

SPECIFICATIONS



615 Bay Street District of Sault Ste. Marie Social Services Window & Screen Replacement



123 East Street
Sault Ste. Marie, ON
P6A 3C7

Project Number

Date

24-001

April 2024

Sault Ste. Marie Housing Corporation
548 Albert St. E
Sault Ste. Marie, ON P6A 7A7

REQUEST FOR TENDER

PTC 2024-01

615 Bay Street
District of Sault Ste. Marie Social Services

Window & Screen Replacement

SAULT STE. MARIE HOUSING CORPORATION

Sault Ste. Marie, ON.

Issue Date: April 25, 2024



April 22, 2024

SUBJECT: REQUEST FOR TENDER

PTC 2024-01

615 Bay Street Window & Screen Replacement
SAULT STE. MARIE HOUSING CORPORATION
SAULT STE. MARIE, ONTARIO

The Sault Ste. Marie Housing Corporation (“SSMHC”) invites sealed tenders for the above-noted Project at the location listed in the enclosed documents.

In order to be considered, all tenders must be received by the Sault Ste. Marie Housing Corporation, 548 Albert Street, Sault Ste. Marie, ON P6A 3B7, no later than **May 14, 2024 at 2:00 P.M. LOCAL TIME** at which time the tenders will be publicly opened.

Please complete the tender and other related forms as applicable and return in a sealed envelope to the SSMHC. The envelope label is provided in the tender package.

The lowest or any tender will not necessarily be accepted.

Regards,

Jeff Barban

Director of Community Housing & Development

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1 **GENERAL DESCRIPTION OF WORK**

- 1.1 The purpose of this invitation to tender is to invite bidders to prepare competitive bids for the supply and installation of replacement windows and balcony screens and associated works including painting of concrete columns and balcony face of the 14 storey structure.
- 1.2 All Bidders are responsible for carefully reviewing the provided specifications, drawings, and documentation prior to ordering products.
- 1.3 If awarded a Contract, the bidder will be responsible for applying and paying for all required permits, through the City of Sault Ste. Marie. A copy of all permits shall be submitted to the Sault Ste. Marie Housing Corporation (“SSMHC” or the “Owner”) prior to commencing the Work.

2 **ANTICIPATED SCHEDULE & COMPLETION DATE**

- 2.1 The approximate expected schedule for the Work is as follows:

Anticipated start date:

Immediately upon award of contract

Anticipated completion date:

(11) working months upon award of contract

All bidders are to allow for this schedule when submitting their bid.

3 **SITE LOCATION**

- 3.1 The project site is located at:
- .1 SAULT STE. MARIE HOUSING CORPORATION,
615 Bay St. Sault Ste. Marie, On

4 **ACCESS TO SITE & TENDER INQUIRIES**

- 4.1 Bidders may address inquiries regarding this tenders in writing to:

Denis Rooney

Infrastructure and Asset Manager
Sault Ste. Marie Housing Corporation
548 Albert St. E, Sault Ste. Marie, ON P6A 3B7

Email: D.Rooney@socialservices-ssmd.ca

- 4.2 All inquiries must be submitted in writing via email **no later than Tuesday, May 14 2024; by 2:00 p.m. LOCAL TIME.** To permit consideration by SSMHC, bidders are encouraged to submit inquiries at an early date.
- 4.3 SSMHC may, in its discretion, amend, clarify or revise this Request for Tender by issuing formal addenda to this Request for Tender prior to Tender Closing. In their submission, bidders must acknowledge receipt of all addenda received from SSMHC.
- 4.4 Where an addendum is issued, bidders will be notified by email. The addenda can be accessed through the Sault Ste. Marie Construction Association website or on the Social

Services website at <https://socialservices-ssmd.ca/> or email at the bidder's request. The bidder is responsible for ensuring they receive a copy of any addenda issued.

- 4.5 SSMHC will not be bound by and assumes no responsibility for any oral instructions, amendments, clarifications, information, advise or suggestions made to a bidder concerning this Request for Tender or the manner in which the Work is to be carried out. Such representations shall not amend the requirements of this Request for Tender, and the bidder bears any and all risks in relying on such representations.

5 **MANDATORY PRE-BID MEETING**

- 5.1 There will be no mandatory site meeting.

6 **SUBMISSION DEADLINE**

- 6.1 Bids **must** be received before the following date and time:

Date: TUESDAY May 14, 2024

Time: 2:00 P.M. LOCAL TIME

("Tender Closing")

- 6.2 Bids received after Tender Closing will be rejected.

7 **BID SUBMISSION / SUBMISSION LOCATION**

- 7.1 Bids must be received at the following location prior to Tender Closing:

**Sault Ste. Marie Housing Corporation
548 Albert Street E
Sault Ste. Marie, ON P6A 7A7**

- 7.2 Bid shall include one hard copy within a sealed envelope, that is clearly identified as to its contents, including project name and project number.

- 7.3 Bids submitted by other means, including fax or email, will not be accepted.

- 7.4 Bids will not be publically opened.

8 **REQUIREMENTS AT THE TIME OF BID SUBMISSION**

- 8.1 Bidders shall complete and fully execute Schedule A - Tender Submission Form, and include all relevant appendices with their bid. Bids must be submitted in the envelope provided by SSMHC in the Request For Tender package. Bidders shall include the bidder's name and return address on the envelope provided.

- 8.2 All writing shall be with ink or electronic print except with signature of the bidder, which shall be written with ink. The total amount of the firm, fixed tender price shall be given in both writing and numerals. If there is any discrepancy in the Tender Submission Form or documents submitted by the bidder between any amount shown in writing and in numerals, SSMHC may choose to accept the amount shown in writing or to reject the bid.

- 8.3 The Tender Submission Form shall be properly signed. If the bidder is a partnership, each member shall sign the tender. If the bidder is a corporation, it shall execute the tender by its duly authorized officers.

- 8.4 The bidder shall submit its bid on the basis of using the products, materials and methods indicated or specified in the Request for Tender. Where alternatives are listed, use one only from the list.
- 8.5 Bidders shall include all proposals to substitute other products, materials and methods for those indicated or specified in the Request for Tender, under material variations, but do not include proposed substitutions in the firm fixed tender price. For each proposed substitution, submit the name of the manufacturer or supplier, the trade name, an explicit description, the amount by which the firm fixed tender price would be changed and all other information necessary for the evaluation of the proposal.
- 8.6 SSMHC in its sole discretion will determine which, if any, substitutions will be accepted and the Contract price will be adjusted accordingly. The accepted products, material or method will become part of the Contract.
- 8.7 In the event the Work or any part of it cannot be completed in accordance with the specified requirements, the bidder shall clearly and explicitly state what the deviations are.
- 8.8 And the fixed tender amount shall be stated in Canadian dollars, and shall include all materials, labour, equipment, services, permits and incidentals required for performance and completion of the Work. Harmonized Sales Tax (H.S.T.) is to be included with the total tender amount.
- 8.9 Upon request, a bidder shall verify any information, including price, contained in its bid, and any bid may be rejected if SSMHC is not satisfied with the information furnished.
- 8.10 In submitting a bid, the bidder represents and warrants that it has reviewed the Contract and this Request for Tender including all Schedules in full, and that the pricing in its bid accounts for all of the bidder's obligations therein. The prices stated in the successful bid will be fixed and included in the Contract for execution, and will thereafter be subject to adjustment only in accordance with the terms of the Contract.
- 8.11 The bidder represents and warrants that every statement in its bid is accurate and complete, and acknowledges that SSMHC is relying on such representations and warranties in selecting the successful bid and entering into the Contract. Misrepresentation in the successful bid may be grounds for SSMHC to cancel or terminate the Contract.

9 **BIDS IRREVOCABLE**

- 9.1 Bids shall not be withdrawn or modified, and shall remain firm, irrevocable and open for acceptance by SSMHC for a period of thirty (30) days after Tender Closing.
- 9.2 In the event that SSMHC deems it necessary to extend the thirty (30) day period, SSMHC shall, prior to the expiration of such period, provide bidders with written notice to that effect, whereupon a bidder shall have five (5) business days from the date of receipt of such written notice to, in writing, either accept the requested extension as referred to in the notice or withdraw their bid. In the event that a bidder does not respond in writing within the five (5) business days described above, the bidder shall be deemed to have accepted the requested extension.

10 **BID AND PERFORMANCE SECURITY AND OTHER BONDING**

10.1 **Bid Security**

- 11 The Bidder shall include together with the Bidder's Tender Submission Form any one of a Bid Bond from a Surety acceptable to the Owner, a certified cheque, a Bank Draft or an irrevocable Letter of Credit in favour of the Owner in an amount **equivalent to 10%** of the submitted **Bid price including**

HST, valid for a period of thirty (30) days from the date of tender closing unless otherwise stipulated in the Tender Submission Form.

12 Such deposit shall be security to the Owner that the tenderer, if successful, will execute the contract documents and supply the Contract Performance Security in accordance with Section 00200, Clause 4.2.

12.1 Failure to comply with Clause 10.1.2 may result in forfeiture of the Bid Security.

12.2 Bid Security of all tenderers, except the lowest and second lowest tenderers will be returned within three (3) business days of the award of the Contract.

12.3 The Bid Security of the two low tenderers will be returned when the Contract has been awarded in accordance with Section 00200, Clause 8.

12.4 **Performance Security**

12.5 The Contractor shall provide, at the Contractor's costs, Performance Security in favour of the Owner in order to secure the due and faithful performance of the Contract, which shall be as follows:

12.5.1.1 a Performance Bond is issued by a Surety Company acceptable to the Owner's approved form which is attached hereto and shall be in an **amount equal to 50%** of the Contract Price;

12.5.1.2 If the Contract price is less than \$1,000,000.00, but over \$500,000.00, the following alternate forms of security are acceptable in lieu of such Performance Bond:

a) an irrevocable letter of credit, bank draft, or certified cheque; or

b) bearer or negotiable bonds of Canada, the Province of Ontario, or the Ontario Hydro Electric Power Commission (bonds to be assessed at market not face value); or

c) such other collateral as may be acceptable to the Owner and in each case, the alternate forms of security shall be equivalent to 20% of the Contract Price.

12.5.1.3 if the Contract price is less than \$500,000.00, no Performance Bond is required.

12.6 If the Contractor fails to meet the requirements of this section within seven (7) business days of receipt by the Contractor of the award letter, then the Owner at its sole option may terminate the Contract and use the Bid Security toward damages.

12.7 If the Security is in the form of a Performance Bond, the document shall be retained by the Owner for a period of two (2) years from the date on which the last payment under the contract falls due, after which it will be returned to the Contractor on the Contractor's request.

12.8 If alternate security is provided pursuant to this section it will be returned to the Contractor forty-five (45) days after completion of the Work and the correction of all deficiencies. If deficiencies involve seasonal work which must be postponed, the security shall be reduced to an amount equal to the value of the work which remains to be completed and the balance of the security returned to the Contractor forty-five (45) days after all other work is completed.

- 12.9 If the Contract Price is greater than \$500,000, the Contractor shall also provide, at the Contractor's cost, a Labour and Material Payment Bond, in the Owner's approved form which is attached hereto, and it shall be in an amount equal to 50% of the total Contract Price.

13 RIGHT TO AMEND OR CANCEL THIS REQUEST FOR TENDER

- 13.1 SSMHC reserves the right to modify, suspend or cancel this Request for Tender at any time for any reason (including if the prices in the bids exceed available funding) and to reissue a Request for Tender, or to undertake another procurement process for the Work, or to obtain the Work in some other manner or to decide not to proceed with the Work or part of it.

14 FORM OF CONTRACT

- 14.1 The contract between the Owner and the successful bidder will be the Canadian Construction Documents Committee's CCDC 2 – 2020 – Stipulated Price Contract, as amended by Schedule B - Supplemental Conditions (the "**Contract**").

- 14.2 If a Contract is awarded, the following documents will all form part of the Contract:

PART 1 – Instruction to Bidders

SCHEDULE A - Tender Submission Form

Stipulated Price Contract CCDC 2 -2020

Schedule B - Supplementary Conditions

Specifications with Appendices and Addenda

Schedules

Award Letter (Letter of Intent)

Purchase Order

(the "**Contract Documents**")

- 14.3 SSMHC reserves the right to amend or supplement the Contract Documents at any time prior to Tender Closing. Additional information, changes, clarifications or corrections made by SSMHC or its consultant on SSMHC's behalf to the Contract Documents shall be issued in the form of addenda which will become part of the Contract and shall be covered in the tender price. The bidder shall acknowledge receipt of these addenda in the space provided in Schedule A – Tender Submission Form.

