
**GLEN ELM LIBRARY RENOVATION
REGINA PUBLIC LIBRARY
SPECIFICATIONS**

**Issued for Permit and Bids
2019.10.08**

144401775



00 01 00	Table of Contents	2
00 01 15	List of Drawing Sheets	2
DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS		
00 21 13	Instructions to Bidders	9
00 41 13	Bid Form.....	8
00 52 13	Agreement – Stipulated Price	1
00 72 13	General Conditions – Stipulated Price	1
00 73 00	Supplementary Conditions.....	14
DIVISION 01 - GENERAL REQUIREMENTS		
01 11 00	Summary of Work	1
01 23 00	Alternates	2
01 32 00	Construction Progress Documentation	4
01 33 00	Submittal Procedures.....	4
01 41 00	Regulatory Requirements.....	2
01 43 00	Quality Assurance	1
01 45 00	Quality Control	3
01 45 43	Fire Rated Separations, Assemblies and Materials.....	2
01 51 00	Temporary Utilities	3
01 52 00	Construction Facilities.....	2
01 61 00	Product Requirements	4
01 73 00	Execution.....	2
01 73 30	Cutting and Patching.....	3
01 74 00	Cleaning and Waste Processing	3
01 75 19	Testing, Adjusting and Balancing	2
01 78 00	Closeout Submittals	6
01 78 19	Maintenance Requirements.....	3
01 78 90	Project Record Documents.....	2
01 79 00	Demonstration and Training	3

END OF SECTION

ARCHITECTURAL

A000 COVER

A001 INFORMATION

A002 SPECIFICATIONS

A003 SPECIFICATIONS

A200 LIFE SAFETY PLAN, CODE ANALYSIS, DEMOLITION PLAN

A201 PARTIAL MAIN FLOOR PLAN, PARTIAL MAIN FLOOR RCP

A401 INTERIOR ELEVATIONS

ELECTRICAL

E001 ELECTRICAL SYMBOL LEGEND & DETAILS

E002 ELECTRICAL SPECIFICATIONS

E100 ELECTRICAL LAYOUTS

MECHANICAL

M001 BASEMENT & MAIN FLOOR MECHANICAL PLANS, SCHEDULES AND SPECIFICATIONS

END OF DOCUMENT

1. BIDS

- .1 Bids for: Glen Elm Library Renovation
Regina Public Library
Regina, Saskatchewan
Project No. 144401775

submitted in duplicate, in accordance with the drawings and specifications included with the bid documents, will be received by the Owner, addressed as follows:

Glen Elm Library Renovation
Regina Public Library
c/o **Stantec Architecture Ltd.**
400 – 1820 Hamilton Street
Regina, Saskatchewan
S4P 2B8

until 2:00 p.m. Central Standard Time – October 22, 2019. Bids received after the stated closing time will be returned unopened to the bidder. The time piece at the location for receiving bids shall be the only measure for the exact time.

- .2 Enclose Bids in a sealed, opaque envelope addressed as above and marked:

BIDS
Glen Elm Library Renovation
Regina Public Library
Regina, Saskatchewan
Project No. 144401775

- .3 Submit Bids in duplicate on the bid form provided, fully filled out in ink or typewritten with signatures in longhand. Complete bids without delineation, alteration or erasures.
- .4 Bidders shall inspect and examine the site and its surroundings and shall satisfy themselves as to the form and nature of the site, nature of the work and materials necessary for the completion of the work, the means of access to the site, accommodation required, and shall have obtained all necessary information as to risks, contingencies and other circumstances which may influence or affect respective bid.
- .5 Quotations by "fax" will not be considered. No oral or telephone proposals will be considered.

Where a formal bid has been received, amendments thereto by fax (306) 781-6500 are acceptable, provided that such amendments are signed, sealed and also received at place of tender closing prior to closing time. Any change resulting in an increase in the bid price prior to closing must be substantiated by a suitable increase in the security deposit (except where a prescribed amount is indicated).

- .6 The Instructions to Bidders shall form part of the contract documents.

2. BID INTENT

The intent of this bid call is to obtain an offer to perform work to complete the interior

renovation of the Regina Public Library - Glen Elm Branch, for a Stipulated Price contract, in accordance with the Contract Documents.

3. CONTRACT DOCUMENTS IDENTIFICATION

- .1 The Contract Documents are identified as:

Glen Elm Library Renovation
Regina Public Library
Project No: 144401775

as prepared by the Prime Consultant Stantec Architecture Ltd. and their sub-consultants, and listed in the Table of Contents.

4. BID AND CONTRACT DOCUMENTS

- .1 Bid Documents: The Contract Documents supplemented with Instructions to Bidders and Bid Supplementary Forms identified, including Appendices.
.2 Contract Documents: Defined in: CCDC 2 (2008) - Stipulated Price.

5. TAXES & DUTIES

- .1 Bidders shall allow for and include in their respective **Base Bid** all taxes in force at date of bid submission, except GST (Goods and Services Tax).

6. GENERAL/SUPPLEMENTARY CONDITIONS AND GENERAL REQUIREMENTS

- .1 All bidders shall acquaint themselves thoroughly with all Conditions and Requirements, and make necessary allowances in the Bids, for items affecting their respective responsibilities and total completion of the work.

7. INTERPRETATION OF DOCUMENTS

- .1 Ascertain the Drawings, Specifications, Addenda, etc., being used for bidding purposes are intact in all respects.
.2 To verify the required sections and pages for the project refer to "Index" bound into these Specifications.
.3 Bidders shall familiarize themselves, and comply with these documents.
.4 Bidders finding contradictions or discrepancies in, or omissions from drawings, schedules, specifications or other documents, or having any doubts as to the meaning or intent of any part thereof, shall notify the Consultant not less than ten (10) days prior to Bid closing, who will subsequently issue written instructions by Addendum.
.5 Neither the Consultant nor the Owner will be responsible for oral instructions. Addenda or corrections issued during the time of bidding shall become part of the Contract Documents.

- .6 In the event of variance between the Specifications, Schedules and Drawings, bidders shall base their respective bid on that product, material or method which is of greater cost (unless such variance is clarified in addenda form). After the contract has been awarded, any variance shall be brought to the Consultant's attention for decision, whose decision will be final.
- .7 In the event that the product, material or method chosen is less cost than that estimated, such amount shall be credited to the Owner.

8. INQUIRIES

- .1 Direct inquiries regarding the work and these documents to:
 - .1 Architectural: STANTEC ARCHITECTURE LTD.
sandra.enns-arthur@stantec.com
Ms. Sandra Enns-Arthur
 - .2 Mechanical: STANTEC CONSULTING LTD.
jeff.osborne@stantec.com
Mr. Jeff Osborne
blaine.quiring@stantec.com
Mr. Blaine Quiring
 - .3 Electrical: STANTEC CONSULTING LTD.
ian.walker@stantec.com
Mr. Ian Walker
steven.romanow@stantec.com
Mr. Steven Romanow

9. SECURITY DEPOSIT

- .1 Bids shall be accompanied by a security deposit as follows:
 - .1 Bid bond or a certified cheque in the amount of 10% of the bid price.
 - .1 Endorse the Bid Bond or certified cheque in the name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.
 - .2 The security deposit will be returned after delivery to the Owner of the required Performance and Labour and Materials Payment Bonds by the accepted bidder.
 - .3 If no contract is awarded, all security deposits will be returned.

10. CONSENT OF SURETY

- .1 Submit with the Bid Form and Bid Bond, a Consent of Surety stating that the surety providing the Bid Bond is willing to supply the Performance and Labour and Materials

Payment Bond required.

- .2 Include the cost of bonds in the Bid Price.

11. PERFORMANCE ASSURANCE

- .1 The accepted bidder shall provide a 50% Performance Bond and a 50% Labour and Material Payment Bond. Bonds shall remain in full force and effect for twelve (12) months after issuance of Final Certificate for Payment.
- .2 Include the cost of bonds in the Bid Price.

12. BID SIGNING

- i. The Bid Form shall be signed under seal by the bidder.
- ii. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
- iii. 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.
- iv. Limited Company: Signature of a duly authorized signing officer(s) in their normal signatures. Insert the officer's 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 the President-Secretary-Treasurer of the company, a copy of the by-law resolution of the Board of Directors authorizing them to do so, must also be submitted with the Bid in the Bid envelope.
- v. Joint Venture: Each party of the joint venture shall execute the Bid under their respective seals in a manner appropriate to such party as described above, similar to the requirements of a Partnership.

13. APPENDICES TO THE BID FORM

- .1 Appendix 'A' - Contract Documents: Include a complete listing of all documents and information issued by which the Bid Price was derived.
- .2 Appendix 'B' - Subcontractors: Include the names of all Subcontractors and the portion(s) of the Work the Bidder will perform.
- .3 Appendix 'C' – Alternatives / Separate Prices: Include the cost variation to the Bid Price applicable to the work described in Section 01 20 00.

14. OWNER

- .1 Wherever reference is made throughout these Specifications to "The Owner", it shall mean:

REGINA PUBLIC LIBRARY

15. WORK START/COMPLETION

- .1 Work shall commence immediately upon award and shall be full scale and continuous until Final completion. The Owners desire is to have substantial completion by Date TBD.

16. APPROVED SUBCONTRACTORS

- .1 All subcontract bids are to be approved by the Owners prior to signing of contract. The Owners reserve the right, subject to requirements in the General Conditions of the Contract to accept or reject subcontractor at price received. Adjustment of General Contract price will be in accordance with net price difference between subcontract price received and that proposed by the Owner.

