRES**

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

## **3 DISPOSAL OF WASTES**

- .1 Do not bury rubbish and waste materials on site.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.
- .3 Dispose of waste or volatile materials which could be hazardous to the health, in strict accordance with the requirements of the authorities having jurisdiction and in a manner which will protect construction personnel, visitors to the site and the public from all such hazards.

## **4 DRAINAGE**

- .1 Provide temporary drainage and pumping as necessary to keep excavations and the site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.
- .4 Implement an erosion and sediment control plan to provide for protection of the receiving storm sewer or water course during construction activities This plan, to be used during construction, shall ensure that no sediment and/or associated pollutants are discharged to a receiving water course which could degrade water quality and/or impair fish or other aquatic habitat. The methods used must be regularly maintained to ensure their effectiveness and to ensure compliance with provincial/federal legislation pertaining to water quality and habitat.

**5 POLLUTION CONTROL**

- .1 Control emissions from equipment and plant to conform to local authorities' emission requirements.
- .2 Prevent sandblasting and other extraneous materials from contaminating air beyond the application area by providing temporary enclosures.
- .3 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.
- .4 Clean public roads at the access points to the site as required to keep public roadways clear of site materials and debris at all times.

**6 NOTIFICATION**

- .1 The Consultant will notify the Contractor in writing of observed noncompliance with Federal, Provincial or Municipal environmental laws, regulations, or permits.
- .2 After receipt of such notice, the Contractor shall inform the Consultant of proposed corrective action and take such action for approval by the Consultant.
- .3 The Consultant will issue a stop work order until satisfactory corrective action has been taken.
- .4 No time extensions will be granted or equitable adjustments allowed to the Contractor for such suspensions.

**END OF SECTION**

## **1 REFERENCES AND CODES**

- .1 Perform the Work in accordance with the Ontario Building Code, OBC-2012, including amendments up to tender closing date and other codes of provincial and local application provided that, in case of conflict or discrepancy, the more stringent requirements apply.
- .2 Meet or exceed requirements of:
  - .1 The Contract documents.
  - .2 Specified standards, codes and referenced documents.
  - .3 Ontario Regulation for Industrial Establishments O.Reg. 851.
  - .4 CAN/CSA-B651-12, Accessible Design for the Built Environment.

## **2 BUILDING SMOKING ENVIRONMENT**

- .1 Smoking is prohibited on the property.

## **3 PERMITS AND FEES**

- .1 The Contractor shall pay for all required permits, fees and inspections by all authorities having jurisdiction.
- .2 The Owner will apply and pay for the Building Permit and any municipal development fees.
- .3 The Contractor will be responsible for following up with the Town, to facilitate the expeditious issue of the Building Permit.
- .4 The Contractor shall provide the Owner with photocopies of all permits required for the work.
- .5 The Contractor shall obtain all necessary approvals from the Ministry of Environment, Conservation and Parks and the Town with regard to the installation of the storm and sanitary sewers and watermains and the provision of sewage holding/treatment facilities.

**END OF SECTION**

## **1 QUALITY ASSURANCE - CONTROL OF INSTALLATION**

- .1 Monitor quality control over suppliers, manufacturers, products, services, site conditions and workmanship to produce work of the specified quality.
- .2 Comply with manufacturer's instructions, including each step in the sequence.
- .3 Should manufacturer's instructions conflict with the Contract Documents, request clarification from the Consultant before proceeding.
- .4 Comply with specified standards as a minimum quality for the Work, except where more stringent tolerances, codes or specified requirements indicate higher standards or more precise workmanship.
- .5 Perform work by persons qualified to produce the required and specified quality.
- .6 Wherever critical to a proper fit, verify dimensions on site prior to commencement of manufacture.
- .7 Secure materials and products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

## **2 TOLERANCES**

- .1 Monitor fabrication and installation tolerance control of products to produce acceptable work. Do not permit tolerances to accumulate.
- .2 Comply with manufacturers' tolerances. Should a manufacturer's tolerances conflict with the Contract Documents, request clarification from the Consultant before proceeding.
- .3 Adjust products to appropriate dimensions; position products before securing in place.

## **3 REFERENCES, CODES AND STANDARDS**

- .1 Perform the Work in accordance with the latest edition, including all revisions, of applicable codes and regulations of federal, provincial, or local application, provided that, in any case of conflict or discrepancy, the more stringent requirements shall apply.
- .2 Meet or exceed the requirements of specified standards, codes and referenced documents.
- .3 For materials, products or workmanship specified by association, trade or other consensus standards, comply with the requirements of the standard, except where more rigid requirements are specified or are required by applicable codes.
- .4 In each case, where a standard, code or other document is referenced, the latest edition or revision shall apply, unless specified otherwise, except where a specific date of issue is established by code.



- .5 Neither the contractual relationships, duties or responsibilities of the parties in the Contract shall be altered from those defined by the Contract Documents by mention or inference otherwise in any referenced document.

#### **4 MOCK-UPS**

- .1 Procedures for the preparation and submission of mock-ups are specified in Section 01 33 00 "Submittal Procedures".
- .2 Tests will be performed under the provisions identified in this Section.

#### **5 INSPECTION AND TESTING**

- .1 Inspection:
  - .1 Provide access to the Work at all times.
  - .2 Provide full cooperation and sufficient, safe, and proper facilities at all times for review of the Work by and for inspection of the Work by authorized agencies.
  - .3 If portions of the Work are in preparation off site, provide access to such work, whenever it is in progress.
  - .4 Provide the Consultant with reasonable notice of when work designated for tests, inspections or approvals will be ready for review and inspection.
  - .5 Provide the Consultant with reasonable notice of the date and time of inspections by other authorities.
- .2 Independent Inspection Agencies:
  - .1 Independent Inspection/Testing Agencies will be engaged by the Owner for the purpose of inspecting and/or testing portions of the Work. The Cost of initial inspections and/or testing will be paid by the Owner.
  - .2 Cooperate with Inspection/Testing Agencies. Furnish samples of materials, design mix, equipment, tools, storage, safe access and assistance by incidental labour as requested.
  - .3 If additional tests are required by the Contractor, make arrangements with the Inspection/Testing Agency and pay for additional samples and tests.
  - .4 The cost of additional inspection and/or testing required because of non-compliance with the Contract Documents at the initial test, shall be paid by the Contractor.
- .3 Reports:
  - .1 All inspection and test reports shall include for, one copy to each of the following:
    - .1 The Owner.
    - .2 The Consultant.
    - .3 Applicable Specialist Consultant(s) (if applicable).
    - .4 The subcontractor (if any) responsible for the work.
    - .5 Material/product manufacturers and/or suppliers, as applicable.
  - .2 The Contractor shall provide copies to the Subcontractor of the work being inspected/tested and to the manufacturer(s)/fabricator(s) of material(s) being inspected/tested.
- .4 Covering Installed Work: Do not cover installed work with subsequent work until the installed work has been reviewed on site by the Consultant.