15 EXAMINATION OF THE SITE AND CONTRACT DOCUMENTS

- 15.1 Before submitting a bid, the bidder shall carefully examine the Contract Documents, including drawings and specifications, and examine site of the proposed Work, and fully inform itself of the existing conditions, limitations and difficulties that may arise and include in its bid the cost of all labour, materials and services required to complete the Work and fulfill the Contract.

- 15.2 Before submitting a bid, the bidder shall ascertain, from the relevant authorities, the availability and existing locations of all services to the project, and without limiting the generality of the foregoing, in particular such services as electric light, power, sewers, water supply, gas, telephone and transportation and availability of roads for traffic, and

shall ascertain what prior notice will be required for the installation of the service to the project.

- 15.3 At SSMHC's discretion, questions arising from the bidder's inspection at the site will be answered in addenda. Existing building information may be available for inspection at the SSMHC's office. The bidder shall interpret existing building information according to his own judgment and not rely upon it as accurately descriptive of subsurface conditions which may be found to exist.
- 15.4 The bidder shall report any ambiguities, discrepancies, errors, non-compliance with applicable codes or standards, or omissions in the Contract Documents or this Request for Tender to SSMHC and request clarification or correction thereof in accordance with Section 0 "ACCESS TO SITE & INQUIRIES". By submitting its bid, the bidder will be deemed to have accepted the Contract Documents, including all specifications and drawings, as being accurate and the Owner will not approve any extra charges subsequent to acceptance of the bidder's bid which arise from any ambiguities, discrepancies, errors, non-compliance, or omissions in the Contract Documents or this Request for Tender which could have or should have been identified through the bidder's due diligence prior to bidding.

16 **QUALIFICATION INFORMATION**

- 16.1 The bidder may be required to furnish names of references conversant with the bidder's performance on similar work, the names and experience of senior personnel to be used on the work, and such statements of the bidder's financial resources as SSMHC may deem necessary.
- 16.2 SSMHC reserves the right to require any bidder to submit qualification information prior to the award of the Contract which qualification information shall include the submission of evidence of the capability of the bidder to carry out and to maintain properly the work and the equipment, together with details of the qualifications of the bidder's staff that may be employed in the execution of the Contract.
- 16.3 SSMHC reserves the right of interpretation of qualification information and any decisions made by SSMHC based upon its findings which may affect the award of the Contract shall be final.
- 16.4 SSMHC reserves the right to give preference to materials, products and equipment:
- 16.5 of Canadian origin and manufacture,
- 16.6 which are environmentally friendly,
- 16.7 which are energy efficient

17 **PRICE BREAKDOWN**

- 17.1 Immediately upon the opening of tenders the low bidder or bidders may be requested to submit a detailed breakdown (trade by trade) of the cost of the work. SSMHC will indicate the amount of detail required and the Contractor(s) must present the information promptly.

18 **BID ACCEPTANCE AND REJECTION**

- 18.1 SSMHC will conduct an evaluation of all compliant Bids. Bids will be evaluated as follows:

- 18.2 SSMHC has the unqualified right to reject any bid or all bids, including the bid with the lowest price, and to accept any bid which is, in SSMHC's sole and absolute discretion, the most advantageous to SSMHC.
- 18.3 SSMHC is not obliged to award any contract as a result of this Request for Tender.
- 18.4 The final acceptance of bids and award of any contract is subject to approval by the Director of Housing Services of SSMHC or his/her designate, and to the availability of funding for a contract that SSMHC may award. SSMHC will not have any liability for any costs, expenses, loss, or damages incurred by a bidder as a result of the failure of the Director Of Housing Services or designate to approve final acceptance of a bid or award of a contract, or as a result of the failure by SSMHC to receive funding for a contract.
- 18.5 Conditional or qualified bids will be rejected as non-compliant. Incomplete bids shall be deemed non-compliant unless the information omitted is not substantially material, in which case SSMHC may ask the bidder to provide the omitted information and, on receipt, may consider the bid. SSMHC reserves the right to waive the formalities in this Request for Tender and to disregard any irregularity in the bids received, in accordance with SSMHC's Procurement Policy (copy available upon request).
- 18.6 The determination that a bid is non-compliant or does not meet the requirements in the Request for Tender is within the sole and absolute discretion of SSMHC, and the bidder acknowledges that SSMHC's decision in this regard is final.
- 18.7 SSMHC reserves the right to seek clarification of the contents of any bid or to require a bidder to submit further documentation. Following Tender Closing, SSMHC may request to meet with any bidder to discuss any aspect of its bid.

19 **AWARD OF CONTRACT**

- 19.1 When a Tender is called for more than one project, a Contract may be awarded on the basis of all or any one or more of the projects, unless otherwise stated in the Request for Tender.
- 19.2 SSMHC reserves the right to award multi-award contracts for the Work to more than one contractor if that meets the best interests of SSMHC.
- 19.3 The Owner has up to thirty (30) days after the date of tender closing to notify the bidder that his Tender is accepted, unless this period is extended in accordance with Section 9.2.
- 19.4 The Contract shall be deemed to be awarded on the date that SSMHC advises the Bidder in writing of such award.
- 19.5 If the bidder alters or withdraws the bidder's bid after Tender Closing or if the Bidder does not provide insurance or other documents in accordance with Section 19.6 "REQUIREMENTS AT THE TIME OF CONTRACT EXECUTION" within the times specified, then SSMHC may reject the bidder's bid or cancel or terminate the Contract.
- 19.6 If the bidder that is awarded a contract for the Work cannot complete the Work as specified, SSMHC, at its sole discretion, may issue the remainder of Work to the contractor of its choice.

20 **REQUIREMENTS AT THE TIME OF CONTRACT EXECUTION**

- 20.1 The bidder who has submitted the successful bid shall submit the following documentation in a form satisfactory to SSMHC within ten (10) working days of its receipt of notice of contract award from the SSMHC and a request from the SSMHC to submit:

- 20.2 A copy of the bidder's insurance policies for those insurance coverages required by the Contract;
- 20.3 The bidder's current WSIB Clearance Certificate or WSIB issued "status determination" letter;
- 20.4 a copy of the bidder's existing Corporate Health and Safety Policy and Program in electronic format, where required under the Occupational Health and Safety Act, and any other safe work procedures or safety practices applicable to the Work; and,
- 20.5 performance security, if required in accordance with Section 12.4 "Performance Security"

21 **HEALTH AND SAFETY**

- 21.1 The bidder shall assume the role of contractor or constructor/prime contractor/principal contractor in accordance with the applicable provincial Occupational Health and Safety legislation.
- 21.2 The bidder shall provide, when requested by SSMHC or its consultant, the bidder's latest Workers' Safety Insurance Board Experience Rating and a signed letter which states only competent personnel will be employed on the project in accordance with the *Occupational Health and Safety Act*, as amended.
- 21.3 The bidder acknowledges that all employees of the bidder and/or its subcontractors executing work on SSMHC property are required to have a valid identification card that confirms the worker has attended a "Standardized Safety Orientation Course" administrated by the Sault Safe Community Partnership, or the Sault Ste. Marie Construction Association or an equal Safety Course as determined by SSMHC.

22 **LIMITATION OF LIABILITY**

- 22.1 SSMHC shall have no liability for any costs, expenses, loss, or damages of any bidder in the event that SSMHC rejects all responses to this Request for Tender, amends or terminates the Request for Tender, awards a contract to the bidder who has not submitted the lowest price, or disqualifies a bidder who has submitted a non-compliant bid or has a conflict of interest or unfair advantage.
- 22.2 The bidder acknowledges that SSMHC will not reimburse the bidder for any costs incurred in preparation of a bid.

END OF SECTION

Schedule A

Jeff Barban
Sault Ste. Marie Housing Corporation
548 Albert St E. Street
Sault Ste. Marie, ON P6A 7A7

RE: PTC 2024-01
Window & Screen Replacement

LOCATION: 615 Bay St.
SAULT STE. MARIE, ONTARIO

TENDER CLOSING: **TUESDAY May 14, 2024**
@ 2:00 P.M. LOCAL TIME

I/We, the undersigned, have carefully read and examined this Request for Tender and all of its Schedules in their entirety. We agree to be bound by their terms and conditions, including but not limited to the provisions relating to the limits place on my/our ability make a claim against SSMHC, and to submit the documentation required, when required.

1 BIDDER INFORMATION

Information	Response
Legal Name of Bidder	
Mailing Address	
Head Office Address (if different)	
Contact Person	
Phone Number	
Mobile Number	
Fax Number	
Email Address	

Schedule A

2 PRICE

Having carefully examined the Contract Documents and visited the site and examined all conditions, I/We agree to provide all materials, labour, equipment, services, permits and incidentals required for performance and completion of the above-referred project, all in full accordance with the Contract Documents, for the **total lump sum fixed price** of:

(a)	Lump Sum Fixed Price	\$	
(b)	Harmonized Sales Tax (HST)	\$	
(c)	Total Lump Sum Fixed Price, including HST	\$	

The total lump sum fixed price, including HST, in writing, is:

_____ /100 Canadian Dollars

3 ALTERNATIVES

Further to our bid, I/we propose the following substitute products listed below showing the addition to or a deduction from the bid amount:

Description of Proposed Alternative	Addition to Contract	Deletion to Contract

I/We acknowledge that each of the above proposed alternative(s) is subject to the written approval of SSMHC.

4 SUBCONTRACT WORK

If my/our bid is accepted, it is our intention to employ subcontractors in accordance with the General Conditions of the Contract. All portions of the work, other than those to be placed with the subcontractors will be executed by ourselves with our own workforce. List of subtrades for trade work is listed below.

TRADEWORK	SUBCONTRACTOR

Schedule A

I/we acknowledge and agree that there shall to be no change to the above list without the written consent of SSMHC.

5 ADDENDA

I/We agree acknowledge receiving and examining all addenda issued by SSMHC, as listed below:

ADDENDUM NUMBER	DATE

(If no addenda have been received, indicate "NIL" in the spaces provided.)

6 COMMENCEMENT AND COMPLETION

This bid will be considered accepted and a binding Contract entered into, upon receipt of a duly authorized Purchase Order. The Contract Documents listed in this Request for Tender shall constitute the Contract, subject to such modification as may be agreed to in writing between the parties.

If awarded the Contract, I/We agree and undertake to:

- (a) commence the Work immediately upon being notified in writing to do so by SSMHC, Letter of Intent, and that the Work will be on a continuous basis;
- (b) complete the work in a manner acceptable to SSMHC within 120 Days of date of receiving the Purchase Order;
- (c) complete whatever additional or extra work may be required, in accordance with the Contract
- (d) submit a progress schedule.

7 REQUIREMENTS AT THE TIME OF CONTRACT EXECUTION

If this bid is accepted by SSMHC, I/We agree to provide the following documents in a form satisfactory to SSMHC within **ten working days** after receipt of the Award Letter:

- (e) proof of insurance, as required by the Contract;
- (f) current WSIB clearance certificate or WSIB issued "status determination" letter;
- (g) a copy of the bidders existing Health and Safety Policy and Program, where required under the *Occupational Health and Safety Act*, and any other safe work or safety practices applicable to the Work;
- (h) Performance security in accordance with Section 12.4 PERFORMANCE SECURITY.

Schedule A

8 NO COLLUSION / CONFLICT OF INTEREST

I/We expressly declare and warrant that the prices contained in my/our bid are quoted in utmost good faith, intended to be competitive, and have been arrived at independently without any collusive arrangement or agreement with any other person or partnership or corporation, including any competitor.

I/We expressly declare and warrant that I/We are not party or privy to any deceit tending to mislead SSMHC into accepting my/our bid as a truly competitive bid whether to the prejudice, injury or benefit of SSMHC.

I/We expressly declare that no member of SSMHC has or will have an interest indirectly or directly as a contracting party, partner shareholder, surety or otherwise

9 IRREVOCABILITY

I/We agree and confirm that this bid is irrevocable and is to continue to be open to acceptance by SSMHC for a period of **30 days** after Tender Closing, unless extended.