17. EQUIVALENTS/ALTERNATES

- .1 Materials or products specified by name of manufacturer, brand, trade names or catalogue reference shall be the basis of the bid and shall be furnished under the Contract. Where two or more materials are named or "approved" in accordance with this Article, the choice of these shall be optional with the Bidder, at time of bidding only. Upon award of Contract, the successful bidders shall identify product or material selected for bidding. Once identified, substitutions (specified or approved) will not be permitted.
- .2 Approval Requests:
 - .1 Requests for an Approved Equal may be submitted to the Consultant no later than five (5) calendar days before closing of subtrade bids. Submit full samples, if requested, product literature and specifications to completely describe the item to substantiate "equal" status, for Consultant's consideration.
 - .2 The purpose of approving manufacturers and/or suppliers of products, as "approved equal" to those specified, is to encourage equitable and competitive bidding.
 - .3 The Consultant does not presume to be an authority on the various performance criteria on all products available and time constraints during the Bid Phase, do not permit detailed evaluation of requests for "approved equals".
 - .4 Approvals will be given in good faith, on the premise that manufacturers and/or suppliers have examined the Bid documents and have assured themselves that their requests for approval are based on absolute conformance with all codes or criteria shown and/or specified.
 - .5 Should, after award of Contract, an "approved equal" be subsequently found in detrimental variance with specified product, the manufacturer and/or supplier shall be held financially responsible for remedial action and Owners inconvenience.
- .3 All other materials or equipment proposed for use which are not given equal status may be approved as alternates. And will be included in subsequent addendum as Approved Alternates. Principle bidders shall then quote a separate price showing the amount to be added or deducted from his base price for the use of Approved Alternates.
- .4 The contractor is responsible for coordination with all subcontractors and the inclusion in their submission of any and all modifications/adjustments to the work and/or price resulting from the proposed alternatives.
- .5 All approvals are granted on the clear understanding that the applicant is responsible for any

costs incurred in adapting the construction to permit use of the product in lieu of that specified and shown on drawings.

18. SITE TOUR

- .1 A briefing for contractors and a tour of the construction site is scheduled for Wednesday, October 16, 2019 at 10:30 am.

19. DURATION OF OFFER

- .1 Bids shall remain open to acceptance and shall be irrevocable for a period of 60 (sixty) days after the bid closing date.

20. ACCEPTANCE OF OFFER

- .1 The Owner reserves the right in its absolute discretion to accept any bid which it deems most advantageous to itself and the right to reject any or all bids, in each instance without giving any notice.
- .2 The lowest or any bid will not necessarily be accepted. In no event will the Owner be responsible for the costs of preparation or submission of a bid.
- .3 After acceptance by the Owner, the Consultant on behalf of the Owner, will issue to the successful bidder, a written bid acceptance.
- .4 After a bid has been accepted, all rejected bids will be returned to the respective bidders with submitted bid securities.

END OF SECTION

stipulated price bid form

Project:

**Glen Elm Library Renovation
Regina Public Library
Regina, Saskatchewan**

BID

PROJECT NO: 144401775

PROJECT TITLE
AND LOCATION: Glen Elm Library Renovation

Regina Public Library

Regina, Saskatchewan

SUBMITTED TO: Regina Public Library
(OWNER)

We, _____
(Company Name)

of _____
(Business Name)

having examined the Bid Documents as listed in Appendix "A" to this Bid, and Addenda No. _____ to
No. _____ inclusive, all as issued by Stantec Architecture Ltd. (Consultant)
and having visited the Project Site; hereby offer to enter into a Contract to perform the Work required by
the Bid Documents for following:

CONSTRUCTION VALUE (in Canadian funds) of:

Dollars(\$ _____)

and **GST** of:

Dollars(\$ _____)

for a **TOTAL STIPULATED PRICE** of:

Dollars(\$ _____)

The stipulated price includes any specified cash and contingency allowances and the applicable taxes in
force at this date except as may be otherwise provided in the Bid Documents.

Appendices to Bid:

The information on Subcontractors, Unit Prices, Alternative Prices and Separate Prices as called for in the Bid Documents is provided in the attached Appendices and forms an integral part of this Bid.

Declarations:

The undersigned bidder also understands, agrees and declares as follows:

- a) We agree to perform the Work in accordance with the Contract Documents commencing immediately upon award and to attain Substantial Completion of the Work as certified by the Consultant by _____, _____ and total performance of the work by _____, _____.
- b) Where quantities are included in the Tender and Unit Prices are requested, it is understood that:
 - I. The actual quantities involved in carrying out the Work may be greater or less than the said estimates of quantities set forth in this Bid Form.
 - II. Payment of work carried out on a Unit Price basis will be made on the basis of actual quantities as determined by the Consultant at the Unit prices set forth in this Bid Form for each respective item of Unit Price Work, which shall be compensation in full for such Work notwithstanding variations between actual and estimated quantities.
 - III. No claim will be made on account of any loss of anticipated profits, for delays in the completion of the work or any portion of the Work or for any other matter of thing arising from or related, directly or indirectly, to any variation between the estimated quantities as determined by the Consultant.
 - IV. In arriving at the Unit Prices set forth in this Bid Form the bidder has made his own estimates of the respective quantities involved and has not relied upon the estimates shown in the Unit Price Tables.
- c) No person, firm or corporation other than the bidder has any interest in this Tender or in the proposed Contract for which this Tender is made and to which it relates.
- d) This Bid is open to acceptance for a period of sixty (60) days from the date of bid closing.
- e) If this Tender is accepted within sixty (60) days, to execute a formal contract on the Canadian Construction Document (CCDC#2, 2008) within seven (7) days of acceptance.
- f) This Tender is made by the bidder without any connection, knowledge, comparison of figures or arrangement with any other person or persons making a Tender for the same Contract, and is in all respects fair and without collusion or fraud.
- g) Communications to the bidder of the Notice of Acceptance by delivery, telex or posting by prepaid mail shall constitute acceptance of this Tender. If sent by mail, acceptance will date from posting.
- h) If the Owner fails to make payments to the Contractor as they become due under the terms of the Contract or in an award by arbitration of court, interest of Prime Plus Two percent (____ 2 ____%) per annum on such unpaid amounts shall also become due and payable until payment.
- i) Failure to substantially perform the work within the stated time indicated in (a) shall entitle the Architect to be paid a sum in the amount of \$500.00 for each extra site visit per consultant. This amount shall be retained by the Owner and be deducted from the Contract stipulated price.

Payment shall be made monthly to the Architect and be deducted from the current Certificate for Payment payable to the General Contractor.

A. The Site Superintendent employed by us to provide full time on-site supervision to this project (subject to Owner's approval) is: _____ who has provided similar services on these projects:

.1 Project _____, Approximate Project Value: \$

.2 Project _____, Approximate Project Value: \$

.3 Project _____, Approximate Project Value: \$

B. The Office Supervisor/Co-ordinator employed by us to provide Administration Services to this project (subject to Owner's approval) is: _____ who has provided similar services on these projects:

.1 Project _____, Approximate Project Value: \$

.2 Project _____, Approximate Project Value: \$

.3 Project _____, Approximate Project Value: \$

Accompanying this Tender, we are submitting:

- (1) A security deposit in the form of a certified cheque, made payable to the Owner, in the amount of \$ _____.
- OR
- (2) Bid Bond in the amount of \$ _____.

We agree that if this Tender is accepted within sixty (60) days from the closing date, whether any other Tender has previously been accepted or not, and we decline to enter into a contract in accordance with this Tender, then:

- (1) If we have submitted a security deposit in the form of a certified cheque, it shall be forfeited;
- OR
- (2) If we have submitted a Bid Bond, the Surety shall be liable in accordance with the terms of the Bond.

PERFORMANCE BOND AND LABOUR AND MATERIALS BOND

If we are notified of the acceptance of this tender within the time aforementioned, we the undersigned will provide such bonds as are required by the Contract documents.

Signatures

Signed, sealed and submitted for and on behalf of:

(Name)

(Street Address or Postal Box Number)

(City, Province & Postal Code)

Apply SEAL above

Signature: _____

Name & Title: _____
(Please Print or Type)

Witness: _____

Dated at _____ this _____ day of _____, 20_____

N.B. Where legal jurisdiction or Owner requirement calls for proof of authority to execute this Bid, proof of such authority in the form of a certified copy of a resolution naming the person or persons in questions as authorized to sign this Bid for and on behalf of the Corporation or Partnership should be attached.

APPENDIX "A" to BID
(To be prepared by the Consultant)

PROJECT NO. 144401775

PROJECT TITLE
AND LOCATION: Glen Elm Library Renovation
Regina Public Library
Regina, Saskatchewan

Bid
Submitted By: _____

LIST OF BID DOCUMENTS

The following is the list or description of the Bid Documents referred to in the Bid for the above named Project.

- .1 Refer to Table of Contents.
- .2 Refer to Section 00 01 15 List of Drawings.
- .3 All addenda issued during bid period.

APPENDIX "B" to BID

PROJECT NO. 144401775

PROJECT TITLE
AND LOCATION: Glen Elm Library Renovation
Regina Public Library
Regina, Saskatchewan

Bid
Submitted By: _____

LIST OF SUBCONTRACTORS

The following are the Subcontractors we propose to use for the Divisions or Sections of Work listed hereunder.
(If not used, bar and initial the space below)

Division or Section or Work	Name of Subcontractor
Concrete Work	
Doors and Frames	
Hardware	
Wood Doors	
Gypsum Wallboard	
Flooring	
Acoustic Tile	
Painting	
Millwork	
Windows	
Mechanical	
Electrical	

APPENDIX "C" to BID

PROJECT NO. 144401775

PROJECT TITLE
AND LOCATION: Glen Elm Library Renovation
Regina Public Library
Regina, Saskatchewan

Bid
Submitted By: _____

ALTERNATIVE PRICES

The following are our Alternative Prices for the work listed hereunder. Such work and amounts are additions or deductions to the Bid Price. These Alternative Prices do NOT include Value Added Taxes.