**6 MANUFACTURERS' FIELD SERVICES**

- .1 When individual specification Sections require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment and testing, adjusting and balancing of equipment, as applicable, and to initiate instructions when necessary.
- .2 Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to the manufacturer's written instructions.
- .3 Refer to Section 01 33 00 "Submittal Procedures".

**END OF SECTION**

Section 01 50 00  
**TEMPORARY FACILITIES AND CONTROLS**

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**1 INSTALLATION/REMOVAL**

- .1 Provide construction facilities and temporary controls as required to execute the Work expeditiously.
- .2 Prior to Substantial Completion, remove from the site all construction facilities and temporary controls.
- .3 Make good any damage to or disturbance of existing property caused by such work. Restore affected existing property to a condition at least equal to that which existed prior to construction.

**2 TEMPORARY ELECTRICAL POWER**

- .1 The existing electrical system may be used for temporary power required during construction for operating equipment and machinery, temporary lighting and operating power tools, provided the system is not overloaded and warranties for new work are not affected.
- .2 Connect to delivery points in accordance with the Canadian Electrical Code and to the satisfaction of the local authority having jurisdiction. Provide all equipment and temporary lines to bring power services to the point of use. Provide flexible power cords as required.

**3 TEMPORARY LIGHTING**

- .1 Provide and maintain general level temporary lighting for construction operations to achieve a minimum lighting level of 2 watts/ft<sup>2</sup> (21 watts/m<sup>2</sup>).
- .2 Provide and pay for additional temporary lighting equipment required for the proper execution of specific tasks. Provide branch wiring from the power source to distribution boxes with lighting conductors, pigtails and lamps, as required.
- .3 Provide and maintain temporary lighting to interior and exterior staging and storage areas, after dark, for security purposes.
- .4 Subject to the approval of the Owner, the permanent lighting system of the building may be used during construction, provided warranties are not affected.

**4 HEATING**

- .1 At the discretion of the Owner and the Consultant, the permanent heating system of the building, or portions thereof, may be used when available, provided warranties are not affected.
- .2 Prior to operation of new permanent equipment for temporary heating purposes, verify that the installation is approved for operation, equipment is lubricated, and filters are in place.
- .3 Be responsible for damage thereto. Before takeover by the Owner, change all filters, vacuum all ductwork, replace any worn or consumed parts and perform such other maintenance work as required to leave the system in proper operating condition.

## **5 TEMPORARY VENTILATION**

- .1 Ventilate enclosed areas as required to cure materials, to dissipate humidity and to prevent accumulation of dust, fumes, vapours or gases.
- .2 The permanent ventilation system of the building may be used, subject to the same provisions as specified above for the use of the permanent heating system and provided such use does not result in contamination of the air outside the area of construction.
- .3 Extend and supplement the permanent equipment with temporary fan units as required to maintain clean air for construction operations.
- .4 Completely clean the entire building ventilation system immediately prior to takeover by the Owner.

## **6 TEMPORARY WATER SERVICE**

- .1 The existing building water supply system may be used for construction use. Connect to delivery points to the approval the Owner and the authorities having jurisdiction.
- .2 Provide all equipment and temporary lines to bring water to the point of use. Provide flexible hoses as required.

## **7 SCAFFOLDING**

- .1 Erect scaffolding in accordance with CAN/CSA-S269.2.
- .2 Provide and maintain scaffolding, ramps, ladders, swing staging, platforms, and temporary stairs as required for the execution of the work.

## **8 HOISTING**

- .1 Provide, operate and maintain hoists and cranes 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 operators licensed in the Province of Ontario.

## **9 SITE ACCESS**

- .1 Provide and maintain adequate access to the project site.
- .2 Clean roads and ground surfaces where used by Contractor's equipment.

## **10 SITE STORAGE/LOADING**

- .1 Refer to CCDC 2, GC 3.11.
- .2 Confine work and operations of employees to the area designated in the Contract Documents. Be advised that the area is limited.
- .3 Obtain and pay for use of additional storage or work areas if needed for operations.
- .4 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .5 Locate materials not required to be stored in weatherproof sheds on site in a manner that will cause the least interference with work activities.
- .6 Do not unreasonably encumber the premises with products. Move stored materials or equipment when directed by the Consultant.
- .7 Do not permit any part of the work to be loaded with a weight or force which will endanger the safety of the work or cause undue deflection.

## **11 SANITARY FACILITIES**

- .1 Provide sufficient temporary sanitary facilities for construction personnel.
- .2 Maintain the facilities in a clean and sanitary condition.

## **12 SITE ENCLOSURE**

- .1 Provide and maintain a temporary enclosure around the designated staging area, using minimum 2400 mm high modular steel fencing.
- .2 Locate where indicated on the drawings and include a lockable vehicle gate.

## **13 SECURITY**

- .1 Ensure the site is secured to ensure the safety of the contents of the site after working hours and during holidays.

## **14 DUST-TIGHT SCREENS**

- .1 Provide dust-tight screens or partitions to localize dust generating activities, and for the protection of workers, finished areas of work and the public.
- .2 Maintain and relocate protection until such Work is complete.