10 BID SECURITY

A bid bond, certified cheque or irrevocable letter of credit in the **amount of 10 % is attached.**

11 APPENDICES

All appendices have been be completed and included with this Tender Submission Form, as follows:

- (a) Bid Security
- (b) Appendix A – References

Schedule A

SIGNED AND SEALED THIS _____ DAY OF _____ , 2024

Full legal name of Bidder (Corporation, Partnership or Individual)

1) Authorized Signing Officer

(I/We have the authority to bind the company)

Title

Signature

Witness

(Must be witnessed if no seal)

2) Authorized Signing Officer

(I/We have the authority to bind the company)

Title

Signature

Witness

(Must be witnessed if no seal)

NOTE: BIDDERS ARE ADVISED THAT FAILURE TO COMPLETE THIS FORM WILL BE CAUSE FOR DISQUALIFICATION OF THE BID.

***Affix Corporate Seal**

END OF SECTION

1. EXISTING CONDITION

- .1 Upon review of the tender documents, it is the responsibility of the Contractor to review the site.
- .2 The project consists of primarily exterior work, and remedial work to interior finishes associated with the new window installation.
- .3 The building will remain operation during the duration of construction, with the Contractor responsible for the safety of the public below. DSSAB, together with the Contractor will schedule the work within existing occupied apartments.
- .4 Previously DSSAB has through a third party, investigated existing construction materials and has determined that there should be no 'Designated Hazardous Materials' present.
- .5 Contractor shall not be entitled to extra payment and/or performance time for work which is required and which is reasonably inferable in the drawings and upon site review of the existing project Site .
- .6 Advise Consultant in writing of any discrepancies.

END OF SECTION

DOCUMENT 00 70 00 - AGREEMENT, DEFINITIONS AND GENERAL CONDITIONS

1. AGREEMENT

The executed Agreement Between Owner and Contractor of the Standard Construction Documents CCDC 2-2020, as amended hereinafter governs the Work of this Contract.

2. DEFINITIONS

The Definitions of the Standard Construction Document CCDC 2-2020 apply to all Contract Documents.

3. GENERAL CONDITIONS

The General Conditions of the Stipulated Price Contract of the Standard Construction Document CCDC 2, 2020, except as amended by Document 007300 - Supplementary Conditions, govern the Work of this Contract.

END OF SECTION

The General Conditions of the Standard Construction Document CCDC 2-2020, Stipulated Price Contract are hereby amended as follows:

GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

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

Article GC 1.1 – Contract Documents

- (1) Add new sentence .6 to the end of paragraph 1.1.5:
PDF *Drawings* and *Specifications* are to be provided to the *Contractor* in their entirety for his use in coordinating the work with his contracted sub-contractors and suppliers.
- (2) Add new paragraph 1.1.12: “The *Specifications* are divided into divisions and sections for convenience but shall be read as a whole and neither such division nor anything else contained in the *Contract Documents* will be construed to place responsibility on the *Consultant* to settle disputes among the *Subcontractors* and *Suppliers* or as between them and the *Contractor* with respect to such divisions”.
- (3) Add new paragraph 1.1.13: “The *Contractor* shall review the *Contract Documents* and shall report promptly to the *Consultant* any error, inconsistency or omission the *Contractor* may discover. Such review by the *Contractor* is *expected* to be to the best of the *Contractor*’s knowledge, information and expectation based on experience. Except for its obligation to make such review and report the result, the *Contractor* does not assume any responsibility to the *Owner* or to the *Consultant* for the accuracy of the *Contract Documents*. The *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies, or omissions in the *Contract Documents*, which the *Contractor* could not reasonably have discovered. If the *Contractor* does discover any error, inconsistency or omission in the *Contract Documents*, the *Contractor* shall not proceed with the work affected until the *Contractor* has received corrected or missing information from the *Consultant*.”
- (4) Add new paragraph 1.1.14: “If at any time, the *Contractor* finds errors, inconsistencies, or omissions in the *Contract Documents* or has any doubt as to the meaning or intent of any part thereof, the *Contractor* shall immediately notify the *Consultant*, and request a *Supplemental Instruction, Change Order, or Change Directive*, as the case may require. Neither the *Owner* nor the *Consultant* will be responsible for the consequences of any action of the *Contractor* based on oral instructions.

Article GC 2.2 – Role of the Consultant

- (1) Add the word “schedules” after the word “techniques” in paragraph 2.2.5
- (2) Add to the end of the second sentence of paragraph 2.2.5 “or to adhere to the construction schedule”.
- (3) Delete the following from sentence 2.2.6: “Except with respect to GC 5.1- FINANCING INFORMATION REQUIRED OF THE OWNER”.
- (4) Add at the end of sentence 2.2.8. “The *Owner* and the *Contractor* shall waive any claims against the *Consultant* arising out of the making of such interpretations and findings in accordance with paragraphs 2.2.7., 2.2.8. and 2.2.9.”
- (5) After the word “submittals”, add the words “which are provided” before the words “in accordance...” in paragraph 2.2.13.

Article GC 2.4 – Defective Work

- (1) Add new subparagraphs 2.4.2.1 and 2.4.1.2:
 - 2.4.1.1 The *Contractor* shall rectify, in a manner acceptable to the *Owner* and the *Consultant*, all defective work and deficiencies throughout the *Work*, whether or not they are specifically identified by the *Consultant*.
 - 2.4.1.2 The *Contractor* shall prioritize the correction of any defective work which, in the sole discretion of the *Owner*, adversely affects the day to day operation of the *Owner*.

Article GC 3.1 – Control of the Work

- (1) Add the word “schedules” after the word “techniques” in paragraph 3.1.2.
- (2) Add new paragraph 3.1.3.: Prior to commencing individual procurement, fabrication and construction activities, the *Contractor* shall verify, at the *Place of the Work*, all relevant measurements and levels necessary for proper and complete fabrication, assembly and installation of the *Work* and shall further carefully compare such field measurements and conditions with the requirements of the *Contract Documents*. Where dimensions are not included or exact locations are not apparent, the *Contractor* shall immediately notify the *Consultant* in writing and obtain written instructions from the *Consultant* before proceeding with any part of the affected work.

Article GC 3.2 - Construction by Owner or Other Contractors

- (1) Delete this Section in its entirety.

Article GC 3.4 – Construction Schedule

- (1) Delete paragraph 3.4.1.1 in its entirety and substitute new paragraph 3.4.1.1:

The *Contractor* shall,

 - (1) Within 15 days following the award of the *Contract* prepare and submit to the *Owner* and the *Consultant* for their review and acceptance, a construction schedule that indicates the timing of the activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time* and in accordance with the *Contract Documents*. Unless otherwise agreed to in writing, in advance by the *Owner* and the *Contractor*, when required by the *Specifications* to employ construction scheduling software, the *Contractor* shall employ the software Microsoft Project in generating the construction schedule, which permits the progress of the *Work* to be monitored in relation to the critical path established in the schedule. The *Contractor* shall provide the construction schedule and any successor or revised schedules to the *Owner* in electronic format and paper copy. When required by the *Specifications* to employ construction scheduling software, the *Contractor* shall provide the construction schedule to the *Owner* in editable format, together with a record version in PDF format. Once accepted by the *Owner* and the *Consultant*, the construction schedule submitted by the *Contractor* shall become the baseline construction schedule.
 - (2) Provide the expertise and resources, such resources including manpower and equipment, as are necessary to maintain progress under the accepted baseline construction schedule or any successor or revised schedule accepted by the *Owner*.
 - (3) Monitor the progress of the *Work* on a weekly basis relative to the baseline construction schedule, or any successor or revised schedule accepted by the *Owner*, and update the schedule on a monthly basis and advise the *Consultant* and the *Owner* in writing of any variation from the baseline or slippage in the schedule.

- (4) If after applying the expertise and resources required under subparagraph 3.4.1.2, the *Contractor* forms the opinion that the variation or slippage in schedule reported pursuant to subparagraph 3.4.1.3 cannot be recovered by the *Contractor*, it shall, in the same notice, indicate to the *Consultant* and the *Owner* if the *Contractor* intends to apply for an extension of *Contract Time* as provided in GC 6.5 – DELAYS.

Article GC 3.5 – Supervision

- (1) Delete paragraph 3.5.1. in its entirety and substitute new paragraph 3.5.1.: “The *Contractor* shall provide all necessary supervision and appoint competent representatives who shall be in attendance at the *Place of the Work* while work is being performed. The appointed representatives shall not be changed except for valid reasons, and upon the *Contractor* obtaining the *Owner’s* written consent, which consent will not be unreasonably withheld”.
- (2) Add new paragraph 3.5.3: “The *Owner* may, at any time during the course of the *Work*, request the replacement of the appointed representative(s), where the grounds for the request involve conduct which jeopardizes the safety and security of the site or the *Owner’s* operations. Immediately upon receipt of the request, the *Contractor* shall make arrangements to appoint an acceptable replacement”.

Article GC 3.7 – Labour and Products

- (1) Add new paragraph 3.5.4: “The *Contractor* is responsible for the safe on-site storage of *Products* and their protection (including *Products* supplied by the *Owner* and other contractors to be installed under the *Contract*) in such ways as to avoid dangerous conditions or contamination to the *Products* or other persons or property and in locations at the *Place of Work* to the satisfaction of the *Owner* and the *Consultant*. The *Contractor* shall provide all relevant information on *Products* to be supplied by the *Contractor*”.

Article GC 3.8 – Shop Drawings

- (1) Add the words “AND OTHER REQUIRED SUBMITTALS” to the Title after SHOP DRAWINGS.
- (2) Add sentence 3.8.3.3: “The *Contractor* shall prepare a Shop Drawing Log and Schedule of the dates for provision, review and return of *Shop Drawings* and *Submittals* and submit it to the *Consultant* for review. The Shop Drawing Log and Schedule to be monitored and up-dated as required and provided to the *Consultant*.”
- (3) Add sentence 3.8.4.1: “Adjustments made on *Shop Drawings* by the *Consultant* are not intended to change the *Contract Price*. If any such adjustments may result in any change to the *Contract Price*, the *Contractor* shall so advise the *Consultant* prior to proceeding with the work”.

Article GC 5.2 – Applications for Payment

- (1) Add paragraph 5.2.9: “The *Contractor* shall submit a Workplace Safety & Insurance Board Clearance Certificate with each application for progress payment”.
- (2) Add paragraph 5.2.10: “The *Contractor* shall prepare current *As-Built Drawings* during the course of the *Work*, which current *As-Built Drawings* shall be maintained by the *Contractor* and made available to the *Consultant* for review with each application for progress payment. The *Consultant* may retain a reasonable amount and up to a maximum of the amounts outlined in paragraph 5.4.7, from any progress payment for the value of the *As-Built Drawings* not presented for review until the *As-Built Drawings* are presented for review”.

Article GC 5.3 – Payment

- (1) Delete subparagraph 5.3.1.2 in its entirety and substitute new subparagraph 5.3.1.2: “The *Owner* shall make payment to the *Contractor* on account no later than 30 calendar days after the date of a certificate of payment issued by the *Consultant*”.

Article GC 5.4 – Substantial Performance of the Work and Payment of Holdback

- (1) Add the following new paragraphs:

- (1) 5.4.7: Within 7 calendar days of receiving a copy of the certificate of *Substantial Performance of the Work* signed by the *Consultant*, the *Contractor* shall publish a copy of the certificate in a construction trade newspaper (as that term is defined in the *Construction Lien Act*) and shall provide to the *Consultant* and the *Owner* the date of publication and the name of the construction trade newspaper in which the publication occurred. If the *Contractor* fails to comply with this provision, the *Owner* may publish a copy of the certificate and charge the *Contractor* with the costs so incurred.
- (2) 5.4.8: Where the *Contractor* is unable to deliver the documents and materials required, 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*.
- (3) 5.4.9: Together with the submission of its written application for *Substantial Performance of the Work*, the *Contractor* shall submit to the *Consultant* and to the *Owner* a statutory declaration setting forth in reasonable detail any then outstanding and unresolved disputes or claims between the *Contractor* and any *Subcontractor* or *Supplier*, including any claims allegedly arising from delay, which are, directly or indirectly, related to any then outstanding or anticipated disputes or claims between the *Contractor* and the *Owner*, and this disclosure shall, at a minimum:
 - .1 identify the parties involved;
 - .2 identify the amount in dispute;
 - .3 provide a brief statement summarizing the position of each party;
 - .4 include copies of any correspondence or documents in support of either party's position;
 - .5 include copies of any documents of any court or arbitration process related to the matter;
 - .6 identify the dispute or claim between the *Contractor* and the *Owner* to which the matter relates; and
 - .7 include a copy of any written agreement or a summary of any oral agreement between the parties related to resolution of the matter.
- (4) 5.4.10: Prior to the release of the finishing holdback provided for under the *Construction Lien Act*, the *Contractor* shall submit:
 - 1) *Contractor's* written request for release of the finishing holdback, including a statement that no written notices of lien have been received by it;
 - 2) a Statutory Declaration CCDC 9A-2001;
 - 3) a final Workplace Safety & Insurance Board Clearance Certificate.