Description of separate Price Work Alternative Price Amount (\$)

1. Not used.

SEPARATE PRICES

The following are our Separate Prices for the work listed hereunder. Such work and amounts are NOT included in our Bid Price. These Separate Prices do NOT include Value Added Taxes.

Description of separate Price Work Separate Price Amount (\$)

1. Base Bid: frameless glass in contract including all hardware and electrical connections.
2. Separate Price: Delete frameless glass wall, door and its door hardware including the card reader and exit sign. Any work associated with the frameless glass wall including, but not limited to the demolition of the display case and the relocation of the fire alarm annunciator panel.

Part 1 General

1.1 AGREEMENT DECLARATION

- .1 CCDC 2 - 2008 Edition, Stipulated Price Contract, as may be amended, forms the basis of Agreement between the Owner and Contractor.

- .2 This Agreement is bound to the CCDC 2 - 2008 Edition, Definitions and CCDC 2 General Conditions.

END OF SECTION

1. CONTRACT CONDITIONS

- .1 The Agreement, Definitions, and General Conditions of the Stipulated Price Contract of the Canadian Construction Documents Committee Standard Construction Document CCDC 2 – 2008 will be the basis for the Contract for this Work, as amended by Section 00 73 00 Supplementary Conditions.

END OF SECTION

1. CONTRACT CONDITIONS

.1 Refer to Section 00 72 13 General Conditions. The Agreement, Definitions, and General Conditions of the Stipulated Price Contract of the Canadian Construction Documents Committee Standard Construction Document CCDC 2 – 2008 is amended herein.

2. ARTICLE A-4 CONTRACT PRICE

.1 Article A - 4, 4.2: Add into blank (of "5" %).

3. ARTICLE A-5 PAYMENT

.1 Article A - 5, 5.1: Add into blanks "ten" percent ("10" %).

.2 Article A - 5, 5.3.1(2): Add into blanks "The Royal Bank of Canada".

4. ARTICLE A-7 LANGUAGE OF THE CONTRACT

.1 Article A - 7.1: Delete paragraph 7.1.

5. DEFINITIONS

.1 Article 20 'Substantial Performance of the Work' is amended by adding the following sentence:

"Substantial Performance of the Work shall be and is interpreted to include and mean ' Substantial Performance of the Contract or Subcontract' ".

.2 Add 27 - **Subcontract**: Means any agreement between the Contractor and a Subcontractor, or between two or more Subcontractors, relating to the provision of services or materials and includes any amendment to that agreement."

.3 Add 28 - **Engineer**: Where the word "Engineer" appears in the Contract Documents it refers to the person, firm or corporation engaged by the Consultant (Architect) as an engineering consultant for the purpose of the Contract and as such he is entitled to have free entry for inspection purposes to all work, but except in emergencies, all orders in connection with the work shall be issued through the Consultant's office.

.4 Add 29 - **Construction Price (Costs)**: "The Construction Price (Costs), is the total amount of the "Contract Price", as defined under Article A.4 of the Agreement, plus the GST."

6. GENERAL CONDITIONS

PART 1 GENERAL PROVISIONS

.1 GC 1.1 CONTRACT DOCUMENTS

.1 Article 1.1 is amended by adding the following thereto:

1.1.11 As-built record drawings must be notated with changes as the work progresses and in accordance with the specifications. The drawings shall be made available for viewing at the request of the Consultant or Engineers.

PART 2 ADMINISTRATION OF THE CONTRACT

.2 GC 2.3 REVIEW AND INSPECTION OF THE WORK

.1 Article 2.3 is amended by adding the following thereto:

2.3.8 The Consultant will make intermittent visits to the site to familiarize himself generally with the progress and quality of the work, and to determine in general if the work is proceeding in accordance with the contract documents. During such visits he will not be required to make exhaustive or continuous on-site inspections to check the quality of quantity of the work, and he will not be responsible for the contractor's failure to carry out the construction work in accordance with the contract documents. On the basis of his observations while at the site, he will keep the Owner informed of the progress of the work of contractors, and he may reject work as failing to conform to the contract documents.

It is not incumbent upon the Consultant to notify the contractor when to begin, when to cease or resume work, or to give early notice of the rejection of faulty work, or in any way to supervise in such a manner as to relieve the contractor of responsibility or the consequences of neglect or carelessness by him or his employees or subordinates. The Consultant shall have the authority to act on behalf of the Owner only to the extent expressly provided in these contract documents.

2.3.9 The carrying out of any inspections, or the failure to carry out inspections, shall not impose any obligations or responsibility for the work upon the Owner or the Consultant nor shall they relieve the contractor of responsibility to complete the works in accordance with the contract documents.

PART 5 PAYMENT

.3 GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

.1 Article 5.2 is amended by adding the following thereto:

5.2.8 With the exception of the first claim, each progress claim must be accompanied by a statutory declaration that all wages and account for materials, sub-contractors and suppliers, as well as all payments required by the Workers' Compensation Act, 2013, have been paid up to date of the preceding progress claim.

5.2.9 The Contractor and Sub-Contractor shall submit with his final application for payment a letter from the Worker's Compensation Board stating that he is in good standing and that all assessments have been paid.

.4 GC 5.3 PROGRESS PAYMENT

.1 Article 5.3.2 is amended by deleting the reference to "5 days" and substituting "10 days".

.2 Article 5.3.3 is amended by the following:

Delete the wording "20 calendar days" and substitute therefore the wording "thirty (30) calendar days."

.5 GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

.1 The following articles are added as additional articles to GC 5.4, namely:

- 5.4.4 The provisions of this article shall apply, with necessary amendment and modification, to the certification of Substantial Performance of the Work under any Subcontract.
- 5.4.5 The parties agree that a request by a Contractor or Subcontractor for certification of the Substantial Performance of the Work under the Contract or Subcontract and the certificate of the Consultant issued with respect thereto shall be in the form prescribed by the regulations to the Builders' Lien Act for Saskatchewan. A request made by the Contractor for certification of the Substantial Performance of the Work under the Contract shall include a declaration by the Contractor that the Contract has been substantially performed. Where the request is by the Subcontractor, it shall be accompanied by a declaration by the Subcontractor and the Contractor that the Subcontract has been substantially performed.
- 5.4.6 Where there has been certification of Substantial Performance of the Work under a Contract or Subcontract the Consultant, by personal service or by registered mail within 7 days after the day the certificate was signed, shall give a copy of the certificate to the Owner and the Contractor and to all persons providing services or materials in the performance of the Contract or Subcontract and who have requested the Consultant in writing, by personal service of a request, with a return address, to give them a copy of the certificate.

.6 GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

- .1 Article 5.5.3 is deleted and the following substituted therefor:
- 5.5.3 The parties acknowledge that under the provisions of subsection 38(2) of The Saskatchewan Builders' Lien Act, the Owner must and shall establish, at a chartered bank, credit union or trust and loan corporation, a holdback trust account and pay the holdback into the trust account. The holdback trust account shall be administered jointly with the Contractor. The parties agree that they shall make payment from the joint holdback trust account in accordance with the terms and conditions of this Contract and The Builders' Lien Act.

PART 6 CHANGES IN THE WORK

.7 GC 6.2 CHANGE ORDER

- .1 Clause 6.2.1 of GC 6.2 is amended by adding the following clause:

The Contractor's maximum aggregate overhead, supervision and profit shall conform to the following table:

Value of change	Markup for overhead, supervision and profit of own work	Markup for overhead, supervision and profit on subcontractors' work
\$0 to \$4,999	10%	10%
\$5,000 to \$9,999	10%	8%
\$10,000 to over	10%	6%

.2 Clause 6.2 of the General conditions is amended by adding the following clause:

6.2.3 Labour costs shall be the actual rates paid to the workman, plus the mark-up to cover Worker's Compensation premiums, holiday pay, insurance, Canada Pension Plan, and other statutory changes in labour.

.8 GC 6.3 CHANGE DIRECTIVE

.1 Clause 6.3.1 is amended by adding the following clause:

The Subcontractor's maximum aggregate overhead and profit shall be no more than 10% of the cost of the contemplated change.

The Contractor's maximum aggregate overhead, supervision and profit shall conform to the following table:

Value of change	Markup for overhead, supervision and profit of own work	Markup for overhead, supervision and profit on subcontractors' work
\$0 to \$4,999	10%	10%
\$5,000 to \$9,999	10%	8%
\$10,000 to over	10%	6%

.2 Clause 6.3.2 is amended by deleting 6.3.2 and substituting the following:

6.3.2 Upon receipt of a Change Directive, the Contractor shall proceed promptly with the change in the work. The adjustment in Contract Price for a change carried out by way of a Change Directive shall be determined on the basis of cost of expenditures and savings to perform the work attributable to the change. The Contractor's maximum aggregate overhead and profit shall be no more than 10% of the cost of the change.

.9 GC 6.5 DELAYS

.1 Article 6.5.1 is amended by adding the words "and Owner" at the end of the first sentence.

.2 Article 6.5.2 is amended by adding the words "and Owner" at the end of the first sentence.