**15 PROTECTION OF INSTALLED WORK**

- .1 Protect installed work and provide special protection where specified.
- .2 Provide temporary and removable protection for installed products. Control activity in the immediate work area to prevent damage.
- .3 Provide protective coverings at walls, projections, jambs, sills and soffits of openings.
- .4 Protect finished floors, stairs and other surfaces from traffic, dirt, wear, damage or movement of heavy objects by covering with durable sheet materials.
- .5 Prohibit traffic from landscaped areas.

**16 FIELD OFFICES**

- .1 Office space to accommodate site meetings will be provided by the Owner in the Arena.
- .2 Office space to accommodate the needs of the Contractor shall be supplied by the Contractor.
  - .1 Provide marked and fully stocked first-aid case in a readily available location.
  - .2 Maintain in clean condition.

**17 PROJECT CLEANLINESS**

- .1 Maintain the Work in tidy condition, free from accumulation of waste products and debris.
- .2 Remove debris and rubbish from pipe chases, plenums attics, crawl spaces or other closed or remote spaces.
- .3 Broom and vacuum clean interior areas prior to the start of finish work; maintain areas free of dust and other contaminants during finishing operations.
- .4 Remove waste material and debris from site and deposit in a designated waste container at the end of each working day.
- .5 Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

**18 PROJECT SIGNAGE**

- .1 No signs are allowed without the prior approval of the Owner and the Consultant, except those required by law.

**END OF SECTION**

**1 REFERENCE STANDARDS**

- .1 Within the individual specifications Sections, reference standards are identified. Conform to these standards, in whole or part, as specifically specified.
- .2 Conform to latest date of issue of referenced standards in effect on the date of submission of tenders, except where a date or issue is specifically noted.

**2 QUALITY**

- .1 Products, materials, equipment and articles (referred to as materials or products throughout the specifications) incorporated in the Work shall be new, not damaged or defective, and of the best quality (compatible with the specifications) for the purpose intended. If requested, furnish evidence as to the type, source and quality of materials or products provided.
- .2 Should any dispute arise as to the quality or fitness of materials or products, the decision rests strictly with the Consultant, based upon the requirements of the Contract Documents.

**3 PRODUCT AVAILABILITY**

- .1 Immediately review material and product delivery requirements and anticipate foreseeable supply delays for any items. Notify the Consultant.
- .2 In the event of failure to notify the Consultant at the commencement of the Work, the Consultant reserves the right to substitute more readily available products of similar character, at no increase in the Contract Sum.

**4 TRANSPORTATION AND HANDLING**

- .1 Transport and handle materials and products in accordance with the manufacturer's instructions.
- .2 Promptly, upon arrival on site, inspect shipments to ensure that products comply with the requirements, quantities are correct and materials and products are undamaged.
- .3 Handle and store materials and products in a manner which will prevent damage, adulteration, deterioration and soiling and in accordance with the manufacturer's instructions when applicable.

**5 STORAGE AND PROTECTION**

- .1 Store packaged or bundled materials or products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in the Work.
- .2 Store sensitive materials and products in weathertight, climate-controlled enclosures, in an environment favourable to the material or product.

- .3 For exterior storage of fabricated products, place on sloped supports, above ground.
- .4 Remove and replace damaged materials and products at own expense and to the Consultant's satisfaction.
- .5 Provide off-site storage and protection when the site does not permit on-site storage or protection, of products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of materials and products.
- .6 Store loose granular materials on solid flat surfaces, in a well-drained area. Prevent mixing with foreign matter.
- .7 Provide equipment and personnel to store materials and products by methods to prevent soiling, disfigurement, or damage.
- .8 Arrange storage of materials and products to permit access for inspection. Periodically inspect to verify materials and products are undamaged and are maintained in acceptable condition.

## **6 MANUFACTURER'S INSTRUCTIONS**

- .1 Unless otherwise indicated in the specifications, install or erect materials and products in accordance with the manufacturers' instructions.
- .2 Improper installation or erection of materials and products, due to failure in complying with these requirements, authorizes the Consultant to require removal and re-installation at no increase in the Contract Sum.

## **7 WORKMANSHIP**

- .1 Workmanship shall be the best quality, executed by workers experienced and skilled in the respective duties for which they are employed. Immediately notify the Consultant if required Work is such as to make it impractical to produce the required results.
- .2 Decisions as to the quality or fitness of workmanship in cases of dispute rest solely with the Consultant whose decision is final.

## **8 CONCEALMENT**

- .1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.

## **9 REMEDIAL WORK**

- .1 Perform remedial work required to repair or replace the parts or portions of the Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with the materials affected. Perform work in a manner which will neither damage nor endanger any portion of the Work.



**10 FASTENINGS**

- .1 Provide metal fastenings and accessories in the same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use noncorrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically specified in the affected specification Section.

**11 PROTECTION OF WORK IN PROGRESS**

- .1 Adequately protect Work completed or in progress. Work damaged or defaced due to failure in providing such protection is to be removed and replaced, or repaired, as directed by the Consultant, at no increase in Contract Sum.

**12 OVERLOADING**

- .1 Prevent overloading of any part of the building. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated, without the Consultant's written approval.

**13 EXISTING UTILITIES**

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with a minimum of disturbance to the Work, and/or pedestrian and vehicular traffic.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in a manner approved by the authority having jurisdiction. Stake and record the location of the capped service.

**14 PRODUCT OPTIONS**

- .1 Products specified by reference standards or by description only: any product meeting those standards or description.
- .2 Products specified by naming one or more manufacturers with substitutions specifically excluded: products of manufacturer's named and meeting the specifications; no options or substitutions allowed.
- .3 Products specified by naming one or more manufacturers with no specific exclusion of substitutions: submit a request for substitution for any manufacturer not named, in accordance with the provisions of Section 01 25 00 "Substitution Procedures".