The disclosure requirements detailed herein are of a continuing nature and survive completion of the *Work*. Accordingly, the *Contractor* shall supplement the information provided with the original statutory declaration with additional materials pertaining to new or existing disputes or claims, as they become available. The *Contractor* shall not be entitled to recover from the *Owner* any amount pertaining to any claim or dispute referred to in this paragraph, if the provisions of this paragraph have not been fully complied with. For greater certainty, the *Contractor* is not obliged to make the aforementioned disclosure with respect to any dispute or claim that is not related to or does not touch upon any then outstanding and unresolved dispute or claim between the *Contractor* and the *Owner*.

Article GC 5.5 – Final Payment

- (1) ~~Paragraph~~ paragraph 5.5.1 in its entirety and substitute new paragraph 5.5.1: When the *Contractor* considers that the *Work* is completed, the *Contractor* shall submit an application for final payment. The *Contractor's* application for final payment shall be accompanied by any documents or materials not yet delivered pursuant to GC 5.4. The *Work* shall be deemed not to be performed until all of the aforementioned documents have been delivered.

Article GC 6.2 – Change Order

- (1) Add paragraph 6.1.3: "The value of a change shall be determined by estimate and acceptance in a lump sum with the following maximum fees chargeable:
 - (1) Work by the Contractor's Own Forces: Additional work (extra): To the cost of materials, labour and statutory charges applicable to labour costs only, add 5% for overhead and to this sum add 10% for profit. For less work (credits): the cost of materials, labour and statutory charges applicable to labour costs only shall be deducted from the Contract Sum.

- (2) Work by Subcontractor: Additional work (extras): to the cost of materials, labour and statutory charges applicable to labour costs only, add 5% for overhead and to this sum add 5% for profit. For less work (credits): the cost of materials, labour and statutory charges applicable to labour costs only shall be deducted from the Contract Sum.
- (3) The Contractor's fee on extras by a Subcontractor: add 5% for combined overhead and profit.
- (5) For extra work by a Sub-Subcontractor for a Prime Subcontractor, the fee as described in item (2) shall be chargeable by the Sub-subcontractor and the fee chargeable by both the Prime Subcontractor and the Contractor shall be 10% for combined overhead and profit.
- (6) Definition of Overhead: "The term 'overhead' shall include the costs for items required by Division 1 - General Requirements - including bonds, permits, insurance, office overhead, field supervision and travelling expenses."

Article GC 6.5 – Delays

- (1) Add new paragraph 6.4.2.1.: "Claimed costs to exclude any consequential, indirect or special damages".
- (2) Add new paragraph 6.5.6.: "If the *Contractor* is delayed in the performance of the *Work* by an act or omission of the *Contractor* or anyone directly or indirectly employed or engaged by the *Contractor*, or by any cause within the *Contractor's* control, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may decide in consultation with the *Contractor*. The *Owner* shall be reimbursed by the *Contractor* for all reasonable costs incurred by the *Owner* as the result of such delay, including, but not limited to, the cost of all additional services required by the *Owner* from the *Consultant* or any subconsultants, employed or engaged by the *Owner*".

Article GC 7.1 – Owner's Right to Perform the Work, Terminate the Contractor's Right to Continue with the Work or Terminate the Contract

- (1) Revise the heading, "OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT" to read, "**OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT**".
- (2) Delete paragraph 7.1.6 and add new paragraphs as follows:
 - 7.1.6: In addition to its right to terminate the Contract set out herein, the *Owner* may terminate this *Contract* at any time for any other reason and without cause upon giving the *Contractor* *Notice in Writing* to that effect. In such event, the *Contractor* shall be entitled to be paid for all *Work* performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*, but in no event shall the *Contractor* be entitled to be compensated for any loss of profit on unperformed portions of the *Work*, or indirect, special, or consequential damages incurred.
 - 7.1.7: The *Owner* may suspend *Work* under this *Contract* at any time for any reason and without cause upon giving the *Contractor* *Notice in Writing* to that effect. In such event, the *Contractor* shall be entitled to be paid for all *Work* performed to the date of suspension and be compensated for all actual costs incurred arising from the suspension, including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the suspension of the *Work*, but in no event shall the *Contractor* be entitled to be compensated for any indirect, special, or consequential damages incurred. In the event that the suspension continues for more than 180 calendar days, the *Contract* shall be deemed to be terminated and the provisions of paragraph 7.1.6 shall apply.
 - 7.1.8: In the case of either a termination of the *Contract* or a suspension of the *Work* under General Condition 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT or General Condition 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* shall use its

best commercial efforts to mitigate the financial consequences to the *Owner* arising out of the termination or suspension, as the case may be.

7.1.9: Upon the resumption of the *Work* following a suspension under General Condition 7.1 - OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK, SUSPEND THE WORK OR TERMINATE THE CONTRACT or General Condition 7.2 - CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT, the *Contractor* will endeavor to minimize the delay and financial consequences arising out of the suspension.

7.1.10: The *Contractor's* obligation under the *Contract* as to quality, correction, and warranty of the *Work* performed by the *Contractor* up to the time of termination or suspension shall continue after such termination of the *Contract* or suspension of the *Work*.

Article GC 7.2 – Contractor's Right to Suspend the Work or Terminate the Contract

- (1) Delete paragraph 7.2.2 in its entirety.
- (2) Delete subparagraph 7.2.3.3 in its entirety and substitute new subparagraph 7.2.3.3: "the *Owner* fails to pay the *Contractor* when due the amount certified by the *Consultant* or awarded by arbitration or a court, except where the *Owner* has a bona fide claim".
- (3) Delete from the end of paragraph 7.2.4 the words "or terminate the *Contract*" and substitute the words: "until the default is corrected, provided however, that in the event of such suspension, the provisions of subparagraph 7.1.10 shall apply. If the *Contractor's Notice in Writing* to the *Owner* was given pursuant to subparagraph 7.2.3.3, then, 180 days after the delivery of the *Notice in Writing*, the *Contractor* may terminate the *Contract*, provided, however, that in the event of such termination, the provisions of subparagraph 7.1.10 shall apply."

Article GC 9.1 – Protection of Work and Property

- (1) Add to subparagraph 9.1.1.1: "which the *Contractor* could not have discovered applying the standard of care described in paragraph 3.14.1"
- (2) Delete paragraph 9.1.2 in its entirety and substitute the following new paragraph 9.1.2: Before commencing any *Work*, the *Contractor* shall determine the locations of all underground utilities and structures indicated in or reasonably determinable from the *Contract Documents*, or that are reasonably determinable from an inspection of the *Place of the Work* exercising the degree of care and skill described in paragraph 3.14.1.
- (3) Add new paragraph 9.1.5: "With respect to any damage to which paragraph 9.1.4 applies, the *Contractor* shall neither undertake to repair or replace any damage whatsoever to the work of other contractors, or to adjoining property, nor acknowledge that the same was caused or occasioned by the *Contractor*, without first consulting the *Owner* and receiving written instructions as to the course of action to be followed from either the *Owner* or the *Consultant*. Where, however, there is danger to life, the environment, or public safety, the *Contractor* shall take such emergency action as it deems necessary to remove the danger".
- (4) Add new paragraph 9.1.6: "The *Contractor* shall be responsible for securing the *Place of Work* at all times and shall take all reasonable precautions necessary to protect the *Place of Work*, its contents, materials (including *Owner*-supplied materials) and the public from loss or damage during and after working hours. Where the *Consultant* or the *Owner* deems the provision of security guard services to be necessary, the *Contractor* shall provide those services at the *Contractor's* expense".

Article GC 9.2 – Toxic and Hazardous Substances

- (1) Add new subparagraph 9.2.5.5: "take all reasonable steps to mitigate the impact on Contract Time and Contract Price".
- (2) Add to subparagraph 9.2.8.3 immediately before the comma, the following new words: "and as a result of the delay"
- (3) Add to paragraph 9.2.8 after the word "responsible", the following new words: or whether any toxic or hazardous substances or materials already at the *Place of the Work* (and which were then

harmless or stored, contained or otherwise dealt with in accordance with legal and regulatory requirements) were dealt with by the *Contractor* or anyone for whom the *Contractor* is responsible in a manner which does not comply with legal and regulatory requirements, or which threatens human health and safety or the environment, or material damage to the property of the *Owner* or others,

- (4) Add “and the *Consultant*” after the word “*Owner*” in subparagraph 9.2.8.4

Article GC 9.4 – Construction Safety

- (1) Delete paragraph 9.4.1 in its entirety and substitute new paragraph 9.4.1: “The *Contractor* shall be solely responsible for construction safety at the *Place of the Work* and for compliance with the rules, regulations, and practices required by the applicable construction health and safety legislation and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the *Work*”.

- (2) Add new paragraphs 9.4.6, 9.4.7 and 9.4.8:

9.4.6: Prior to the commencement of the *Work*, the *Contractor* shall submit to the *Owner*:

- (1) a current Workplace Safety & Insurance Board Clearance Certificate;
- (2) copies of the *Contractor*'s insurance policies having application to the *Project* or certificates of insurance, at the option of the *Owner*;
- (3) documentation setting out the *Contractor*'s in-house safety programs;
- (4) a copy of the Notice of Project filed with the Ministry of Labour naming itself as “constructor” under the *Occupational Health and Safety Act*.

9.4.7. The *Contractor* shall indemnify and save harmless the *Owner*, its agents, officers, directors, employees, consultants, successors, appointees, and assigns from and against the consequences of any and all safety infractions committed by the *Contractor* under the *Occupational Health and Safety Act*, including the payment of legal fees and disbursements on a solicitor and client basis. Such indemnity shall apply to the extent to which the *Owner* is not covered by insurance, provided that the indemnity contained in this paragraph shall be limited to costs and damages resulting directly from such infractions and shall not extend to any consequential, indirect or special damages.

9.4.8 The *Owner* undertakes to include in its contracts with other contractors and in its instructions to its own forces the requirement that the other contractor or its own forces, as the case may be, comply with the policies and procedures of and the directions and instructions from the *Contractor* with respect to occupational health and safety and related matters. Prior to admission to the *Place of the Work*, the *Contractor* may, as a condition of admission, require any other contractor or the *Owner*'s own forces to sign a written acknowledgement in the following form:

END OF SECTION

Acknowledgement

The undersigned acknowledges that the *Work* it will perform on behalf of the *Owner* requires it to enter a *Place of the Work* which is under the total control of a *Contractor* that has a *Contract* with the *Owner*, pursuant to which the *Contractor* has assumed overall responsibility for compliance with all aspects of the applicable health and safety legislation, including all the responsibilities of the “constructor” under the *Occupational Health and Safety Act*, as well as responsibility to co-ordinate and schedule the activities of our *Work* with the *Work* of the *Contractor* under its *Contract*. The undersigned agrees to comply with the *Contractor*'s directions and instructions with respect to health, safety, co-ordination, and scheduling and acknowledges that its failure to do so will be cause for termination of employment or of the undersigned's *Contract* with the *Owner*, as the case may be. The undersigned also agrees to have the *Contractor* named as an additional insured on any comprehensive liability insurance policy, where such insurance is required.