.3 Article 6.5.3 is amended by adding the words "and Owner" at the end of the first sentence.

PART 8 DISPUTE RESOLUTION

.10 GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

.1 Article 8.2 is amended by adding the following thereto:

- 8.2.9 The parties acknowledge and agree that the provisions of this article 8.2 shall be amended to conform with the requirements and provisions for arbitration as contained in section 85 of The Builders' Lien Act for Saskatchewan.

PART 10 GOVERNING REGULATIONS

.11 GC 10.2 LAWS, NOTICES, PERMITS AND FEES

- .1 Delete sentence 10.2.2 and replace with the following:

10.2.2 The Contractor shall obtain and pay for all permits, licenses, certificates, fees and governmental inspections or notices required for the performance of the Work which are in force at the date of tender closing, but this shall not include the obtaining of permanent easements or rights of servitude.

.12 GC 12.3 WARRANTY

- .1 Article 12.3 is amended by adding the following thereto:

12.3.7 Approximately one month prior to expiration of the one year warranty period an inspection of the Work will be made by the Consultant, accompanied by the Contractor and Owner. Any deficiencies found in materials and/or workmanship shall be corrected by the Contractor prior to the expiration of the Performance Bond .

.13 GC 13 – TITLE OF MATERIALS

- .1 Add the following Article:

- .1 Title to all materials shall, unless otherwise agreed in writing, vest in the Owner absolutely upon delivery to site or upon payment thereof, whichever shall happen first.
- .2 Title to any materials which are rejected by the Consultant, or are ordered by him to be removed from the Place of the Work for any reason, shall revert in the Contractor immediately upon receipt of notice of rejection or order for removal.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Title and description of Work.
- .2 Contract Method.
- .3 Work sequence.
- .4 Contractor use of premises.

1.2 RELATED SECTIONS

- .1 Section 01 33 00: Submittal Procedures.

1.3 WORK COVERED BY CONTRACT DOCUMENTS

- .1 Work of this Contract comprises renovation to the Regina Public Library – Glen Elm Branch in Regina, SK, and is further identified as:

Glen Elm Library Renovation
Regina, SK
Regina Public Library

1.4 CONTRACT METHOD

- .1 Construct Work under single, stipulated price.

1.5 CONTRACTOR USE OF PREMISES

- .1 Contractor has use of site until Substantial Performance. Owner will occupy building during renovations.

1.6 PHASED WORK

- .1 One existing washroom must remain in service while the others are renovated. Once new washrooms are in service, the last existing washroom can be renovated. Refer to drawings for possible phasing.
- .2 Door / hardware removal and replacement must be completed after hours
- .3 Some of the plumbing work required in the basement ceiling space for the main floor renovation will require the removal and replacement of a section of supply air ductwork. The ventilation system will be required to be shut down during this period. This work is required to be done after hours. Coordinate timing of this work with owner.
- .4 Hours of operation are:
 - Sunday: **12:00 pm – 5:00pm**
 - Monday: **Closed**
 - Tuesday: **9:30 am – 6:00 pm**
 - Wednesday: **1:00 pm – 9:00 pm**
 - Thursday: **9:30 am – 9:00 pm**

Friday: 9:30 am – 6:00 pm
Saturday: 9:30 am – 5:00 pm

Part 2 **Products**
2.1 **NOT USED**

Part 3 **Execution**
3.1 **NOT USED**
 .1

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Product Installation Alternatives to Agreement.
- .2 Incorporation of accepted Alternatives into Agreement.

1.2 RELATED SECTIONS

- .1 Section 00 21 13- Instructions to Bidders.
- .2 Section 00 41 13 – Bid Form.

1.3 REFERENCES

- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 23-2003, A Guide to Calling Bids and Awarding Contracts.

1.4 REQUIREMENTS

- .1 Referenced specification Sections stipulate pertinent requirements for products and methods to achieve the Work stipulated under each Alternative.
- .2 Coordinate affected related Work and modify surrounding Work to integrate the Work under each Alternative.

1.5 AWARD/SELECTION OF ALTERNATIVES

- .1 Indicate variation of Bid Price for Alternatives described below and listed in Bid Form. Note that this form requests a 'difference' in Bid Price by adding to or deducting from the base Bid price.
- .2 Alternate prices included in the Contract shall include all necessary supply, installation, products, equipment, services, materials, labour, overhead, profit and taxes, but exclude *Value Added Taxes*.

1.6 ALTERNATES/SEPARATE PRICES

- .1 Alternate No. 1:
 - .1 Not Used
- .2 Separate Price No. 1:
 - .1 Base Bid: frameless glass in contract including all hardware and electrical connections.
 - .2 Separate Price: Delete frameless glass wall, door and its door hardware including the card reader and exit sign. Any work associated with the frameless glass wall including, but not limited to the demolition of the display case and the relocation of the fire alarm annunciator panel.

Part 2 Products

2.1 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Schedules, form, content, submission.
- .2 Critical path scheduling.
- .3 Progress photographs.
- .4 Submittals schedule.

1.2 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 SCHEDULES

- .1 Submit schedules as follows:
 - .1 Submittal Schedule for Shop Drawings and Product Data.
 - .2 Submittal Schedule for Samples.
 - .3 Submittal Schedule for timeliness of Owner-furnished Products.
 - .4 Product Delivery Schedule.
 - .5 Shutdown or closure activity.
- .2 Schedule Format
 - .1 Prepare schedule in form of a horizontal Gantt bar chart.
 - .2 Provide a separate bar for each major item of work.
 - .3 Split horizontally for projected and actual performance.
 - .4 Provide horizontal time scale identifying last Working Day of each week.
 - .5 Format for listings: Chronological order of start of each item of work.
 - .6 Identification of listings: By systems description.
- .3 Schedule Submission
 - .1 Submit initial format of schedules within fifteen (15) working days after award of Contract.
 - .2 Submit schedules in electronic format, forward through e-mail files.
 - .3 Consultant will review schedule and return review copy within ten (10) days after receipt.
 - .4 Resubmit finalized schedule within seven (7) days after return of review copy.
 - .5 Submit revised progress schedule with each application for payment.
 - .6 Distribute copies of revised schedule to:
 - .1 Job site office.
 - .2 Subcontractors.
 - .3 Other concerned parties.

- .7 Instruct recipients to report to Contractor within ten (10) days, any problems anticipated by timetable shown in schedule.

1.4 CONSTRUCTION PROGRESS SCHEDULING

- .1 Submit initial schedule in duplicate within fifteen (15) days after date established in Notice to Proceed.
- .2 Revise and resubmit as required.
- .3 Submit revised schedules with each Application for Payment, identifying changes since previous version.
- .4 Submit a computer generated horizontal bar chart with separate line for each [major portion of Work or operation] [section of Work], identifying first work day of each week.
- .5 Show complete sequence of construction by activity, identifying Work of separate stages and other logically grouped activities. Indicate the early and late start, early and late finish, float dates, and duration.
- .6 Indicate estimated percentage of completion for each item of Work at each submission.
- .7 Indicate submittal dates required for shop drawings, product data, samples, and product delivery dates, including those furnished by Owner and required by Allowances.
- .8 Include dates for commencement and completion of each major element of construction [as follows].
 - .1 Site clearing.
 - .2 Site utilities.
 - .3 Foundation Work.
 - .4 Structural framing.
 - .5 Special Subcontractor Work.
 - .6 Equipment Installations.
 - .7 Finishes.
- .9 Indicate projected percentage of completion of each item as of first day of month.
- .10 Indicate progress of each activity to date of submission schedule.
- .11 Indicate changes occurring since previous submission of schedule:
 - .1 Major changes in scope.
 - .2 Activities modified since previous submission.
 - .3 Revised projections of progress and completion.
 - .4 Other identifiable changes.
- .12 Provide a narrative report to define:
 - .1 Problem areas, anticipated delays, and impact on schedule.
 - .2 Corrective action recommended and its effect.
 - .3 Effect of changes on schedules of other prime contractors.

1.5 CRITICAL PATH SCHEDULING

- .1 Include complete sequence of construction activities.
- .2 Include dates for commencement and completion of each major element of construction [as follows].
 - .1 Site clearing.
 - .2 Site utilities.
 - .3 Foundation Work.
 - .4 Structural framing.
 - .5 Special Subcontractor Work.
 - .6 Equipment Installations.
 - .7 Finishes.
- .3 Show projected percentage of completion of each item as of first day of month.
- .4 Indicate progress of each activity to date of submission schedule.
- .5 Show changes occurring since previous submission of schedule:
 - .1 Major changes in scope.
 - .2 Activities modified since previous submission.
 - .3 Revised projections of progress and completion.
 - .4 Other identifiable changes.
- .6 Provide a narrative report to define:
 - .1 Problem areas, anticipated delays, and impact on schedule.
 - .2 Corrective action recommended and its effect.
 - .3 Effect of changes on schedules of other prime contractors.

1.6 PROGRESS PHOTOGRAPHS

- .1 Digital Photography:
 - .1 Submit electronic copy of colour digital photography in *.jpg format, minimum 6-megapixel resolution.
 - .2 Identification: Name and number of project and date of exposure indicated.
- .2 Number of Viewpoints: Locations of viewpoints determined by Consultant.
- .3 Frequency: Monthly with meeting minutes.

1.7 SUBMITTALS SCHEDULE

- .1 Include schedule for submitting shop drawings, product data, samples.
- .2 Indicate dates for submitting, review time, resubmission time, and last date for meeting fabrication schedule.
- .3 Include dates when delivery will be required for Owner-furnished products.
- .4 Include dates when reviewed submittals will be required from Consultant.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Shop drawings and product data.
- .2 Samples.
- .3 Certificates and transcripts.