**END OF SECTION**

## **1 FIELD ENGINEERING**

- .1 The Construction Manager will be responsible for the provision of benchmarks and reference points for Trade Contractors' use.
- .2 The Construction Manager will employ a Registered Ontario Land Surveyor (OLS) to establish the initial survey points.
- .3 Survey Reference Points: The OLS will:
  - .1 establish two permanent benchmarks on site, referenced to established benchmarks by survey control points.
  - .2 locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction;
  - .3 record locations, with horizontal and vertical data in the Project Record Documents;
  - .4 make no changes or relocations without prior written notice to the Construction Manager;
  - .5 replace control points which are lost, or destroyed or require relocation because of changes in grade;
  - .6 establish lines and levels, locate and lay out the work by instrumentation;
  - .7 stake for grading, fill and topsoil;
  - .8 establish pipe invert elevations;
  - .9 stake batter boards for foundations;
  - .10 establish foundation; column locations and floor elevations;
  - .11 establish lines and levels for mechanical and electrical work;
  - .12 maintain a complete, accurate log of control and survey work as it progresses;
  - .13 on completion of foundations and major site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of the work; and
  - .14 submit certificate signed by Surveyor certifying that elevations and locations of completed Work are in conformance, or non-conformance with Contract Documents.
- .4 The Trade Contractor shall:
  - .1 lay out his/her own work relative to the established survey control points and to adjacent work already in place;
  - .2 report to the Construction Manager when a reference point is lost or destroyed or requires relocation because of necessary changes in grades or locations.

## **2 DIMENSIONS**

- .1 Check and verify dimensions wherever referring to the work. Dimensions, when pertaining to the work of another trade, shall be verified with the trade concerned. Details and measurements of work which is to fit or conform with work installed shall be taken at the site.
- .2 Do not scale drawings. If there is ambiguity, lack of information or inconsistency, immediately consult the Construction Manager for directions. Be responsible for extra costs caused by the disregarding of this requirement.

**3 EXISTING UTILITIES**

- .1 It is the applicable Trade Contractor's responsibility to obtain all information required for sewer, gas, water, telephone, electrical signal systems, and any other utilities that are within the building and surrounding other locations.
- .2 Ensure that piping, sewer lines, conduit, and similar items, belonging to others, are protected during construction activity.

**4 EXAMINATION**

- .1 Examine areas and conditions under which work is to be performed and notify the Construction Manager in writing of conditions detrimental to the proper and timely completion of the work.
- .2 Verify that the existing site conditions and substrate surfaces are acceptable for subsequent work.
- .3 Verify that the existing substrate is capable of structural support or attachment of new work being applied.
- .4 Verify the specific conditions described in individual specification Sections.
- .5 Verify that utility services are available, of the correct characteristics, and in the correct locations.
- .6 Do not proceed with the work until unsatisfactory conditions have been corrected to the installer's satisfaction.
- .7 Commencement of the installation will be construed as acceptance of the site conditions.

**5 PREPARATION**

- .1 Clean substrate surfaces prior to applying next material or substance.
- .2 Allow substrate surfaces to cure or dry out to the moisture content limits recommended by the manufacturer of their material or substance to be applied.
- .3 Seal cracks or openings in the substrate prior to applying the next material or substance.
- .4 Apply the manufacturer's recommended or required substrate primer, sealer or conditioner prior to applying any new material of substance.

**END OF SECTION**

## **1 WORKMANSHIP**

- .1 Workmanship shall be best quality, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify the Consultant if required work is such as to make it impractical to produce the required results.
- .2 Do not employ any unfit person or anyone unskilled in his/her required duties.
- .3 In cases of dispute, decisions as to quality or fitness of workmanship rest with the Consultant.

## **2 CONCEALMENT**

- .1 Except where indicated otherwise, in finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings,
- .2 Before installation, inform the Consultant if there is a contradictory situation. Install as directed by the Consultant.

## **3 LOCATION OF FIXTURES**

- .1 The locations of fixtures, apparatus, equipment, fittings, outlets, conduits, pipes and ducts shown or specified, but not dimensioned, shall be considered approximate.
- .2 Request clarification from the Consultant, to establish exact locations. Any relocation caused by the Contractor's failure to request clarification shall be done by the Contractor as part of the Work. Where job conditions require reasonable changes in indicated locations and arrangements, make such changes at no additional cost.
- .3 Conserve space and coordinate with the work of other Sections to ensure that ducts, pipes and conduits will fit into allocated wall and ceiling spaces.
- .4 Where ducts, piping and conduits are permitted to be exposed, they shall be neatly and uniformly laid out, parallel to adjacent building lines and parallel to each other where they run in the same direction. Request the Consultant's review of exposed installations prior to the start of work. Where exposed work is not installed in accordance with the Consultant's prior review, make changes to such work, as directed by the Consultant, at no extra cost to the Contract.
- .5 Except where locations are specifically noted on the drawings, install exposed mechanical and electrical fixtures, including outlets, switches, thermostats, panels and other items located on walls in an orderly and neatly laid out manner, lining up with each other and grouped together where possible. Request the Consultant's review of the proposed installation prior to the start of rough-in work. Relocate at no extra cost to the Contract any work for which the Consultant's review prior to the start of work was not requested.

#### **4 REMOVED MATERIAL**

- .1 Unless otherwise specified, materials designated for removal become the Contractor's property and shall be taken from site.
- .2 Deposit removed unsalvagable materials in a garbage container daily or more frequently if directed by the Consultant.
- .3 Locate the garbage container where directed by the Consultant.
- .4 Arrange for removal of containers immediately as soon as they are full. Legally dispose of content.

#### **5 USE OF PLUMBING FIXTURES**

- .1 The use of plumbing fixtures and/or floor drains for mixing, draining or dumping of construction materials is not permitted.

#### **6 CONSTRUCTION SAFETY REQUIREMENTS**

- .1 Execute all work in strict compliance with construction health and safety requirements specified in Section 01 35 29 "Health and Safety Procedures".

#### **7 NUISANCE OR DISTURBANCE**

- .1 Perform the work so as not to constitute a nuisance or disturbance to abutting or nearby properties or to the Owners thereof. Comply with written instructions issued by the City concerning any such nuisance or disturbance regardless of whether such instructions require positive action or discontinuance of action.

#### **8 POWDER ACTUATED FASTENING DEVICES**

- .1 Do not use powder actuated tools using explosives, unless permitted expressly by the Consultant; comply with requirements of CAN3-Z166.2-M85, Use and Handling of Powder Actuated Tools.