DOCUMENT 007300 - SUPPLEMENTARY CONDITIONS

Name: _____

Signature: _____

Title: _____

Company: _____

Date: _____

SECTION 01 11 00 - SUMMARY OF WORK

1.1 DESCRIPTION

- .1 Work Included: Throughout construction the existing premises will remain occupied. Work is to be executed in a manner that will cause minimum interference with normal official activity (residents) and maintain absolute safety of the occupants and visitors.
 - .1 Remove and replace all exterior windows.
 - .2 Remove and replace all balcony framing and screens.
 - .3 Remove existing metal handrail / guard on balconies. Patch concrete slab.
 - .4 Paint exterior concrete at balcony slabs and vertical concrete walls.
- .2 Safety and security of the DSSAB's property and the Occupants is not to be compromised by construction activity.
- .3 Cooperate with the DSSAB in developing suitable security measures. Responsibility for a safe environment is the Contractor's.
- .4 Do not proceed until satisfied that the requirements for a safe workplace can be maintained.
- .5 Keep access point(s) to windows & balconies away from traffic and parking areas.
- .6 All access equipment must be removed at the end of each day's work.
- .7 Related Work Described Elsewhere: In addition to the requirements and standards specified in this Section, comply with all requirements for occupancy and safety described in various other Sections of these Specifications.

1.2 QUALITY ASSURANCE

- .1 Codes and Standards: Comply with the relevant Health, Occupation and Safety Code requirements of Federal, Provincial and Municipal authorities having jurisdiction and include, but not limited to; means of egress, fire detection and suppression systems, emergency lighting, public safety etc.

1.3 SUBMITTALS

- .1 Before contemplating entering existing areas to carry out work or to obstruct or to take out of use any area of existing premises or service or to cause any other interference, request meeting with Consultant and Owner's representative in order to reach agreement as to timing and length of time you may cause interference.

2.1 SCOPE OF THE WORK

- .1 The following is an outline of the scope of work for this project. Tenderers are required to review all contract documents for a complete description of the scope of work for **615 BAY STREET: WINDOW & SCREEN REPLACEMENT, 615 Bay Street, Sault Ste. Marie, Ontario.**
- .2 Substantial Performance (Temporary Occupancy) for this contract be completed **prior to November 30, 2024 (+/- 7 months)**. The duration of the contract will be confirmed by the Contractor once the contract is awarded. The Base Bid scope includes Architectural work associated with the complete construction requirements for this project.
- .3 The scope of project is further described in the balance of the contract documents, including the drawings and specifications.

SECTION 01 11 00 - SUMMARY OF WORK

2.2 WORK BY OTHERS

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

2.3 CONTRACTOR USE OF THE PREMISES

- .1 Contractor shall have limited use of project site for construction operations during the construction period. Contractor to coordinate extent of all zones and staging with the Consultant and DSSAB at Pre-construction meeting.
- .2 Provide and maintain temporary construction access to work zone.
- .3 Remove or alter existing work to prevent injury or damage to portions of existing adjacent construction which is to remain.
- .4 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by Consultant.
- .5 The building and all adjacent buildings and designated parking areas will continue to be operational during all phases of construction and therefore the Contractor must take special precautions to:
 - .1 Maintain a clean and safe construction site
 - .2 Observe strict contamination control standards
 - .3 Cooperate with the DSSAB in all respects so that there is as little or no interference to the ongoing operations.
 - .4 Limit all activities (i.e., demolition, material delivery, material removal) which could disturb the current on-going operations.
- .6 Contractor entry point and circulation within the facility will be defined by DSSAB at Pre-construction meeting.
- .7 Contractor to provide temporary washroom facilities.
- .8 Electrical Power may be made available for Contractor use by DSSAB.
- .9 Lay-Down area to be determined by DSSAB at pre-construction meeting.

PART THREE - EXECUTION

3.0 GENERAL

- 3.1 Furnish and maintain all temporary facilities and controls as 'long as needed' for the safe and proper completion of the work. Remove all temporary facilities as rapidly as the progress of the work will permit, or as directed by the Consultant.

END OF SECTION

SECTION 01 14 00 - WORK RESTRICTIONS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 ACCESS AND EGRESS

- .1 Where security has been reduced by Work of Contract, provide temporary means to maintain security.
- .2 Hours of operation (8:00 a.m. to 5 p.m.) to be in place. Hours outside of this period to be coordinated with DSSAB.
- .2 Owner will provide instruction for lay-down material areas, and protocols for delivery of construction materials.

END OF SECTION

SECTION 01 21 00 - ALLOWANCES

1. GENERAL

- .1 Comply with GC 4.2 CONTINGENCY ALLOWANCE.
- .2 Cash allowances are designated for additional work and services deemed to be necessary by Owner, from time to time, throughout the execution of the Work. Where a cash allowance refers to an item or category of work already included in Contract Documents, it shall be assumed to cover work or services in addition to that indicated, unless specifically indicated otherwise.
- .3 Contractor may be required from time to time to assist in tendering of certain items of work as may be covered by allowance, as directed by Consultant.

2. AUTHORIZATION

- .1 Allowances shall be expended by a written order signed by the Owner or Owner Representative.
- .2 Work covered by allowances shall be performed for such amounts and by such persons as directed by the Consultant. Should it be required, the Contract Price will be adjusted, by written order, to provide for a deficit to any allowance.
- .3 Include with each progress payments a summary of all allowances. Include the total amount, amount expended to date, amount applied for with new application (include supporting documentation).
- .4 If entire allowance is not required to be expended against at the end of the project, the entire residual value will be retained by the owner, or at any time during the project at the owner's discretion.

3. CONTINGENCY ALLOWANCE

- .1 Cash Contingency Allowance, unless otherwise specified, covers total cost to Contractor of services, products, construction machinery and equipment, freight, handling, unloading, storage, Installation and other authorized expenses incurred in performing Work for unforeseen conditions within existing building.
- .2 The Contingency Allowance, and not contract price, shall include the Contractor's Overhead and Profit in connection with such cash allowance.
- .3 Include the Contract a cash Contingency Allowance in the amount of **\$ 50,000.00**.
(Fifty Thousand Dollars)
- .4 Expenditures under Contingency Allowance will be authorized by issuance of Change Order only.

END OF SECTION

SECTION 01 29 00 - PAYMENT PROCEDURES

1.1 GENERAL

- .1 Comply with Reference Standards as stipulated by:
- .1 Canadian Construction Documents Committee (CCDC)
 - .1 CCDC 2-2020, Stipulated Price Contract

1.2 APPLICATIONS FOR PROGRESS PAYMENT

- .1 Refer to CCDC 2.
- .2 Make applications for payment on account as provided in Agreement monthly as Work progresses.
- .3 Date applications for payment last day of agreed monthly payment period and ensure amount claimed is for value, proportionate to amount of Contract, of Work performed and Products delivered to Place of Work at that date.
- .4 Submit to Consultant, at least 14 days before first application for payment. Schedule of values for parts of Work, aggregating total amount of Contract Price, to facilitate evaluation of applications for payment.

1.3 SCHEDULE OF VALUES

- .1 Refer to CCDC 2.
- .2 Provide schedule of values supported by evidence as Consultant may reasonably direct and when accepted by Consultant, be used as basis for applications for payment.
- .3 Include statement based on schedule of values with each application for payment.
- .4 Support claims for products delivered to Place of Work but not yet incorporated into Work by such evidence as Consultant may reasonably require to establish value and delivery of products.

1.4 PROGRESS PAYMENT

- .1 Refer to CCDC 2.
- .2 Consultant will issue to Owner, no later than 10 days after receipt of an application for payment, certificate for payment in amount applied for or in such other amount as Consultant determines to be due. If Consultant amends application, Consultant will give notification in writing giving reasons for amendment.

1.5 SUBSTANTIAL PERFORMANCE OF WORK

- .1 Refer to CCDC 2.
- .2 Prepare and submit to Consultant comprehensive list of items to be completed or corrected and apply for a review by Consultant to establish Substantial Performance of Work or substantial performance of designated portion of Work when Failure to include items on list does not alter responsibility to complete Contract.
- .3 No later than 10 days after receipt of list and application, Consultant will review Work to verify validity of application, and no later than 7 days after completing review, will notify Contractor if Work or designated portion of Work is substantially performed.
- .4 Consultant will state date of Substantial Performance of Work or designated portion of Work in certificate.
- .5 Immediately following issuance of certificate of Substantial Performance of Work, in consultation with Consultant, establish reasonable date for finishing Work.

1.6 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF WORK

- .1 Refer to CCDC 2.
- .2 After issuance of certificate of Substantial Performance of Work:

SECTION 01 29 00 - PAYMENT PROCEDURES

- .1 Submit application for payment of holdback amount.
- .2 Submit sworn statement that accounts for labour, subcontracts, products, construction machinery and equipment, and other indebtedness which may have been incurred in Substantial Performance of Work and for which DSSAB might in be held responsible have been paid in full, except for amounts properly retained as holdback or as identified amount in dispute.
- .3 After receipt of application for payment and sworn statement, Consultant will issue certificate for payment of holdback amount.
- .4 Where holdback amount has not been placed in a separate holdback account, DSSAB will, 10 days prior to expiry of holdback period stipulated in lien legislation applicable to Place of Work, place holdback amount in bank account in joint names of DSSAB and Contractor.
- .5 Amount authorized by certificate for payment of holdback amount is due and payable on day following expiration of holdback period stipulated in lien legislation applicable to Place of Work. Where lien legislation does not exist or apply, holdback amount is due and payable in accordance with other legislation, industry practice, or provisions which may be agreed to between parties. DSSAB may retain out of holdback amount sums required by law to satisfy liens against Work or, if permitted by lien legislation applicable to Place of Work, other third-party monetary claims against Contractor which are enforceable against DSSAB.

1.7 FINAL PAYMENT

- .1 Refer to CCDDC 2, GC 5.7.
- .2 Submit application for final payment when Work is completed.
- .3 Consultant will, no later than 10 days after receipt of application for final payment, review Work to verify validity of application. Consultant will give notification that application is valid or give reasons why it is not valid, no later than 7 days after reviewing Work.
- .4 Consultant will issue final certificate for payment when application for final payment is found valid.

END OF SECTION

SECTION 01 31 19 - PROJECT MANAGEMENT AND COORDINATION

1. PRE-CONSTRUCTION MEETING

- .1 Immediately prior to construction, upon notification attend at location of Owner's choice, pre-construction meeting, along with authoritative representatives of certain key subcontractors as specifically indicated in the conference notice.
- .2 Purpose of meeting is as follows:
 - .1 Review project communications procedures.
 - .2 Review contract administration requirements including submittals, payment and change order procedures.
 - .3 Identify all critical points on construction schedule for positive action.
 - .4 Identify any product availability problems and substitution requests.
 - .5 Establish site arrangements and temporary facilities.
 - .6 Review Consultant's inspection requirements.
 - .7 Review any points which, in Owner's, Consultant's and Contractor's opinion, require clarification.
- .3 The Consultant shall organize and chair the pre-construction meeting. Consultant shall record minutes of pre-construction meeting and distribute a copy to each participant within ten days of meeting.

2. SITE MEETINGS

- .1 Prior to the commencement of the Work, the Contractor together with the Consultant shall mutually agree to a sequence for holding regular site meetings.
- .2 Contractor to organize and chair site meetings. Ensure that persons, whose presence is required, are present and that relative information is available to allow meetings to be conducted efficiently.
- .3 Once a month or more often if directed by Consultant include review with Consultant and Owner of construction schedule and application for progress payment, during or immediately following site meeting.
- .4 Contractor to record minutes of each meeting and promptly distribute copies to be received by all participants not later than seven days after meeting has been held. Distribute minutes of meetings to all Consultants, whether in attendance or not.

3. SUPERVISION

- .1 Employ an experienced and qualified supervisor who shall be in complete charge of the Work from commencement to final completion of the Work and who shall be present at the site whenever work is being carried out. A working foreperson will not be acceptable. The supervisor shall not be changed after commencement of work without the Consultant's approval.
- .2 Supervise, direct, manage and control the work of all forces carrying out the Work, including subcontractors and suppliers. Carry out daily inspections to ensure compliance with the Contract Documents and the maintenance of quality standards. Ensure that the supervisory staff includes personnel competent in supervising all Sections of Work required.
- .3 Arrange for sufficient number of qualified assistants to the supervisor as required for the proper and efficient execution of the Work.

SECTION 01 31 19 - PROJECT MANAGEMENT AND COORDINATION

4. DOCUMENTS ON SITE

- .1 Contractor's field office / space shall at all times contain a complete set of Contract Documents (Drawings and Specifications) with all addenda, site instructions, change orders, reviewed shop drawings and samples, colour schedule, finish materials schedules, hardware list, progress reports and meeting minutes.