1.2 RELATED SECTIONS

- .1 Section 01 78 00 - Closeout Submittals.
- .2 Other sections requesting submittals.
- .3 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 ADMINISTRATIVE

- .1 Submit to Consultant submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Work affected by submittal shall not proceed until review is complete.
- .3 Present Shop Drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not manufactured or produced in SI Metric units, converted values within the metric measurement tolerances are acceptable.
- .5 Review submittals prior to submission to Consultant. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents.
- .6 Submittals not stamped, signed, dated, identified as to specific project, and attesting to their being reviewed will be returned without being examined and shall be considered rejected.
- .7 Notify Consultant, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .8 Verify field measurements and affected adjacent Work are coordinated.
- .9 Contractor's responsibility for errors and omissions in submission is not relieved by Consultant's review of submittals.
- .10 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Consultant review.
- .11 Keep one (1) reviewed copy of each submission on site.

1.4 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "Shop Drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .3 Allow five (5) days for Consultant's review of each submission.
- .4 Adjustments made on Shop Drawings by Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Consultant prior to proceeding with Work.
- .5 Make changes in Shop Drawings as Consultant may require, consistent with Contract Documents. When resubmitting, notify Consultant in writing of any revisions other than those requested.
- .6 Accompany submissions with duplicate transmittal letter, containing:
 - .1 Date.
 - .2 Project title and number.
 - .3 Contractor's name and address.
 - .4 Identification and quantity of each shop drawing, product data and sample.
 - .5 Other pertinent data.
- .7 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.

- .8 Wiring diagrams.
- .9 Single line and schematic diagrams.
- .10 Relationship to other parts of the Work.
- .8 After Consultant's review, distribute copies.
- .9 Submit electronic copy of Shop Drawings for each requirement requested in specification Sections and as consultant may reasonably request. If electronic copy is not feasible, submit hard copies as necessary. Consultant will keep up to 2 copies for their records.
- .10 Submit an electronic copy of product data sheets or brochures for requirements requested in specification sections and as requested by Consultant where Shop Drawings will not be prepared due to standardized manufacture of product.
- .11 Delete information not applicable to project.
- .12 Supplement standard information to provide details applicable to project.
- .13 If upon review by Consultant, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If Shop Drawings are rejected, noted copy will be returned and re-submission of corrected Shop Drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

1.5 SAMPLES

- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Consultant's business address.
- .3 Notify Consultant in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Consultant prior to proceeding with Work.
- .6 Make changes in samples which Consultant may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

1.6 MOCK-UP

- .1 Erect mock-ups to Section 01 45 00 – Quality Control.

1.7 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.

- .2 Submit transcription of insurance immediately after award of Contract.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Laws, notices, permits and fees.
- .2 Discovery of hazardous materials.

1.2 RELATED SECTIONS

- .1 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 LAWS, NOTICES, PERMITS AND FEES

- .1 The laws of the Place of the Work shall govern the Work.
- .2 The Owner shall obtain and pay for permanent easements and rights of servitude. The Contractor shall be responsible for the building permit, other permits, licenses or certificates necessary for the performance of the Work which were in force at the date of executing the Agreement.
- .3 Give the required notices and comply with the laws, ordinances, rules, regulations or codes which are or become in force during the performance of the Work and which relate to the Work, to the preservation of the public health and to construction safety.
- .4 If the Contractor knowingly performs or allows work to be performed that is contrary to any laws, ordinances, rules, regulations or codes, the Contractor is responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations or codes. Determine detailed requirements of authorities having jurisdiction.
- .6 Pay construction damage deposits levied by municipality in connection with the issuance of a building permit.

1.4 AUTHORITY HAVING JURISDICTION

- .1 The Contractor shall notify the Chief Building Official or the registered code agency, where applicable, of the readiness, substantial completion, and completion of the stages of construction set out in the Saskatchewan Amendments to the National Building Code. The Contractor shall be present at each site inspection by an inspector or registered code agency. If any laws, ordinances, rules, regulations, or codes conflict, the more stringent shall govern.

1.5 HAZARDOUS MATERIAL DISCOVERY

- .1 Asbestos: If material resembling asbestos is encountered in course of demolition work, immediately stop work and notify Consultant.

1.6 PERSONNEL SMOKING

- .1 Comply with regulatory and Owner imposed smoking restrictions during execution of the Work within or out-of-doors to the premises.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Quality assurance criteria.

1.2 RELATED SECTIONS

- .1 Section 01 45 00 - Quality Control.
- .2 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 REFERENCES

- .1 Associated Air Balance Council (AABC): National Standards for Field Measurements and Instrumentation, Total Systems Balance, Air Distribution-Hydronics Systems.

1.4 QUALITY ASSURANCE

- .1 Provide testing organization services as specified in Section 01 45 00.
- .2 Testing organization: Current member in good standing of their respective professional or industry organization and certified to perform specified services.
- .3 Comply with applicable procedures and standards of the certification sponsoring association.
- .4 Perform services under direction of supervisor qualified under certification requirements of sponsoring association.
- .5 Qualifications:
 - .1 Provide adequate workforce training through meetings and demonstrations.
 - .2 Provide a designated experienced person on site with de-construction experience throughout the project for consultation and supervision purposes.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Inspection and testing, administrative and enforcement requirements.
- .2 Tests and mix designs.
- .3 Mock-up criteria.
- .4 Mill tests.
- .5 Written and electronic submitted reports.
- .6 Equipment and system adjustments and balance.

1.2 RELATED SECTIONS

- .1 Section 01 43 00 - Quality Assurance.
- .2 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 REFERENCES

- .1 ISO/IEC 17025:2005 - General Requirements for the Competence of Testing and Calibration Laboratories.
- .2 SCC (Standards Council of Canada).

1.4 INSPECTION BY AUTHORITY

- .1 Allow Authorities Having Jurisdiction access to Work. If part of the Work is in preparation at locations other than the Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection whenever portions of the Work are designated for special tests, inspections or approvals, either when described in the Contract Documents or when required by law in the Place of the Work.
- .3 If the Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.

1.5 REVIEW BY CONSULTANT

- .1 Consultant may order any part of the Work to be reviewed or inspected if the Work is suspected to be not in accordance with Contract Documents.
- .2 If, upon review such work is found not in accordance with Contract Documents, correct such Work and pay cost of additional review and correction.
- .3 If such Work is found in accordance with Contract Documents, Owner will pay cost of review and replacement.

1.6 INDEPENDENT INSPECTION AGENCIES

- .1 Independent Inspection and Testing Agencies will be engaged by the Contractor or his subtrades for purpose of inspecting and testing portions of Work. Cost of such services will be borne by respective Contractor or Subtrade.
- .2 Testing Organizations: Listed by SCC within info.palcan@scc.ca listings.
- .3 Provide equipment required for executing inspection and testing by appointed agencies.
- .4 Employment of inspection and testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .5 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and testing to ascertain full degree of defect. Correct defect and irregularities as advised by Consultant at no cost to Owner. Pay costs for retesting and re-inspection.

1.7 ACCESS TO WORK

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

1.8 PROCEDURES

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

1.9 REJECTED WORK

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

1.10 REPORTS

- .1 Submit one (1) electronic copy of signed inspection and test reports to Consultant.

- .2 Provide signed paper copies to Subcontractor of work being inspected or tested.

1.11 TESTS AND MIX DESIGNS

- .1 Furnish test results and mix designs as may be requested.
- .2 The cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of the Place of Work, shall be appraised by Consultant and may be authorized as recoverable from Owner.

1.12 MOCK-UP

- .1 Prepare mock-up for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.
- .2 Construct in all locations acceptable to Consultant.
- .3 Prepare mock-ups for Owner and Consultant review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.
- .4 Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .5 If requested, Consultant will assist in preparing a schedule fixing dates for preparation.
- .6 Specification section identifies whether mock-up may remain as part of Work or if it is to be removed.

1.13 MILL TESTS

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

1.14 EQUIPMENT AND SYSTEMS

- .1 Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

- .1 Refer to drawings for related sections.

1.2 REQUIREMENTS

- .1 Conform to the following requirements to maintain the continuity of fire separations whether or not shown on the drawings.
- .2 Fire separations may not be pierced by electrical or similar service outlets except in accordance with local Building Code.
- .3 Non-combustible construction shall not be supported on combustible construction.
- .4 Where a fire separation is required to be of non-combustible construction and terminates at the exterior wall, the underside of floor, ceiling, or roof structures, and at floors, the opening shall be firestopped with non-combustible material.
- .5 Combustible members, fastenings, and similar items shall not be used to anchor fixtures to fire separations.
- .6 Openings for non-combustible pipes and ducts shall be firestopped to prevent the passage of smoke and flame. Trade Contractor shall be responsible for ensuring that where their work passes through a fire separation, the opening shall be sealed with ULC labelled and approved firestopping sealant, insulation or other material approved by local authorities having jurisdiction to maintain the integrity of the fire separations.
- .7 Refer to technical sections for specific requirements for sealing penetrations and joints of smoke and fire separations.

1.3 FIRE TEST RESPONSE CHARACTERISTICS

- .1 For assemblies or materials having fire resistance ratings, provide materials and construction identical to those tested in assembly indicated according to CAN/ULC S101 as verified by an independent testing and inspecting agency acceptable to authorities having jurisdiction for fire resistance ratings of specific assemblies indicated on drawings:
- .2 Fire resistance rated assemblies and materials shall bear a label and proof of acceptance as indicated by design designations from ULC List of Equipment and Materials or Warnock Hersey-Intertek Directory of Listed Products. Where no design designation is provided, use only time assigned to materials listed in Appendix D of the Building Code.