#### **9 CUTTING, PATCHING & MAKING GOOD**

- .1 Approvals: Submit written request in advance of cutting or alteration which affects:
  - .1 Structural integrity of any element of Project.
  - .2 Integrity of weather-exposed or moisture-resistant elements.
  - .3 Efficiency, maintenance, or safety of any operational element.
  - .4 Visual qualities of sight-exposed elements.
  - .5 Work of the Owner or a separate contractor.
- .2 Inspection:
  - .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 shall be construed to mean acceptance of existing conditions.
  
- .3 Execution:
  - .1 Perform cutting, fitting, and patching as required to complete the Work.
  - .2 Remove and replace defective and non-conforming work.
  - .3 Provide openings in non-structural elements of the Work for penetrations of mechanical and electrical work.
  - .4 Perform work in a manner which will avoid damage to other work.
  - .5 Prepare proper surfaces to receive patching and finishing.
  - .6 Where possible, employ the original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
  - .7 Cut rigid materials using a power saw or core drill. Pneumatic or impact tools will not be allowed.
  - .8 Restore work with new products in accordance with the Contract Documents.
  - .9 Fit work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
  - .10 At penetrations of fire-rated wall, ceiling, or floor construction, completely seal voids with fire-rated material, acceptable to the authorities having jurisdiction, full thickness of construction element.
  - .11 Refinish surfaces to match adjacent finishes; for continuous surfaces refinish to the nearest intersection; for an assembly, refinish the entire unit.
  - .12 In the finished work there shall be no detectable difference in appearance between existing surfaces, patched surfaces and new surfaces.

## **10 SLEEVES, HANGERS AND INSERTS**

- .1 Co-ordinate the setting and packing of sleeves and supply and installation of hangers and inserts. Obtain Consultant's approval before cutting into structure.

**END OF SECTION**

**1 GENERAL**

- .1 Be responsible for the cleanliness of assigned work areas to the satisfaction of the Construction Manager. Maintain the work areas in a neat and orderly condition at all times.
- .2 Periodically, or when directed by the Construction Manager, remove from work areas rubbish and waste materials.
- .3 Burning or burying of rubbish and waste materials on site is not permitted.
- .4 Use only cleaning materials recommended by the manufacturer of the surface to be cleaned.
- .5 Use cleaning material only on surfaces recommended by the cleaning material manufacturer.

**2 CLEANING DURING CONSTRUCTION**

- .1 Keep work areas free from the accumulation of waste products, packaging and debris.
- .2 Remove waste material, packaging and debris from the site and deposit in waste container at the end of each working day or more often if required.
- .3 Keep dust and dirt to an acceptable level, as directed by the Construction Manager.
- .4 Remove oily rags, waste and other hazardous substances from the premises at the end of each working day or more often if required. of waste
- .5 Make arrangements with and obtain permits from authorities having jurisdiction for disposal and debris.
- .6 Upon verbal or written instruction from the Construction Manager, conduct clean-up as instructed.

**3 FINAL CLEANING**

- .1 Prior to Substantial Performance, remove surplus products, tools, construction machinery and equipment not required for the performance of the remaining Work.
- .2 Remove stains, dirt and smudges from finished surfaces.
- .3 Clean exposed finished surfaces in accordance with respective material manufacturers' recommendations.
- .4 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- .5 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fittings, walls, and floors and other surfaces.

**PROGRESS AND FINAL CLEANING**

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- .6 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
- .7 Wax, seal, shampoo or prepare floor finishes, as recommended by the manufacturer.
- .8 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .9 Broom clean and wash exterior walks, steps and surfaces.
- .10 Remove dirt and other disfiguration from exterior surfaces.
- .11 Clean and sweep roofs, gutters, areaways, sunken wells.
- .12 Sweep and wash clean paved areas.
- .13 Clean mechanical and electrical fixtures and other fittings of labels, wrappings, paper and other foreign material.
- .14 Replace heating, ventilation and air conditioning filters, if units were operated during construction.
- .15 Clean ducts, blowers and coils if heating, ventilation and air conditioning systems were operated without filters during construction.
- .16 Clean roofs, downspouts, and drainage systems.
- .17 When the Work is Totally Performed, remove surplus products, tools, construction machinery and equipment. Remove waste products and debris.

**END OF SECTION**



**WASTE MANAGEMENT AND DISPOSAL**

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**1 GENERAL**

- .1 Designate one person as "Waste Management Coordinator (WMC)" to be responsible for implementation of the waste management plan and ensuring compliance by all construction personnel with the requirements of this Section.
- .2 Comply with the Environmental Protection Act, Ontario Regulations O. Reg. 102/94 and O. Reg. 103/94 for waste management program on construction and demolition projects.

**2 WASTE MANAGEMENT PLAN**

- .1 The WMC shall develop and implement a waste management plan for the project to implement procedures to reduce, reuse and recycle materials to the maximum extent possible.
- .2 A copy of the waste management plan shall be posted in a conspicuous location where it can be readily seen by all construction personnel.

**3 WASTE DISPOSAL**

- .1 All construction personnel are required to conform to the waste management plan and implement throughout the project a materials source separation program to collect re-usable and recyclable materials in an orderly fashion for diversion from the general waste stream and alternative disposal at appropriate materials recycling and re-use facilities. The Contractor shall provide appropriate on-site disposal bins.
- .2 Collect and separate packaging for disposal at recycling facilities. Include paper, plastic, polystyrene, corrugated cardboard, metal banding, and other recyclable packaging materials.

**4 ENVIRONMENTAL PROTECTION**

- .1 Dispose of unused adhesive, sealant, volatile materials such as mineral spirits, oil or paint thinner, and other volatile materials which could be hazardous to the health, including empty containers, at an official hazardous materials collection site acceptable to the Consultant, in strict accordance with the requirements of the authorities having jurisdiction and in a manner which will protect construction personnel, visitors to the site, and the public from all such hazards.
- .2 Do not permit such materials to enter waterways, storm or sanitary sewers; do not dispose onto ground or other location that might pose a health or environmental hazard. Do not bury or burn rubbish and waste materials on site.