5. BUILDING PERMIT

- .1 The Contractor shall be responsible for the application for the Building Permit on behalf of the project.
 - .1 The Building Permit will be paid for by the Contractor.
 - .2 Coordinate and provide to the Authorities Having Jurisdiction, any and all responses required from all parties to satisfy any questions arising out of the building permit application.
- .2 Provide authorities having jurisdiction with any and all information as may be requested throughout the course of the project.
 - .1 Coordinate and provide, any and all information required from all parties to satisfy any questions that may be provided.
- .3 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 as set out in the Ontario Building Code.
 - .1 The Contractor shall be present at each site inspection by an inspector or registered code agency as applicable under the Ontario Building Code.
 - .2 The Contractor shall take minutes of these meetings and distribute copies to any and all persons, companies necessary and required to resolve all issues.
 - .3 The contractor shall collect and coordinate the response with the various parties and provide a consolidated response to the authorities having jurisdiction.

6. REGULATORY REQUIREMENTS

.1 BUILDING CODE

- .1 The project work has been documented to comply with the requirements of the Ontario Building Code and all amendments to date.
- .2 Modifications to the project must not reduce the requirements of the Ontario Building Code.
- .3 Conform to local by-laws which amend or expand upon the requirements of the Ontario Building Code.
- .4 Conform to Ontario Fire Code, latest amendment.

.2 SAFETY CODES

- .1 Comply with the requirements of the Ontario Ministry of Labour specifically, and municipal and/or federal authorities as applicable for construction safety on this project.
- .2 Contractor to include all costs for temporary facilities necessary to comply with safety standards.
- .3 Conform to local by-laws which amend or expand upon the requirements of

the Ontario Building Code

.3 MINISTRY OF LABOUR – CONSTRUCTOR GUIDELINES

- .1 Comply with the requirements of the Occupational Health and Safety Branch Ministry of Labour – Constructor Guidelines – March 2009.

7. REQUEST FOR INFORMATION (RFI's)

.1 GENERAL

- .1 Review Contract Documents ahead of work required for the project and submit RFI's in a timely fashion so as to not delay the work. Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
 - .1 Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response
 - .2 Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors
- .2 Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following
 - .1 Project name
 - .2 Project number
 - .3 Date.
 - .4 Name of Contractor
 - .5 Name of Architect
 - .6 RFI number, numbered sequentially
 - .7 RFI subject
 - .8 Specification: Section Title, Section Number, Article and Item number and related paragraphs, as appropriate Drawing: Number, and location reference and photocopy/printed scan of portion of drawing as may be required to fully describe information required.
 - .9 Field dimensions and conditions, as appropriate
 - .10 Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI
 - .11 Contractor's signature
 - .12 Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation or withdrawn.

.2 ARCHITECT'S ACTION

- .1 Architect will review each RFI, determine action required, and respond. Allow ten (10) working days for Architect's response for each RFI.
 - .1 The following Contractor-generated RFIs will be returned without action
 - .1 Requests for approval of submittals
 - .2 Requests for approval of substitutions
 - .3 Requests for approval of Contractor's means and methods.
 - .4 Requests for coordination information already indicated in the Contract Documents.
 - .5 Requests for adjustments in the Contract Time or the Contract Sum.
 - .6 Requests for interpretation of Architect's actions on submittals.

SECTION 01 31 19 - PROJECT MANAGEMENT AND COORDINATION

- .7 Incomplete RFIs or inaccurately prepared RFIs.
- .2 Architect's action may include a request for additional information, in which case Architect's time for response will be dated from time of receipt of additional information.
- .3 Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal.
 - .1 If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within three (3) days of receipt of the RFI response
- .4 The Consultant shall endeavor to provide, with reasonable promptness, written responses to requests from the Contractor for clarification and interpretation of the requirements of the Contract Documents. Such services shall be provided as part of the Consultants Services. However, if the Contractors' requests for information, clarification or interpretation are, in the Consultant's professional opinion, for information readily apparent from reasonable observation of field conditions or a review of the Contract Documents, or are reasonable inferable therefrom, the Consultant shall be entitled to compensation for Additional Services in accordance with their agreement with the Owner, for time spent responding to such Requests. In turn, the Owner shall deduct these costs, plus a reasonable mark-up for administration, from the Contractors payment applications.
- .5 RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit up-to date log bi-weekly at commencement of project.

END OF SECTION

SECTION 01 32 00 - PROJECT PROGRESS DOCUMENTATION

1. CONSTRUCTION SCHEDULE

- .1 Within 14 days of Contract award, submit in format acceptable to Consultant, minimum 2 copies of Contractor's critical path construction schedule and in pdf format.
- .2 Provide computer generated Schedule using suitable scheduling, software such as Gantt or Microsoft Project.
- .3 Set up format to permit plotting of actual construction progress against scheduled progress.
- .4 Schedule shall show:
 - .1 Commencement and completion dates of Contract.
 - .2 Commencement and completion dates of construction stages/phases, if any.
 - .3 Commencement and completion dates of each trade. Major trades shall be further broken down as directed by Consultant; generally follow Specification format.
 - .4 Order and delivery dates for major or critical equipment.
 - .5 Critical dates for shop drawing/sample submissions.
 - .6 Any other information relating to orderly progress of Contract, considered by Contractor or Consultant to be pertinent.
- .5 Consultant, together with Contractor shall review construction progress once a month during or immediately following regular site meeting, or more often as directed by Consultant.
- .6 Update construction schedule, whenever changes occur, in manner and at times acceptable to Consultant.
- .7 Plot actual construction progress or schedule at least once a week.
- .8 Submit copy of updated schedule to Consultant once a month, concurrently with application for payment.

2. CASH FLOW CHART

- .1 Within 7 days after award of Contract, submit, in form approved by Consultant, cash flow chart broken down on a monthly basis in an approved manner. Cash flow chart shall indicate anticipated Contractor's monthly progress billings from commencement of work until completion.
- .2 Update cash flow chart whenever changes occur to scheduling and in manner and at times satisfactory to Consultant.

3. PROGRESS RECORD

- .1 Maintain on site, permanent written record of progress of work. Record shall be open to inspection by Consultant at all times and copy shall be furnished to Consultant upon request.
- .2 This record shall show weather conditions, dates of commencement, progress and completion of various trades and items of work. Particulars pertaining to erection and removal of forms, pouring of concrete, installation of roofing and other critical or major components as well as number of employees of various trades and type and quantity of equipment employed daily, shall be noted.
- .3 Display a copy of the construction schedule in the site office from start of construction to completion. Superimpose actual progress of work on schedule at least once each week.

SECTION 01 32 00 - PROJECT PROGRESS DOCUMENTATION

4. RECORD DRAWINGS

- .1 Obtain and keep on site at all times a complete and separate set of black line white prints.
- .2 Note clearly, neatly, accurately and promptly as the work progresses all architectural revisions and additions to the work and deviations from the Contract Documents.

5. PRODUCT DELIVERY CONTROL

- .1 It is the responsibility of the Contractor to ensure that the supplier or distributor of materials specified or alternatives accepted, which he intends to use, has materials on the site when required. The Contractor shall obtain confirmed delivery dates from the supplier.
- .2 Provide equipment delivery schedule, coordinated with construction and submittals' schedule, showing delivery dates for major and/or critical equipment.
- .3 The Contractor shall contact the Consultant immediately upon receipt of information indicating that any material or item, will not be available on time, in accordance with the original schedule, and similarly it shall be the responsibility of all subcontractors and suppliers to so inform the Contractor.
- .4 The Consultant reserves the right to receive from the Contractor at any time, upon request, copies of actual purchase or work orders of any material or products to be supplied for the work.
- .5 If materials and products have not been placed on order, the Consultant may instruct such items to be placed on order, if direct communication in writing from the manufacturer or prime suppliers is not available indicating that delivery of said material will be made in sufficient time for the orderly completion of the Work.
- .6 The Consultant's review of purchase orders or other related documentation shall in no way release the Contractor, or his subcontractors and suppliers from their responsibility for ensuring the timely ordering of all materials and items required, including the necessary expediting, to complete the work as scheduled in accordance with the Contract Documents.

END OF SECTION

SECTION 01 50 00 - TEMPORARY FACILITIES

1. GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

2. GENERAL PROJECT SCOPE

- .1 Provision of required temporary facilities and barriers for the safety of the general public during the course of construction.
- .2 Coordination of the use of interior spaces and areas of work to be coordinated with DSSAB.
- .3 The use of existing roof hangers for potential use by contractor to be coordinated with DSSAB.

3. TEMPORARY WATER AND POWER

- .1 Access to temporary water supply and Power connections will be provided at Contractor's expense for use of all required trades.

4. TEMPORARY SANITARY FACILITIES

- .1 Provide temporary toilet facilities, including handwash facilities, for all personnel on site, outside of building.
- .2 Keep facilities clean and sanitary and provided with required supplies at all times.
- .3 Except where temporary sanitary facilities are connected to municipal sewer system, periodically remove wastes from site.

5. TEMPORARY FIRST-AID FACILITIES

- .1 Provide site equipment and medical facilities necessary to supply first-aid service to injured personnel in accordance with regulations of the Workers' Compensation Act. Maintain facilities for duration of Contract.

6. TEMPORARY FIRE PROTECTION

- .1 Provide and maintain in proper working order at least four fire extinguishers on each floor, prominently placed, until completion of work.
- .2 Fire extinguishers shall be minimum 9 kg 4A 60BC type.
- .3 Remove fire extinguishers from site, upon completion of work.
- .4 Where gas welding or cutting is to be done within 3 m or above combustible material, or above space that may be occupied by persons, interpose shields of non-combustible material. Tanks supplying gases for welding or cutting shall be placed at no greater distance from the work than is necessary and shall be securely fastened in an upright position. Such tanks shall be free from exposure to the sun or high temperature.

7. CONSTRUCTION AIDS

- .1 Provide temporary stairs, ladders, ramps required for movement and placing of materials, equipment and personnel.
- .2 Provide mechanical hoisting equipment and fully qualified operators as required during construction.
- .3 as may be required, erect required scaffolding independent of walls, arranged to avoid interference with work of other Sections as much as possible.
- .4 Provide and maintain required shoring and bracing in accordance with Construction Safety Act and other applicable regulations.

SECTION 01 50 00 - TEMPORARY FACILITIES

- .5 Shoring and all false work over one tier in height shall be designed and shall bear the stamp of a registered professional engineer, having experience in this field.

8. BARRIERS

- .1 The intent of this section is to provide temporary construction barriers, barricades and enclosures – as may be required - to separate the demolition/construction activities from the Public, during all phases of the Work.
 - .1 This separation must meet the functional requirements of the Owner; in that it may not impede the access of the public use of the property during all hours. Coordinate these requirements with the Owner.
 - .2 These separation(s) must also meet the regulatory requirements of the Ministry of Labour and other Authorities Having Jurisdiction. Review the requirements and incorporate all into the barriers and barricades.
 - .3 At no time may the Owner be deemed the “Constructor”. Provide and maintain all barriers to ensure the responsibility, safety and security of the construction zone.
- .2 The existing property outside of the construction area will be occupied by the Public during all phases of the work.
- .3 These barriers and barricades shall separate the construction forces and all construction activities access to and from the Areas of Work without allowing access by the public.
- .4 These barriers and barricades shall provide separation and protection from any construction hazards for the property and public path of travel to temporary entrances. Safety of the Public during all phases of the work is paramount.
- .5 These barriers and barricades shall control the migration of construction debris, dust and other material from crossing over into the occupied spaces of the overall property site.
- .6 It shall be the responsibility of this trade to supply and install all barriers and barricades necessary and required to meet the requirements of above design intent and any and all authorities having jurisdiction.

9. HOARDING

- .1 Temporary site hoarding for minimal works using new 4'-0" high snow fence wired with continuous 2" x 4" top and bottom rails, to rolled steel "T" bar fence posts spaced at 8'-0" on centre. Maintain fence in good repair.

10. SIGNS

- .1 Except as specified here do not erect any signs unless approved by the DSSAB.
- .2 Erect signs relating to safety on the work, or mandatory regulation notices.
- .3 Prior to commencement of work wherein hazardous or volatile cements, coatings, or substances are used, barricade entire area and post adequate number of "NO SMOKING" signs.