PART 2 Products

1.4 NOT USED

- .1 Not Used.

PART 3 Execution

1.5 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Temporary utilities.

1.2 RELATED SECTIONS

- .1 Section 01 45 00 – Quality Control.
- .2 Section 01 52 00 - Construction Facilities.

1.3 INSTALLATION AND REMOVAL

- .1 Provide temporary utilities controls in order to execute work expeditiously.
- .2 Salvage and assist in recycling products for potential reuse.
- .3 Remove from site all such work after use.
- .4 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.4 WATER SUPPLY

- .1 Owner will provide continuous supply of potable water for construction use.
- .2 Arrange for connection with owner and pay all costs for installation, maintenance and removal.

1.5 TEMPORARY HEATING AND VENTILATION

- .1 Owner will provide temporary heating required during construction period.

1.6 TEMPORARY POWER AND LIGHT

- .1 Owner will provide temporary power during construction for temporary lighting and operating of power tools, to a maximum supply of 230 volt, 30 amp.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Construction aids.
- .2 Office and sheds.
- .3 Parking.
- .4 Project identification.

1.2 RELATED SECTIONS

- .1 Section 01 51 00 - Temporary Utilities.
- .2 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 REFERENCES

- .1 CAN/CSA-Z321-96 (R2006) - Signs and Symbols for the Workplace.

1.4 INSTALLATION AND REMOVAL

- .1 Provide construction facilities to execute work expeditiously.
- .2 Remove from site all such work after use.

1.5 SCAFFOLDING

- .1 Provide and maintain scaffolding, ramps, ladders, platforms and temporary stairs.

1.6 HOISTING

- .1 Provide, operate and maintain hoists or cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for use thereof.
- .2 Qualified operator shall operate hoists and cranes.

1.7 USE OF THE WORK

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

1.8 CONSTRUCTION PARKING

- .1 Parking will not be permitted on site.
- .2 Provide and maintain adequate access to project site.

- .3 Build and maintain temporary roads as necessary to complete Work. Provide snow removal during period of Work.

1.9 EQUIPMENT, TOOL AND MATERIALS STORAGE

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

1.10 SANITARY FACILITIES

- .1 Owner will provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities.
- .3 New permanent facilities may be used on approval of Consultant.
- .4 Keep sanitary facilities clean and fully stocked with the necessary supplies at all times.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Product quality, availability, storage, handling, protection, and transportation.
- .2 Product substitution procedures.
- .3 Manufacturer's instructions.
- .4 Quality of Work, coordination and fastenings.
- .5 Existing facilities.

1.2 RELATED SECTIONS

- .1 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 TERMINOLOGY

- .1 New: Produced from new materials.
- .2 Renewed: Produced or rejuvenated from an existing material to like-new condition to serve a new or existing service.
- .3 Defective: A condition determined exclusively by the Consultant Owner.

1.4 PRODUCT QUALITY

- .1 Products, materials, equipment, parts or assemblies (referred to as Products) incorporated in Work: New, not damaged or defective, of best quality (compatible with specification requirements) for purpose intended. If requested, provide evidence as to type, source and quality of Products provided.
- .2 Defective Products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective Products at own expense and be responsible for delays and expenses caused by rejection.
- .3 Should any dispute arise as to quality or fitness of Products, decision rests strictly with Consultant.
- .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .5 Permanent labels, trademarks and nameplates on Products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.5 AVAILABILITY

- .1 Immediately upon signing Contract, review Product delivery requirements and anticipate foreseeable supply delays for any items.

- .2 If delays in supply of Products are foreseeable, notify Consultant of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
- .3 In event of failure to notify Consultant at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Consultant reserves right to substitute more readily available Products of similar character, at no increase in Contract Price or Contract Time.

1.6 STORAGE AND PROTECTION

- .1 Store and protect Products in accordance with manufacturers' written instructions.
- .2 Store with seals and labels intact and legible.
- .3 Store sensitive Products in weather tight, climate controlled, enclosures in an environment favourable to Product.
- .4 For exterior storage of fabricated Products, place on sloped supports above ground.
- .5 Cover Products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of 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 Products by methods to prevent soiling, disfigurement, or damage.
- .8 Arrange storage of Products to permit access for inspection. Periodically inspect to verify Products are undamaged and are maintained in acceptable condition.

1.7 TRANSPORTATION AND HANDLING

- .1 Transport and handle Products in accordance with manufacturer's written instructions.
- .2 Promptly inspect shipments to ensure that Products comply with requirements, quantities are correct, and Products are undamaged.
- .3 Provide equipment and personnel to handle Products by methods to prevent soiling, disfigurement, or damage.

1.8 EXISTING UTILITIES

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

1.9 MANUFACTURER'S WRITTEN INSTRUCTIONS

- .1 Unless otherwise indicated in specifications, install or erect Products to manufacturer's written instructions. Do not rely on labels or enclosures provided with Products. Obtain written instructions directly from manufacturers.
- .2 Notify Consultant in writing, of conflicts between specifications and manufacturer's instructions, so that Consultant may establish course of action.
- .3 Improper installation or erection of Products, due to failure in complying with these requirements, authorizes Consultant to require removal and re-installation at no increase in Contract Price or Contract Time.

1.10 QUALITY OF WORK

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

1.11 COORDINATION

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

1.12 CONCEALMENT

- .1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.
- .2 Before installation, inform Consultant if there is interference. Install as directed by Consultant.

1.13 REMEDIAL WORK

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

1.14 LOCATION OF FIXTURES

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

1.15 FASTENINGS

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

1.16 FASTENINGS - EQUIPMENT

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use Type 304 or 316 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

1.17 PROTECTION OF WORK IN PROGRESS

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

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Submittal requirements associated with connecting to new and existing facilities.
- .2 Execution requirements for all Work.

1.2 RELATED SECTIONS

- .1 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 SUBMITTALS - ATTACHING TO EXISTING WORK

- .1 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 Owner or separate contractor.
- .2 Include in request:
 - .1 Identification of Project.
 - .2 Location and description of affected Work.
 - .3 Statement on necessity for cutting or alteration.
 - .4 Description of proposed Work, and products to be used.
 - .5 Alternatives to cutting and patching.
 - .6 Effect on Work of Owner or separate contractor.
 - .7 Written permission of affected separate contractor.
 - .8 Date and time work will be executed.

1.4 TOLERANCES

- .1 Monitor fabrication and installation tolerance control of Products to produce acceptable Work.
- .2 Do not permit tolerances to accumulate beyond effective or practical limits.
- .3 Comply with manufacturers' tolerances. In case of conflict between manufacturers' tolerances and Contract Documents, request clarification from Consultant before proceeding.
- .4 Adjust Products to appropriate dimensions; position and confirm tolerance acceptability, before permanently securing Products in place.

1.5 EXECUTION

- .1 Execute cutting, fitting, and patching to complete the Work.

- .2 Perform all required excavation and fill to complete the Work.
- .3 Fit several parts together, to integrate with other Work.
- .4 Uncover Work to install ill-timed Work.
- .5 Remove and replace defective or non-conforming Work.
- .6 Remove samples of installed Work for testing, if not designated in the respective Section as remaining as part of the Work.
- .7 Provide openings in non-structural elements of Work for penetrations of mechanical electrical and associated Work. Limit opening dimensions to minimal sizes required, and performed in a neat and clean fashion.
- .8 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- .9 Employ qualified workers to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
- .10 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry or concrete work without prior approval.
- .11 Restore work with new products in accordance with requirements of Contract Documents.
- .12 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .13 At penetration of fire rated wall, ceiling, or floor construction, completely seal voids with firestopping material, for full thickness of the constructed element.
- .14 Re-finish surfaces to match adjacent finishes: For continuous surfaces re-finish to nearest intersection; for an assembly, re-finish entire unit.
- .15 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Requirements and limitations for cutting and patching of Work.

1.2 RELATED SECTIONS

- .1 Section 01 11 00 - Summary of Work: Work by Owner.
- .2 Section 01 61 00 - Product Requirements.
- .3 Individual Product Specification Sections:
 - .1 Cutting and patching incidental to work of the section.
 - .2 Advance notification to other sections of openings required in Work of those sections.
 - .3 Limitations on cutting structural members.

1.3 SUBMITTALS

- .1 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 element.
 - .3 Efficiency, maintenance, or safety of any operational element.
 - .4 Visual qualities of sight exposed elements.
 - .5 Work of Owner or separate contractor.
- .2 Include in request:
 - .1 Identification of Project.
 - .2 Location and description of affected Work.
 - .3 Necessity for cutting or alteration.
 - .4 Description of proposed Work and Products to be used.
 - .5 Alternatives to cutting and patching.
 - .6 Effect on work of Owner or separate contractor.
 - .7 Written permission of affected separate contractor.
 - .8 Date and time work will be executed.

Part 2 Products

2.1 MATERIALS

- .1 Primary Products: Those required for original installation.

Part 3 Execution

3.1 EXAMINATION

- .1 Examine existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.
- .2 After uncovering existing Work, assess conditions affecting performance of work.
- .3 Beginning of cutting or patching means acceptance of existing conditions.

3.2 PREPARATION

- .1 Provide temporary supports to ensure structural integrity of the Work. Provide devices and methods to protect other portions of Project from damage.
- .2 Provide protection from elements for areas which may be exposed by uncovering work.
- .3 Maintain excavations free of water.