**END OF SECTION**

## **1 STARTING SYSTEMS**

- .1 Coordinate the schedule for start-up of various equipment and systems.
- .2 Notify the Consultant four (4) days prior to start-up of each item.
- .3 Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions which may cause damage.
- .4 Verify that tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- .5 Verify that wiring and support components for equipment are complete and tested.
- .6 Execute start-up under the supervision of the applicable manufacturer's representative and Contractor's personnel in accordance with the manufacturer's instructions.
- .7 When specified in individual specification Sections, require the manufacturer to provide an authorized representative to be present at the site to inspect, check, and approve equipment or system installation prior to start-up, and to supervise the placing of equipment or the system in operation.
- .8 Submit a written report in accordance with Section 01 33 00 "Submittal Procedures", stating that equipment or system has been properly installed and is functioning correctly.

## **2 DEMONSTRATION AND INSTRUCTIONS**

- .1 Demonstrate the operation and maintenance of equipment, products and systems to the Owner's personnel two weeks prior to the date of final inspection.
- .2 Demonstrate Project equipment and instruct in a classroom environment, by a qualified manufacturers' representative who is knowledgeable about the Project.
- .3 For equipment or systems requiring seasonal operation, perform a demonstration for other season within seven (7) months.
- .4 Utilize the operation and maintenance manuals as the basis for instruction. Review the contents of the manual with the Owner's personnel, in detail, to explain all aspects of operation and maintenance.
- .5 Demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, maintenance, and shutdown of each item of equipment at an agreed time, at the equipment location.
- .6 Prepare and insert additional data in the operations and maintenance manuals when the need for additional data becomes apparent during instruction.
- .7 Prepare and submit with the contract closeout submittals, a video of all demonstrations and instructions. Submit in DVD format.

**3 TESTING, ADJUSTING, AND BALANCING**

- .1 The Contractor shall pay for the services of an independent firm, acceptable to the Consultant, to perform testing, adjusting, and balancing.
- .2 Reports shall be submitted by the independent firm to the Consultant indicating observations and results of tests and indicating compliance or non-compliance with the requirements of the Contract Documents.

**END OF SECTION**

## **1 INSPECTION AND DECLARATION PROCEDURES**

- .1 Follow the recommended procedures concerning substantial performance of construction contracts and completion take-over of projects as prescribed in OAA/OGCA Document 100 "Take Over Procedures".

## **2 REINSPECTION**

- .1 Should status of the Work require reinspection by Consultant due to failure of Work to comply with the Contract Documents, the Owner will deduct the costs of reinspection services from payment to the Contractor.

## **3 FINAL CLEANING**

- .1 Refer to Section 01 74 13 "Progress and Final Cleaning".

## **4 ADJUSTING**

- .1 Adjust operating products and equipment to ensure smooth and unhindered operation.

## **5 PROJECT CLOSEOUT SUBMITTALS**

- .1 Prior to application for Certificate of Substantial Performance, submit the documentation the following documents, in accordance with the requirements Section 01 78 00 "Closeout Submittals" and the Contract Documents:
  - .1 Project Record Documents
  - .2 Operation and Maintenance Manual
  - .3 Warranties and maintenance service agreements
  - .4 Final shop drawings
  - .5 Specified spare parts and maintenance materials.
- .2 The Certificate of Substantial Performance will not be issued until the above documents and items have been submitted and are deemed by the Consultant to be acceptable.
- .3 The submission of the specified Contract Closeout Documents is a requirement of the Contract and failure to submit any item to the satisfaction of the Consultant will be deemed to be a deficiency under the Contract. Accordingly, the Owner will withhold a 5% of the Contract Price from payments due to the Contractor. The purpose of this provision is to ensure that Contract closeout documents are accurately and properly prepared and submitted.
- .4 This holdback will be released upon acceptance of all the required Contract closeout documents.

## **6 SYSTEMS DEMONSTRATION AND TRAINING**

- .1 Prior to final inspection, demonstrate the operation of each system to the Owner.

**CONTRACT CLOSEOUT PROCEDURES**

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- .2 Conduct a pre-handover briefing and walk-through of the completed Work for the Owner's operation and maintenance staff, prior to Substantial Performance of the Work or receipt of an Occupancy Certificate for partial or full occupancy.
- .3 Prior to an agreed handover date, arrange for and provide a full and complete hands-on instruction program for the Owner's operation and maintenance staff in accordance with Section 01 79 00 "Demonstration and Training".

**END OF SECTION**

**1 MAINTENANCE DATA**

- .1 Provide operation and maintenance data specified in individual sections of the specifications for inclusion in the operation and maintenance manual to be prepared by the Construction Manager.
- .2 Include the requirements of all Sections of the specifications for maintenance instructions.
- .3 Coordinate with the Construction Manager and provide the required number of copies in the format prescribed for the manual.
- .4 Provide one complete set of final shop drawings indicating corrections and changes made during fabrication and installation.

**2 THE TRADE CONTRACTOR'S SUBMITTAL**

- .1 Each trade Contractor shall submit to the Construction Manager the required documentation as applicable to his/her work for incorporation into the operation and maintenance manual.
- .2 Provide three (3) copies of the information and data. Each set shall be organized and presented in accordance with the format prescribed by the Construction Manager.
- .3 Neatly type lists and notes. Use clear drawings, diagrams and manufacturers' literature.
- .4 Include one complete set of final shop drawings (bound separately) indicating corrections and changes made during fabrication and installation.

**3 WARRANTIES**

- .1 Provide duplicate notarized copies of warranties called for in the applicable specifications Sections.
- .2 Refer to individual sections of the specifications for specific requirements of the warranties.
- .3 Execute and assemble transferable warranty documents from Subcontractors, Suppliers, and Manufacturers.
- .4 Submit warranties immediately after the issuance of the Certificate of Substantial Completion, to facilitate release of holdback monies.
- .5 For items of work delayed beyond the date of Substantial Performance of the Work, provide an updated submittal within ten (10) days after acceptance, listing the date of acceptance as the start of the warranty period.
- .6 If the validity of an extended warranty is related to proper maintenance and servicing of equipment, etc., provide full details of maintenance requirements.