11. FIELD OFFICE AND SHEDS

- .1 Maintain, until completion of Contract, for Contractor's use, a temporary office as required for work, large enough to accommodate site administrative activities and site meetings, complete with light, heating and cooling equipment to maintain 21°C, ventilation. Do not store materials, tools, equipment in meeting area; keep clean and tidy.

SECTION 01 50 00 - TEMPORARY FACILITIES

- .2 Provide temporary covers, sheds and platforms of weatherproof construction as may be required for protection and preservation of materials, small tools, equipment which may be susceptible to damage.
- .3 Exterior delineated lay-down areas will be coordinated with Owner within the “construction zone” as indicated on drawing A1.2: General Arrangement Plan. Note that the intent of this drawing is to indicate required unimpeded access routes to the rest of the site during construction and can be modified as required to facilitate construction with Owner’s approval.

12. TEMPORARY ACCESS

- .1 Location of parking for Contractor use will be coordinated and defined with Owner.
- .2 Truck and material delivery onto site to be coordinated and scheduled with Owner as to not disrupt existing operations.

END OF SECTION

SECTION 02 41 12 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Methods and procedures for demolishing, salvaging, recycling and removing site work items designated to be removed in whole or in part.
- .2 Refer and coordinate requirements as indicated in Section 011400 Work Restrictions.

1.2 QUALITY ASSURANCE

- .1 Convene Pre-Demolition Meeting prior to beginning work of this Section to coordinate meeting with the project schedule. The intent of this meeting is to:
 - .1 Verify project requirements.
 - .2 Review existing installation and current conditions, develop work plan to suit new work as indicated on the Drawings, which must be verified prior to possible compromise of existing fire alarm system within area of demolition work.
 - .3 Co-ordination with other building sub-trades.
 - .4 Co-ordinate with the Owner pursuant to continued use of the existing property.
 - .5 Identify potential project risk items and develop solutions.
 - .6 Review existing installation and current conditions, develop work plan to suit new work.

1.3 PRODUCT DELIVERY, HANDLING & STORAGE

- .1 Storage and Protection.
 - .1 Remove and store materials to be salvaged, in manner to prevent damage.
 - .2 Store and protect in accordance with requirements for maximum preservation of material.
 - .3 Owner to indicate the status of removed balcony framing, balcony handrails (guards) and windows.
- .2 Remediate all adjacent existing construction to Owner's approval.

1.4 SCHEDULING

- .1 Coordinate with the Owner for phasing and hours of day for any and all demolition activities within existing facilities. The existing adjacent building will be occupied during the course of demolition and construction activities. Coordinate with the general contractor to maintain access through and around the site as described in the Scope of The Work.
- .2 Schedule any disruption to the existing Facilities and site, with the Consultant and Owner representative.

SECTION 02 41 12 - SELECTIVE DEMOLITION

PART 2 - EXECUTION

2.1 REMOVAL OPERATIONS

- .1 Perform all demolition with coordination with Consultant and Owner.

2.2 RESTORATION

- .1 Restore areas and existing works outside areas of demolition to conditions that existed prior to beginning the Work as part of Contract Requirements.

2.3 CLEANING

- .1 Remove debris, trim surfaces, match existing adjacent construction, and leave work site clean, upon completion of Work.
- .2 Remove debris daily as it accumulates.
- .3 Use cleaning solutions and procedures which are not harmful to health, are not injurious to plants, and do not endanger wildlife, adjacent water courses or ground water.
- .4 Clean: Prior to request for completion, thoroughly clean the construction zone.

END OF SECTION

SECTION 04 05 12 - MORTAR AND GROUT

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- .1 This Section specifies the requirements for repairing the penetrations into the balcony slabs resulting from the removal of the existing metal handrail / guards located within the screen framing.

1.2 RELATED WORK

- .1 Metal Fabrications: Section 05 50 00

1.3 QUALITY ASSURANCE

- .1 Quality Standards: meet requirements of CSA A179-04.
- .2 Source of Material: for mortar to remain exposed in finished project, brands of cementitious materials and source of supply of sand, shall remain the same for duration of work.

1.4 PRODUCT HANDLING

- .1 Store cementitious materials to prevent moisture absorption from any source. Do not use material affected by moisture.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 SIKA Powerset: Two component, fast setting polyester gap filler, or approved equivalent product.
- .2 Colour pigment: Grey

PART 3 - EXECUTION

3.1 APPLICATION

- .1 Upon removal of anchoring bolts, the existing holes to be mechanically prepared to a clean, sound, dust-free condition.
- .2 Dry substrate conditions are ideal, but damp conditions can be tolerated as long as the cracks, cavities or voids contain no standing water.
- .3 Substrate should be frost-free.
- .4 Application Temperature: -10 °C to 41 °C (14 °F to 105 °F).
- .5 Prior to installation, the initial portion of dispensed material is discarded until it can be visually verified that both components are flowing and mixing to a uniform grey appearance and consistency.

3.3 FINISHING

- .1 Finish flush and strike even with the existing surface using a dry putty knife or small pointing trowel.
- .2 Minimize product application within holes in order to minimize excessive overlap of materials on existing balcony slab. Material may stain porous substrates. Carry out tests on a small mock-up or in an inconspicuous location prior to proceeding with entire project. Coordinate review with Consultant.

END OF SECTION

SECTION 055000 - METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- .1 Removal of existing insect screens within balcony screen framing for installation of new metal bird screens.

1.2 RELATED WORK

- .1 Aluminium-Framed Storefronts: Section 08 34 13

1.3 WORK SUPPLIED BUT NOT INSTALLED

- .1 Supply following items for installation under other Sections of work: anchor bolts, bearing plates, sleeves and other inserts to be built into concrete and masonry elements and required for anchorage and support of metal fabrications.
- .2 Supply other Sections with instructions, and if required, templates, necessary for accurate setting of inserts and components.

1.4 QUALITY ASSURANCE

- .1 Qualifications of Welders: certified under CSA W47.1-03 for appropriate class of work.
- .2 Upon completion of installation of metal screens submit certification by professional engineer responsible for design of these components, verifying that they have been installed in accordance with reviewed shop drawings.

1.5 SHOP DRAWINGS

- .1 Submit detailed shop drawings of all metal fabrications required, showing profiles, members, fastenings, thicknesses, finishes and other pertinent data.

1.6 SAMPLES

- .1 Submit duplicate 300 x 300 mm (12 x 12 inches) sample sections showing prefinished VINYL surface, finish, colour and texture.

1.7 PRODUCT HANDLING

- .1 Deliver, handle and store fabricated components to prevent permanent distortion, corrosion and damage.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Item # 2"VI.080WD, Galvanized Vinyl Coated Wire Mesh - 2" x 2" Mesh, 0.080" Diameter Wire
- .2 Percentage of Open Area: 92.16%.
- .3 Weight: 0.25 lb / sq. ft.
- .4 Wire Diameter: 0.08 inches.
- .5 Width of opening: 1.920 inches.
- .6 Black Vinyl Coating

SECTION 055000 - METAL FABRICATIONS

2.2 MANUFACTURER

- .1 Edward J. Darby & Son, Inc. PO BOX 50049 Philadelphia, PA 19132 Phone: 215-236-2203 • Fax: 215-236-9989 Email: sales@darbywiremesh.com Website: www.darbywire.b2bdd.net

2.3 INSTALLATION

- .1 Install screens within Aluminium-Framed Storefronts plumb, square, straight and true to line. Drill, cut and fit as necessary to attach this work to adjoining work.
- .2 Provide temporary supports and bracing required to position components until they are permanently anchored in place.
- .3 Securely anchor components in place; unless otherwise indicated, anchor components as follows:
 - .1 To aluminium framing with screws or bolts.

2.4 MOCK-UP

- .1 Provide for review of Consultant and Owner the mesh installation within the FlushGlaze 1800 framing system for approval prior to proceeding with the work.

END OF SECTION

SECTION 06 20 00 - FINISH CARPENTRY

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.
- .2 Section Includes Labour, Products equipment and services necessary for the finish carpentry work in accordance with the Contract Documents.

1.2 RELATED WORK

- .1 Joint Sealants: Section 079200
- .3 Aluminium Windows: Section 085200
- .4 Painting: Section 09900

1.3 REFERENCES

- .1 ASTM F1667, Driven Fasteners: Nails, Spikes and Staples.
- .2 Architectural Woodwork Manufacturers Association of Canada (AWMAC).
- .3 Architectural Woodwork Standards (AWS) - Quality Standards for Architectural Woodwork.
- .4 CSA O151-M, Canadian Softwood Plywood.
- .5 National Hardwood Lumber Association (NHLA) Rules for the Measurement and Inspection of Hardwood.
- .6 National Lumber Grades Authority (NLGA) Standard Grading Rules for Canadian Lumber.

1.4 SUBMITTALS

- .1 Shop drawings: Submit shop drawings of finish carpentry work in accordance with Section 01 33 00 indicating materials, thicknesses, sizes, profiles, shop jointing, anchorage, fastener types and sizes,
- .2 Mock-up:
 - .1 Shop fabricate one mock-up of window sill with apron specified, installed in location acceptable to Consultant.
 - .2 Arrange for Consultant's review and acceptance, allow 48 hours after acceptance before proceeding with work.
 - .3 When accepted, mock-up will demonstrate minimum standard for this work.
 - .4 Mock-up may remain as part of Work if accepted by Consultant. Remove and dispose of mock-ups which do not form part of Work.

1.5 QUALITY ASSURANCE

- .1 Execute work of this Section by member of AWMAC, with 5 years' experience in finish carpentry work of comparable complexity and scope. Submit proof of experience upon Consultant's request.
- .2 Fabricate finish carpentry work in accordance with AWS Quality Standards, Premium Quality materials and installation unless otherwise indicated. Perform work in accordance with the definition of Good Workmanship as defined in the AWS Quality Standards.

SECTION 06 20 00 - FINISH CARPENTRY

- .3 Remove and replace finish carpentry work which does not conform to the AWS Quality standards or as amended by these Specifications.

1.6 PRODUCT DELIVERY, HANDLING & STORAGE

- .1 Protect against damage, including damage by excessive changes in moisture content, during delivery and storage. Maintain minimum storage temperature of 16°C, and relative humidity 25% to 55%.
- .2 Do not deliver finish carpentry components to site before all wet trades are completed, the building is closed in and humidity conditions on site are acceptable. Do not deliver during rain or damp weather.
- .3 Store materials on site in such a way as to prevent deterioration or loss or impairment of essential properties. Prevent moisture gain of kiln dried materials.

1.7 PROTECTION

- .1 Provide coverings as necessary to protect finish carpentry components from damage of any kind during storage and after installation.

1.8 EXTENDED WARRANTY

- .1 Submit an extended warranty for plastic laminate work of this Section in accordance with General Conditions, except that warranty period is extended to 2 years from date of Substantial Performance of the Work.
 - .1 Provide warrantee against defects in material and workmanship including but not limited to opening of joints, cracking, shrinkage, warpage, and delamination of plastic laminate.
 - .2 Coverage: Complete replacement including affected adjacent Work.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Solid Wood:
 - .1 Unless otherwise indicated, provide AWI/AWMAC Premium Grade.
 - .2 All wood materials shall be new, straight and clean, free of sap, knots, pitch, and other defects, except as permitted by applicable grading rules.
 - .3 All wood shall be kiln dried to a maximum moisture content of 12% for exterior work and 6% to 8% for interior work.
 - .4 Hardwood: Species as indicated is Maple.
 - .5 All materials under work of this Section, including but not limited to, adhesives and mastics, are to have low VOC content limits.
- .2 Fasteners and Adhesives:
 - .1 Nails and staples: Conforming to ASTM F1667; Size and type to suit application.

2.2 FABRICATION

- .1 General Requirements:
 - .1 Exposed joints and edges:
 - .1 All sills to be continuous 1-piece (no jointing will be accepted).