3.3 CUTTING

- .1 Execute cutting and fitting including excavation and fill to complete the Work.
- .2 Uncover work to install improperly sequenced work.
- .3 Remove and replace defective or non-conforming work.
- .4 Remove samples of installed work for testing when requested.
- .5 Provide openings in the Work for penetration of mechanical and electrical work.
- .6 Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- .7 Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.

3.4 PATCHING

- .1 Execute patching to complement adjacent Work.
- .2 Fit Products together to integrate with other Work.
- .3 Execute work by methods to avoid damage to other Work, and which will provide appropriate surfaces to receive patching and finishing.
- .4 Employ original installer to perform patching for weather exposed and moisture resistant elements, and sight-exposed surfaces.
- .5 Restore work with new Products in accordance with requirements of Contract Documents.
- .6 Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

- .7 At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material to Section 07 84 00, to full thickness of the penetrated element.
- .8 Refinish surfaces to match adjacent finish. For continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Progressive cleaning.
- .2 Cleaning prior to acceptance.

1.2 RELATED SECTIONS

- .1 This section describes requirements applicable to all Sections within Divisions 02 to 49.

Part 2 Products

2.1 CLEANING MATERIALS

- .1 Cleaning Agents and Materials: Low VOC content.

Part 3 Execution

3.1 PROGRESSIVE CLEANING

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris.
- .2 Remove waste materials from site at regularly scheduled times or dispose of as directed by Consultant. Do not burn waste materials on site, unless approved by Consultant.
- .3 Remove waste material and debris from site and deposit in waste container at end of each working day.
- .4 Dispose of waste materials and debris off site.
- .5 Clean interior areas prior to start of finish work and maintain areas free of dust and other contaminants during finishing operations.
- .6 Store volatile waste in covered metal containers and remove from premises at end of each working day.
- .7 Provide adequate ventilation during use of volatile or noxious substances. Use of enclosure ventilation systems is not permitted for this purpose.
- .8 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .9 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

3.2 CLEANING PRIOR TO ACCEPTANCE

- .1 Prior to applying for Substantial Performance of the Work, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris and leave Work clean and suitable for occupancy.
- .3 Prior to final review, remove surplus products, tools, construction machinery and equipment.
- .4 Remove waste materials from site at regularly scheduled times. Do not burn waste materials on site. Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .6 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- .7 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, floors.
- .8 Clean lighting reflectors, lenses, and other lighting surfaces.
- .9 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
- .10 Clean and polish surface finishes, as recommended by manufacturer.
- .11 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .12 Clean equipment and fixtures to a sanitary condition; clean or replace filters of mechanical equipment.

3.3 FINAL PRODUCT CLEANING

- .1 Execute final cleaning prior to final project assessment.
- .2 Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum and wash flooring surfaces.
- .3 Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- .4 Replace filters of operating equipment.
- .5 Clean site; sweep paved areas, rake clean landscaped surfaces.
- .6 Remove waste and surplus materials, rubbish, and construction facilities from the site.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Adjusting products and equipment required by all specification sections for this Project.

1.2 RELATED SECTIONS

- .1 Section 01 74 00 - Cleaning and Waste Processing.
- .2 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 PURPOSE

- .1 Perform testing adjusting and balancing of operating systems.
- .2 Prior to start of balancing, ensure systems are:
 - .1 Piped, ducted, wired and wireless services and systems, including components and equipment forming part thereof.
 - .2 Manually and mechanically operated, including components and equipment forming any part.
 - .3 Testing, adjusting and balancing will not be started until after all static checks have been completed for the system being balanced and signed off on the commissioning report forms.
 - .4 Contractor to ensure systems are operated at designated times, under conditions required for proper testing, adjusting, and balancing.
 - .5 Report any deficiencies or defects which may affect the balancing or noted during testing, adjusting and balancing, which cannot be promptly corrected.

Part 2 Products

2.1 NOT USED.

Part 3 Execution

3.1 PREPARATION

- .1 Prepare each system and item of equipment for testing, adjusting and balancing.
- .2 Verify that each system and equipment installation is complete and in functional operation.
- .3 Verify appropriate ambient conditions.

3.2 TESTING

- .1 Tests will be conducted to confirm compliance with requirements of Contract Documents. Take corrective action as necessary.

3.3 ADJUSTING

- .1 Adjust operating Products and equipment to ensure smooth and unhindered operation.
- .2 Provide equipment required to ensure proper, efficient and safe operation of all equipment including belts and sheaves.

3.4 BALANCING

- .1 Cooperate with and assist the balancing agent to ensure that the various parts of system are in a proper state of equilibrium.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Inspections and declarations.
- .2 Closeout submittals
- .3 Operation and maintenance manual format.
- .4 Contents each volume.
- .5 Recording actual site conditions.
- .6 Record (as-built) documents and samples.
- .7 Record documents.
- .8 Final survey.
- .9 Warranties and bonds.

1.2 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 45 00 - Quality Control.
- .3 Section 01 79 00 - Demonstration and Training.
- .4 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 INSPECTIONS AND DECLARATIONS

- .1 Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Consultant in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
 - .2 Request Consultant's Inspection.
- .2 Consultant's Inspection: Consultant and Contractor will perform inspection of Work to identify defects or deficiencies. Correct defective and deficient Work accordingly.
- .3 Completion: Submit written certificate that following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 Defects have been corrected and deficiencies have been completed.
 - .3 Equipment and systems have been tested, adjusted, balanced and are fully operational.
 - .4 Certificates required by authorities having jurisdiction have been submitted.

- .5 Operation of systems have been demonstrated to Owner's personnel.
- .6 Work is complete and ready for Final Inspection.
- .4 Final Inspection: When items noted above are completed, request final inspection of Work by Owner, Consultant and Contractor. If Work is deemed incomplete by Consultant, complete outstanding items and request re-inspection.
- .5 Declaration of Substantial Performance: when Consultant considers deficiencies and defects have been corrected and it appears requirements of Contract have been substantially performed, make application for Substantial Performance of the Work.
- .6 Commencement of Warranty Periods: the date of Substantial Performance of the Work shall be the date for commencement of the warranty period.
- .7 Commencement of Lien Periods: the date of publication of the certificate of Substantial Performance of the Work shall be the date for commencement of the lien period, unless required otherwise by the lien legislation applicable at the Place of the Work.
- .8 Final Payment: When Consultant consider final deficiencies and defects have been corrected and it appears requirements of Contract have been completed, make application for final payment.
- .9 Payment of Hold-back: After issuance of certificate of Substantial Performance of the Work, submit an application for payment of hold-back amount.

1.4 CLOSEOUT SUBMITTALS

- .1 Prior to submitting its written application for Substantial Performance of the Work, the Contractor shall submit to the Consultant all:
 - .1 Guarantees;
 - .2 Warranties;
 - .3 Certificates;
 - .4 Testing and balancing reports;
 - .5 Distribution system diagrams;
 - .6 Spare parts;
 - Maintenance manuals;
 - .7 Samples;
 - .8 Existing reports and correspondence from authorities having jurisdiction in the Place of the Work.

and other materials or documentation required to be submitted under the Contract, together with written proof acceptable to the Owner and the Consultant that the Work has been substantially performed in conformance with the requirements of municipal, governmental, and utility authorities having jurisdiction in the Place of the Work.

- .2 Where the Contractor is unable to deliver the documents and materials described in paragraph 5.4.4, then, provided that none of the missing documents and materials interferes with the use and occupancy of the Project in a material way, the failure to deliver shall not be grounds for the Consultant to refuse to certify Substantial Performance of the Work.

1.5 OPERATION AND MAINTENANCE MANUAL SUBMITTALS

- .1 Prepare instructions and data using personnel experienced in maintenance and operation of described products.
- .2 Copy will be returned after final inspection with Consultant's comments.
- .3 Revise content of documents as required prior to final submittal.
- .4 Two (2) weeks prior to Substantial Performance of the Work, submit to the Consultant, three (3) final copies of operating and maintenance manuals in Canadian English.
- .5 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.
- .6 If requested, furnish evidence as to type, source and quality of products provided.
- .7 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
- .8 Pay costs of transportation.

1.6 OPERATION AND MAINTENANCE MANUAL FORMAT

- .1 Organize data in the form of an instructional manual.
- .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
- .3 When multiple binders are used, correlate data into related consistent groupings. Identify contents of each binder on spine.
- .4 Cover: Identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
- .5 Arrange content by systems under Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7 Text: Manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- .9 Provide 1:1 scaled CAD files in *.dwg AutoCAD Release 2008 format on DVD.

1.7 CONTENTS - EACH VOLUME

- .1 Table of Contents: Provide:
 - .1 Title of project.
 - .2 Date of submission.

- .3 Names, addresses, and telephone numbers of Consultant and Contractor with name of responsible parties.
- .4 Schedule of products and systems, indexed to content of volume.
- .2 For each product or system, list names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation; delete inapplicable information. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00.
- .4 Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .5 Certificate of Acceptance: Relevant certificates issued by authorities having jurisdiction, including code compliance certificate.
- .6 Training: Refer to Section 01 79 00.

1.8 RECORDING ACTUAL SITE CONDITIONS

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

1.9 RECORD (AS-BUILT) DOCUMENTS AND SAMPLES

- .1 In addition to requirements in General Conditions, maintain at the site for Consultant, one (1) record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to the Contract.
 - .5 Reviewed shop drawings, product data, and samples.
 - .6 Field test records.
 - .7 Inspection certificates.
 - .8 Manufacturer's certificates.
- .2 Store as-built documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
- .3 Label as-built documents and file in accordance with section number listings in List of Contents of the Project Manual. Label each document "AS-BUILT DOCUMENTS" in neat, large, printed letters.
- .4 Maintain as-built documents in clean, dry and legible condition. Do not use as-built documents for construction purposes.
- .5 Keep as-built documents and samples available for inspection by Consultant.
- .6 Submit to Consultant for inclusion in electronic documents.