#### **4 MAINTENANCE SERVICE**

- .1 Furnish service and maintenance of components indicated in specification sections for the specified time period commencing on the date of Substantial Performance.
- .2 Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- .3 Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- .4 Maintenance service shall not be assigned or transferred to any agent or Subcontractor without the Owner's prior written consent.

#### **5 AS-BUILT AND PROJECT RECORD DRAWINGS**

- .1 The Construction Manager will maintain on site one set of blackline prints for recording as-built conditions.
- .2 The Trade Contractor is required to record accurately on the As-Built Drawings significant deviations from the Contract Documents caused by site conditions and changes ordered by the Construction Manager or the Consultant.
- .3 Mark changes in red ink.
- .4 Where applicable, record the following information:
  - .1 Depths of various elements of foundations in relation to finish ground floor.
  - .2 Horizontal and vertical locations of underground utilities and appurtenances referenced to a permanent surface improvement.
  - .3 Locations of internal utilities and appurtenances concealed in the construction, referenced to visible and accessible features of the structure.
  - .4 Field changes of dimension and detail.
  - .5 Changes made by Change Order, Additional Instruction or order for minor change in the Work.
- .5 Each Trade Contractor shall provide the Construction Manager with the as-built information applicable to the work of his/her contract within 4 weeks of Substantial Performance, or earlier if required.

#### **6 PROJECT RECORD DRAWINGS**

- .1 At the completion of the project and prior to final inspection, the Construction Manager will submit the As-Built Drawings to the Consultant and the sub-consultants for the production of Project Record Drawings by revising the electronic drawing files to incorporate the as-built information provided by the various Trade Contractors and the Construction Manager.
- .2 The provision of complete information for the production of the Project Record Drawings is the responsibility of each Trade Contractor.

## **7 SPARE PARTS AND MAINTENANCE MATERIALS**

- .1 Quality:
  - .1 Spare parts, maintenance materials and special tools provided shall be new, not damaged or defective, and of the same quality and manufacture as materials and products provided in the Work.
  - .2 If requested, furnish evidence as to type, source and quality of products provided.
  - .3 Defective materials and products will be rejected, regardless of previous inspections. Replace materials and products at no additional cost to the Contract.
- .2 Pay costs of transportation.
- .3 Storage, handling and protection:
  - .1 Store spare parts, maintenance materials and special tools in a manner which will prevent damage, or deterioration.
  - .2 Store in original and undamaged condition with the manufacturer's seals and labels intact.
  - .3 Store components subject to damage from weather in weatherproof enclosures.
  - .4 Store paints and freezable materials in a heated and ventilated room.
  - .5 Remove and replace damaged products at no additional cost to the Contract and to the Construction Manager's and the Consultant's satisfaction.
- .4 Spare parts:
  - .1 Provide spare parts in quantities specified in the individual specification Sections.
  - .2 Provide items of the same manufacture and quality as items in the Work.
  - .3 Deliver to the Project Site, place and store where directed by the Construction Manager.
  - .4 Receive and catalogue all items. Submit an inventory listing to the Consultant. Include the accepted listings in the Operation and Maintenance Manual specified in Section 01 78 23.
  - .5 Obtain receipts for delivered products and submit receipts prior to final payment.
- .5 Maintenance materials:
  - .1 Provide maintenance and extra materials in quantities specified in individual specification Sections.
  - .2 Provide items of same the manufacture and quality as items in the Work.
  - .3 Provide materials from the same production run as installed materials.
  - .4 Deliver to the Project Site, place and store where directed by the Construction Manager.
  - .5 Receive and catalogue all items. Submit an inventory listing to the Construction Manager. Include the approved listings in the Operation and Maintenance Manual.
  - .6 Obtain receipts for delivered products and submit receipts prior to final payment.
- .6 Special tools:
  - .1 Provide special tools in quantities specified in the individual specification Sections.
  - .2 Provide items with tags identifying their function and the equipment with which they are associated.
  - .3 Deliver to the Project Site, place and store where directed by the Construction Manager.
  - .4 Receive and catalogue all items. Include the accepted listings in the Operation and Maintenance Manual.

**END OF SECTION**



## **1 SUMMARY**

- .1 This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers standard warranties on products and special warranties.
  - .1 Refer to the General Conditions for terms of the Contractor's period for correction of the Work.
- .2 Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and Subcontractors required to countersign special warranties with the Contractor.

## **2 WARRANTY REQUIREMENTS**

- .1 Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.
- .2 Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original and shall commence on the date of completion and acceptance of the corrective work.
- .3 Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.
- .4 Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
  - .1 Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- .5 Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

### **3 SUBMITTALS**

- .1 Submit written warranties to the Consultant prior to the date certified for Substantial Performance. If the Consultant's Certificate of Substantial Performance designates a commencement date for warranties other than the date of Substantial Performance for the Work, or a designated portion of the Work, submit written warranties upon request of the Consultant.
  - .1 When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Consultant within 15 days of completion of that designated portion of the Work.
  - .2 For items of work delayed beyond the date of Substantial Performance of the Work, provide an updated submittal within ten (10) days after acceptance, listing the date of acceptance as the start of the warranty period.
- .2 When the Contract Documents require the Contractor and a Subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner to the Consultant for approval prior to final execution.
  - .1 Refer to Divisions 02 through 33 Sections for specific content requirements and particular requirements for submitting special warranties.
- .3 Form of Submittal: At Final Completion compile 2 copies of each required warranty properly executed by the Contractor, Subcontractor, Supplier, or manufacturer and assembled by the Contractor. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
  - .1 Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 216 mm x 281 mm paper.
  - .2 Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.
  - .3 Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.
- .4 If the validity of an extended warranty is related to proper maintenance and servicing of equipment, etc., provide full details of maintenance requirements.
- .5 When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

**END OF SECTION**

## **1 ADMINISTRATIVE REQUIREMENTS**

- .1 Demonstrate operation and maintenance of equipment and systems to the Owner's personnel two weeks prior to date of interim completion.
- .2 The Owner will provide a list of personnel to receive instructions, and coordinate their attendance at agreed-upon times.
- .3 Preparation:
  - .1 Verify conditions for demonstration and instructions comply with requirements.
  - .2 Verify designated personnel are present.
  - .3 Ensure equipment has been inspected and put into operation in accordance with the requirements of the respective specification sections.
  - .4 Ensure testing, adjusting, and balancing has been performed and equipment and systems are fully operational.
- .4 Demonstration and Instructions:
  - .1 Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, and maintenance of each item of equipment at agreed upon times, at the equipment location.
  - .2 Instruct personnel in phases of operation and maintenance using operation and maintenance manuals as basis of instruction.
  - .3 Review contents of manual in detail to explain aspects of operation and maintenance.
  - .4 Prepare and insert additional data in operation and maintenance manuals when needed during instructions.
  - .5 Perform training as required to fully inform the Owner's personnel regarding the correct operation and maintenance of each item of equipment.