1.10 WARRANTIES AND BONDS

- .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
- .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten (10) days after completion of the applicable item of work.
- .4 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial Performance is determined.
- .5 Verify that documents are in proper form, contain full information, and are notarized.
- .6 Co-execute submittals when required.
- .7 Retain warranties and bonds until time specified for submittals.

1.11 RECORDS/DAILY REPORTS/DAILY LOGS

- .1 The Contractor shall maintain and keep accurate Project records (which means all tangible records, documents, computer printouts, electronic information, books, plans, Drawings, Specifications, accounts or other information relating to the Work) in its office in accordance with the requirements of law, but in any event for not less than 6 years from Substantial Performance of the Work or until all claims have been settled. During

this time, the Contractor shall allow Owner and Consultant access to the Project records during normal business hours upon the giving of reasonable notice. The Contractor shall ensure that equivalent provisions to those provided herein are made in each subcontract and shall require the Subcontractors and Suppliers to incorporate them into every level of contract thereunder for any part of the Work.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Equipment and systems.
- .2 Materials and finishes.
- .3 Spare parts.
- .4 Maintenance manuals.
- .5 Special tools.
- .6 Storage, handling and protection.

1.2 RELATED SECTIONS

- .1 Section 01 45 00 - Quality Control.
- .2 Section 01 78 40 – Maintenance Requirements.

1.3 EQUIPMENT AND SYSTEMS

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

- .11 Provide Contractor's coordination drawings, with installed colour coded piping diagrams.
- .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- .13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .14 Include test and balancing reports as specified in Section 01 45 00 and 01 90 10.
- .15 Additional requirements: As specified in individual specification sections.

Part 2 Products

2.1 MATERIALS AND FINISHES

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-protection and Weather-exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Building Envelope: include copies of drawings of building envelope components, illustrating the interface with similar or dissimilar items to provide an effective air, vapour and thermal barrier between indoor and outdoor environments. Include an outline of requirements for regular inspections and for regular maintenance to ensure that on-going performance of the building envelope will meet the initial building envelope criteria.
- .5 Additional Requirements: as specified in individual specifications sections.

2.2 SPARE PARTS

- .1 Provide spare parts, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.
- .4 Obtain receipt for delivered products and submit prior to final payment.

2.3 MAINTENANCE MATERIALS

- .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.

- .3 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.
- .4 Obtain receipt for delivered products and submit prior to final payment.

2.4 SPECIAL TOOLS

- .1 Provide special tools, in quantities specified in individual specification section.
- .2 Provide items with tags identifying their associated function and equipment.
- .3 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.

Part 3 Execution

3.1 DELIVER TO SITE

- .1 Deliver to site; place and store.

3.2 STORAGE, HANDLING AND PROTECTION

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

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 33 00 – Submittal Procedures: Retention of Shop Drawings for inclusion in Project Record Documentation.
- .2 Section 01 73 00 –Execution: Field engineering and final survey requirements.

1.2 DESIGNATION OF PROJECT RECORD DOCUMENTS

- .1 Designate one copy of the following documents to be retained as project record documents:
 - .1 One copy of Project Manuals (specifications).
 - .2 One complete set of Drawings.
 - .3 One set of all Addenda issued.
 - .4 One set of approved Change Orders and Supplementary Instructions.
- .2 Subtrades shall report to the Contractor all required information for recording of information on Project Record Drawings.
- .3 Record Documents shall consist of Division 1 to 28 of the Project Manual and all Drawings issued for construction and as modified.

1.3 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS

- .1 Provide red-line drawings to the Owner with the exception of both Mechanical and Electrical Trade Contractors.
- .2 Mechanical and Electrical Trade Contractors shall record their information on red-line drawings and return to Contractor for final coordination.
- .3 Use coloured erasable pencils to record information.
- .4 Trade Contractors shall report to Contractor all changes and variations from Contract Drawings concurrently with construction process. Do not conceal any work until required information is recorded.
- .5 Trade Contractor shall provide sufficient information so that Contractor can legibly mark project record drawings to record actual construction including, but not limited to the following:
 - .1 Measured locations of internal utilities and appurtenances concealed in construction. Reference to visible and accessible features of construction.
 - .2 Field changes of dimension and detail.
 - .3 Changes to equipment layout and services.
 - .4 Deviations in piping, duct runs, wiring, and utility connections.
 - .5 **Actual locations** of mechanical and electrical equipment, plumbing lines, electrical, data and communications lines **referenced to fixed structural elements** for items that are schematically indicated in Contract Documents.
 - .6 Clearly identify locations of fire dampers, major control lines, access doors, tagged valves, and actual final room names or numbers.
 - .7 Changes in construction materials or locations required by on-site conditions and to make components of the Work come together.

- .8 Changes required by Addenda, Bid Revisions, Change Orders, Work Orders and Construction Communications.
- .9 Other information identified in specific sections of the Specifications.
- .6 Contractor shall maintain Record Documents at the site office and make available for review during all site meetings.
- .7 Trade Contractor shall make recordings immediately after the respective Work is completed and not less than once a week. Each recording shall be dated.
- .8 Changes to specification sections shall be legibly noted in the margins of the document or by stapling a sheet of white paper to the margin and referencing the affected article(s). Use of adhesive tape or self-sticking removable notes will not be acceptable for this purpose.
- .9 Consultant will review the drawing changes in print form. When accepted, the Contractor shall provide an electronic copy of the as-built drawings in AutoCad format acceptable to the Owner as specified in Section 01 78 00 Closeout Submittals.
- .10 The Consultant's review of Record Documents is not a verification of the accuracy of the record drawings. Responsibility for accuracy lies solely with the Contractor:
 - .1 Where subsequent reviews or modifications to the Work occur during the Warranty Period indicate that the Record Drawings contain inaccuracies, the Owner reserves the right to verify or survey as-built conditions by an independent agency.
 - .2 Where inaccuracies are contained within the Record Drawings, the Contractor will be responsible for costs of independent survey agency and costs related to revisions to the Record Drawings.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Procedures for demonstration and instruction of Products, equipment and systems to Owner's personnel.
- .2 Seminars and demonstrations.

1.2 RELATED SECTIONS

- .1 This section describes requirements applicable to all Sections within Divisions 02 to 49.

1.3 DESCRIPTION

- .1 Demonstrate scheduled operation and maintenance of equipment and systems to Owner's personnel two (2) weeks prior to date of final inspection.
- .2 Owner will provide list of personnel to receive instructions and will coordinate their attendance at agreed-upon times.

1.4 COMPONENT DEMONSTRATION

- .1 Manufacturer to provide authorized representative to demonstrate operation of equipment and systems.
- .2 Instruct Owner's personnel and provide written report that demonstration and instructions have been completed.

1.5 SUBMITTALS

- .1 Submit schedule of time and date for demonstration of each item of equipment and each system two (2) weeks prior to designated dates, for Consultant's approval.
- .2 Submit reports within one (1) 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.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 PREPARATION

- .1 Verify that suitable conditions for demonstration and instructions are available.
- .2 Verify that designated personnel are present.
- .3 Prepare agendas and outlines.
- .4 Establish seminar organization.
- .5 Explain component design and operational philosophy and strategy.
- .6 Develop equipment presentations.
- .7 Present system demonstrations.
- .8 Accept and respond to seminar and demonstration questions with appropriate answers.

3.2 PREPARATION OF AGENDAS AND OUTLINES

- .1 Prepare agendas and outlines including the following:
 - .1 Equipment and systems to be included in seminar presentations.
 - .2 Name of companies and representatives presenting at seminars.
 - .3 Outline of each seminar's content.
 - .4 Time and date allocated to each system and item of equipment.
 - .5 Provide separate agenda for each system

3.3 SEMINAR ORGANIZATION

- .1 Coordinate content and presentations for seminars.
- .2 Coordinate individual presentations and ensure representatives scheduled to present at seminars are in attendance.
- .3 Arrange for presentation leaders familiar with the design, operation, maintenance and troubleshooting of the equipment and systems. Where a single person is not familiar with all aspects of the equipment or system, arrange for specialists familiar with each aspect.
- .4 Coordinate proposed dates for seminars with Owner and select mutually agreeable dates.

3.4 EXPLANATION OF DESIGN STRATEGY

- .1 Explain design philosophy of each system. Include following information:
 - .1 An overview of how system is intended to operate.
 - .2 Description of design parameters, constraints and operational requirements.
 - .3 Description of system operation strategies.
 - .4 Information to help in identifying and troubleshooting system problems.

3.5 DEMONSTRATION AND INSTRUCTIONS

- .1 Demonstrate start-up, operation, control, adjustment, troubleshooting, servicing, and maintenance of each item of equipment at scheduled times, at the equipment location.
- .2 Instruct personnel in all phases of operation and maintenance using operation and maintenance manuals as the basis of instruction.
- .3 Instruct personnel on control and maintenance of sensory equipment and operational equipment associated with maintaining energy efficiency and longevity of service.
- .4 Review contents of manual in detail to explain all aspects of operation and maintenance.
- .5 Prepare and insert additional data in operations and maintenance manuals when the need for additional data becomes apparent during instructions.

END OF SECTION