## **2 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit schedule of the time and date for demonstration of each item of equipment and each system two weeks prior to designated dates, for the Owner's approval.
- .2 Submit reports within one week after completion of demonstration, that demonstration and instructions have been satisfactorily completed.
- .3 Give time and date of each demonstration, with list of persons present.
- .4 Provide copies of completed operation and maintenance manuals for use in demonstrations and instructions.

## **3 QUALITY ASSURANCE**

- .1 When specified in individual Sections and/or when necessary for the proper and complete training of the Owner's personnel, arrange with the manufacturer to provide an authorized representative to demonstrate operation of equipment and systems:
  - .1 Instruct the Owner's personnel.
  - .2 Provide written report that demonstration and instructions have been completed.

**END OF SECTION**

**Part 1 General**

**1.1 RELATED DOCUMENTS**

- .1 Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

**1.2 SUMMARY OF WORK**

- .1 Work Included: The work of this Section includes the provision of all labour, materials, equipment and services required to demolish selected portions of the existing buildings, as necessary for the execution of the new work, as indicated on the drawings, as specified herein and as required for a complete project.

**1.3 REFERENCES**

- .1 Canadian Standards Association (CSA):
  - .1 CSA-S350-M1980(R2003), Code of Practice for Safety in Demolition of Structures.

**1.4 EXISTING CONDITIONS**

- .1 Should material resembling spray or trowel applied asbestos or any other designated substance be encountered in the course of demolition, stop work, take preventative measures, and notify the Consultant immediately. Do not proceed until written instructions have been received.
- .2 The portions of the buildings to be demolished to be based on the condition of the buildings at the time of examination prior to tendering.

**1.5 DEMOLITION DRAWINGS**

- .1 Where required by authorities having jurisdiction, submit for approval drawings, diagrams or details showing sequence of demolition work and supporting structures and underpinning.
- .2 Submit drawings stamped and signed by qualified professional engineer registered or licensed in the Province of Ontario.

**1.6 PROTECTION**

- .1 Prevent movement, settlement or damage to parts of the existing building to remain. Provide bracing, shoring and underpinning as required. Repair damage caused by demolition as directed by the Consultant.
- .2 Support affected structures and, if the safety of the structure being demolished appears to be endangered, take preventative measures and then cease operations and notify the Consultant.
- .3 Perform all work in accordance with Section 01 35 43 "Environmental Protection".

- .4 Prevent debris from blocking the surface drainage system, or mechanical and electrical systems which must remain in operation.
- .5 Ensure that demolition work does not contribute to excess air and noise pollution.
- .6 Fires and burning of waste or materials is not permitted on site.
- .7 Do not bury waste or materials on site.
- .8 Do not dispose of waste or volatile materials such as: mineral spirits, oil, petroleum-based lubricants, or toxic cleaning solutions into watercourses, storm or sanitary sewers. Ensure proper disposal procedures are maintained throughout project.
- .9 Do not pump water containing suspended materials into watercourses, storm or sanitary sewers, or onto adjacent properties.
- .10 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authorities.
- .11 Prevent extraneous materials from contaminating air beyond the application area by providing temporary enclosures during demolition work.
- .12 Cover or wet down dry materials and waste to prevent blowing dust and debris. Control dust on all roads.
- .13 Where the Work involves demolition of portions of the existing building immediately adjacent to other work which is designated to remain, take care to protect the adjacent work from damage during demolition.
- .14 Protect finished surfaces designated to remain. Where existing finishes are to be partially removed or abut other items which are to be demolished, make accurate, clean, straight cuts, true-to line, as required to facilitate the proper execution of the new work.

## **1.7 REGULATORY REQUIREMENTS**

- .1 Ensure the work is performed in compliance with all applicable provincial regulations.

## **Part 2 Products**

### **2.1 EQUIPMENT**

- .1 Equipment and heavy machinery to meet or exceed all applicable emission requirements.
- .2 Leave machinery running only while in use, except where extreme temperatures prohibit shutting machinery down.

**Part 3 Execution**

**3.1 PREPARATION**

- .1 Disconnect electrical and telephone service lines in the areas of the building where demolition work is to be carried out. Post warning signs on electrical lines and equipment which must remain energized during the period of demolition.
- .2 Disconnect and cap mechanical services where necessary.
- .3 Do not disrupt active or energized utilities that are designated to remain undisturbed.

**3.2 SAFETY CODE**

- .1 Do demolition work in accordance with CSA S350 governing construction/demolition safety regulations.
- .2 Blasting operations are not permitted during demolition.

**3.3 DEMOLITION**

- .1 Demolish parts of the structure as necessary to permit new construction work as indicated.
- .2 At the end of each day's work, leave the work in a safe and stable condition. Protect interiors from exterior elements at all times.
- .3 Demolish to minimize dusting. Where appropriate, keep materials wetted as directed by the Consultant.
- .4 Remove and dispose of demolished materials, except where noted otherwise and as directed by the Consultant, in accordance with Section 01 74 21 "Waste Management and Disposal" and in accordance with the requirements of the authorities having jurisdiction.
- .5 Protect existing items which are designated to be removed and stockpiled for renovation and re-use or to be handed over to the Owner.
- .6 Remove contaminated or dangerous materials, as defined by authorities having jurisdiction relating to environmental protection, from the site and dispose of in a safe manner to minimize danger at the site or during disposal.
- .7 Use natural lighting to work by wherever possible. Shut off all lighting except those required for security purposes at the end of each day.

**END OF SECTION**