SECTION 06 20 00 - FINISH CARPENTRY

- .2 Edge grain shall not be visible; mitre external corners, house internal corners.
- .2 Mechanical fasteners:
 - .1 Inconspicuously locate mechanical fasteners. Wherever possible conceal fastenings.
 - .2 Countersink nail heads.
 - .3 Unless otherwise indicated, countersink screw and bolt heads and fill holes with matching wood plugs.
- .2 Standing & Running Trim:
 - .1 Fabricate trim and base for paint finish.
 - .2 Length: standing trim shall be in one piece. Running trim shall be in longest practicable lengths.
 - .3 Thickness: unless otherwise indicated, minimum 13 mm.
- .3 Rails, Slats, Caps, Base:
 - .1 Fabricate components to profiles shown and in longest practicable lengths.
 - .2 Slightly round exposed edges, sand smooth all surfaces.
 - .3 Unless otherwise indicated fabricate members of hard- wood. Use the same species of wood throughout, except where specifically indicated otherwise.

PART 3 - EXECUTION

3.1 INSTALLATION

- .1 Install work in accordance with AWS Quality Standards and tolerances for Architectural Woodwork. Set and secure finish carpentry in place, rigid, plumb, square, and level.
- .2 Scribe and cut as required, fit to abutting walls, and surfaces, and to fit properly into recesses.
- .3 Set nails and countersink screws, apply wood filler to indentations, sand smooth and leave ready to receive finish.
- .4 Finish millwork in accordance with Section 09 91 00. Finished millwork shall be free from bruises, blemishes, mineral marks, knots, shakes and other defects and shall be selected for uniformity of colour, grain and texture.
- .5 Fastening:
 - .1 Coordinate wall securement, anchorage, and blocking for finish carpentry items.
 - .2 Position items of finished carpentry work accurately, level, plumb, true and fasten or anchor securely.
 - .3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round cleanly cut hole and plug with wood plugs to match material being secured.
 - .4 Remove and replace damaged, marked, or stained finish carpentry.

END OF SECTION

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

- .1 Acoustic caulking at gypsum board elements: Section 09 21 16
- .2 Quality Control Section 01 45 00
- .3 Common Product Requirements Section 01 61 00
- .4 Aluminium Windows Section 08 52 00
- .5 Joint Sealant Colour Guide Section 07 92 10

1.3 DEFINITION

- .1 Caulking = Sealant.

1.4 QUALITY ASSURANCE

- .1 Sealants must be installed by qualified caulking contractor with minimum five years experience and proven record of being able to produce good quality work.
- .2 Upon Consultant's request arrange for sealant manufacturer's technical representative to visit the site, investigate conditions and make recommendations in connection with work of this Section.

1.5 PRODUCT HANDLING

- .1 Deliver sealants to site in sealed containers bearing manufacturer's name, brand name of sealant and reference standard to which sealant complies.
- .2 Store materials in a dry area having an ambient temperature within limitations recommended by material manufacturer.

1.6 JOB CONDITIONS

- .1 Unless otherwise specified, apply sealants when air temperature is between 10°C and 25°C. When air temperature is above 25°C or below 10°C follow sealant manufacturer's recommendations regarding application.
- .2 Environmental Limitations:
 - .1 Do not proceed with installation of joint sealants under following conditions:
 - .2 When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 4.4 degrees C.
 - .3 When joint substrates are wet.
- .3 Joint-Width Conditions:
 - .1 Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.
- .4 Joint-Substrate Conditions:
 - .1 Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

SECTION 07 92 00 - JOINT SEALANTS

1.7 GENERAL CONDITIONS

- .1 Provide sealants (and backer-rod) at the junction between dissimilar materials, including but not limited to the following locations:
 - .1 Expansion and control joints in masonry and junctions between masonry and other materials.
 - .2 Expansion and control joints in gypsum board and junctions between gypsum board and other materials.
 - .3 Joints around the perimeter of exterior windows and adjacent construction.
 - .4 Joints in vapour/air seal materials.
 - .5 Joints as indicated in all details and sections to be caulked or sealed.

1.8 WARRANTY

- .1 At no cost to Owner remedy any defects in work, including work of this and other Sections, due to faults in materials and workmanship provided under this Section appearing within a period of 2 years from date of Substantial Performance.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Sealants:
 - .1 As recommended by manufacturer - Exterior sealant for vertical joints: one-part ultra low modulus silicone sealant with joint movement capability of $\pm 50\%$; custom colour selected by Consultant: ASTM C920, Type S, Grade NS, Class 25, uses NT, G, A, 0: standard of acceptance: Bondaflex Sil 290.
 - .2 Interior sealant for horizontal joints: multi-component, self levelling, chemically curing polyurethane: ASTM C920, Type M, Grade P, Class 25: Standard of acceptance: : Bondaflex Pur 2 SL.
 - .3 Colours: refer to Section 07 92 10 from manufacturer's standard colours.
- .2 Primers, thinners, cleaners: as recommended by sealant manufacturer, non-staining type.
- .3 Premoulded backup for sealant: non-gassing closed cell foam rope, compressed 25% when in joint: Sof-Rod by Tremco, or Cera-Rod by W.R. Meadows.
- .4 Bond breaker: closed cell polyethylene or vinyl foam tape, self-adhering one side.

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 Examine joints to be caulked and report in writing to the Consultant any defects in work of other Sections which would impair installation, performance and warranty of sealants.
- .2 Do not commence installation of sealants until conditions are acceptable.
- .3 Start of work implies acceptance of conditions.

3.2 PREPARATION

- .1 Clean and prepare joints to be caulked to produce clean sound surfaces for sealant adhesion.
- .2 Remove dust, oil, grease, water, frost, loose mortar and other foreign matter. Remove loose particles by blowing joint out with compressed air.
- .3 Chemically clean non-porous surfaces such as metal and glass, taking care to wipe solvents dry with

SECTION 07 92 00 - JOINT SEALANTS

a clean cloth. Use solvents recommended by sealant manufacturer.

- .4 Clean porous surfaces such as masonry, concrete and stone by mechanical abrading.
- .5 Surfaces adjacent to joints to be primed and which may be stained by primer shall be masked with tape before primer is applied.
- .6 Prime joints in accordance with sealant manufacturer's recommendations. Apply primer before installing premoulded backup.
- .7 Install premoulded backup in joints 6 mm and more in width. Roll rope type backup into joint, do not stretch or braid. Install bond breaker in joints less than 6 mm in width.
- .8 Protect adjacent surfaces from stains and contamination. Make good any damage caused.

3.3 APPLICATION

- .1 Apply sealants under pressure using suitable equipment. Gun nozzle shall be of proper size to fit, and seal joint.
- .2 Force sealant into joints in full bead, making certain that void free contact is made with sides of joint. Tool joints to produce a slightly concave surface.
- .3 Caulking must appear as a concave recessed joint, free of ridges, wrinkles and embedded foreign matter. Caulking shall not spread or bulge beyond surfaces on each of joint.
- .4 Apply sealants in accordance with following table:

<u>Joint Width</u>	<u>Sealant Depth</u>
5 mm	5 mm
10 mm	5 mm
15 mm	7 mm
20 mm	10 mm
25 mm	12 mm

- .5 Vent exterior joints as directed by Consultant.

3.4 CLEANING

- .1 As work progresses, remove sealant smears and stains from adjacent surfaces. Use cleaning method recommended by sealant manufacturer.
- .2 Leave adjacent surfaces in neat and clean condition.

3.5 SCHEDULE

- .1 Apply sealant at the following exterior locations:
 - .1 Between dissimilar materials in exposed locations except where specifically indicated otherwise.
 - .2 Between interior Windows and Sills.
 - .3 Perimeter of Exterior Window Frames.
 - .4 Where indicated.

END OF SECTION

SECTION 07 92 10 - JOINT SEALANT COLOUR GUIDE

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Comply with requirements of Division 1.

1.2 RELATED WORK

- .1 Acoustic caulking at gypsum board elements: Section 09 21 16
- .2 Quality Control Section 01 45 00
- .3 Common Product Requirements Section 01 61 00
- .4 Aluminium Windows Section 08 52 00

1.3 GENERAL REQUIREMENTS

- .1 This section is intended to provide a general description of the colours of sealants to be utilized for the project. Where no description is provided, confirm colour with Consultant

1.4 GENERAL SCOPE DESCRIPTION

- | .1 Item: | Colour: |
|--|-----------------------|
| .1 Interior Windows | Colour to match walls |
| .2 Between interior Windows and Sills | Colour to match sills |
| .3 Perimeter of Exterior Window Frames | Colour to match Frame |

END OF SECTION

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- .1 This Section specifies glazed, non-thermally broken aluminum-framed storefronts and accessories.

1.2 RELATED WORK

- .1 Metal Flashing and Trim Section 07 62 00
- .2 Joint Sealing Section 07 92 00
- .3 Glazing: Insulating Glazing Units Section 08 80 50

1.3 REFERENCES

- .1 Aluminum Association (AA), Designation System for Aluminum Finishes (2003)
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.40-[97], Anticorrosive Structural Steel Alkyd Primer.
 - .2 CAN/CGSB-79.1-[M91], Insect Screens.
- .3 Canadian Standards Association (CSA) International
 - .1 CSA-A440-[00]/A440.1-[00], A440-[00], Windows / Special Publication A440.1-[00], User Selection Guide to CSA Standard A440-[00], Windows
 - .2 CAN/CSA-G164-[M92(R1998)], Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CAN/CSA-Z91-[M90(R2000)], Safety Code for Window Cleaning Operations

1.4 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Technical Information: Submit product data including manufacturer's literature for aluminum window frames, glazing, components and accessories, indicating compliance with specified requirements and material characteristics.
 - .1 Submit list on window manufacturer's letterhead of materials, components and accessories to be incorporated into Work.
 - .2 Include product names, types and series numbers.
 - .3 Include contact information for manufacturer and their representative for this Project.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by Professional Engineer registered or licensed in Province of Ontario, Canada.
 - .2 Indicate materials and details in full size scale for head, jamb and sill, profiles of components, interior and exterior trim, junction between combination units, elevations of unit, anchorage details, description of related components and exposed finishes, fasteners, and caulking.
 - .3 Indicate location of manufacturer's nameplates.

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

- .4 Samples for following products:
 - .1 Submit duplicate 300 x 300 mm (12 x 12 inches) sample sections showing prefinished aluminum surface, finish, colour and texture, and including frame corner details.
 - .2 Submit duplicate 300 x 300 mm (12 x 12 inches) sample sections of insulating glass unit showing glazing materials and edge and corner details.
- .5 Thermal Performance: Submit verification that Insulating Glass Units used meet (U) centre of glass values specified.
- .6 Field Reports: Submit manufacturer's field reports within 3 days of manufacturer representative's site visit and inspection.
- .7 Installer Qualifications:
 - .1 Submit letter verifying installer's experience with work similar to work of this Section.

1.5 CLOSEOUT SUBMITTALS

- .1 Operation and Maintenance Data: Supply maintenance data for windows for incorporation into manual specified in Section 01 70 00 - Closeout Procedures.
- .2 Record Documentation: In accordance with Section 01 70 00 - Closeout Procedures.
 - .1 List materials used in windows work.
 - .2 Warranty: Submit warranty documents specified.

1.6 DELIVERY, STORAGE AND HANDLING

- .1 Delivery and Acceptance Requirements:
 - .1 Deliver material in accordance with Section 01 61 00 - Common Product Requirements.
 - .2 Deliver aluminum windows in manufacturer's original packaging with identification labels intact and in sizes to suit project.
 - .3 Brace frames to maintain squareness and rigidity during shipment.
- .2 Material Handling: To AAMA CW-10.
- .3 Storage and Handling Requirements: Store materials off ground and protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
 - .1 Material storage: To AAMA CW-10.

1.7 WARRANTY

- .1 Manufacturer's warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to and not intended to limit other rights Owner may have under Contract Conditions.
- .2 Warranty period: 2 years commencing on Date of Substantial Performance of Work.
 - .1 Insulating glass units: 10 years, on Date of Substantial Performance of Work.

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

1.8 ADMINISTRATIVE REQUIREMENTS

- .1 Co-ordination: Co-ordinate work of this Section with work of other trades for proper time and sequence to avoid construction delays.
- .2 Pre-installation Meeting: Convene pre-installation meeting after Award of Contract and one week prior to commencing work of this Section to verify project requirements, substrate conditions and coordination with other building sub-trades, and to review manufacturer's written installation instructions.
 - .1 Comply with Section [01 31 19 - Project Meetings] and co-ordinate with other similar pre-installation meetings.
 - .2 Notify attendees 2 weeks prior to meeting and ensure meeting attendees include as minimum:
 - .1 Owner;
 - .2 Consultant;
 - .3 Glazing subcontractor;
 - .4 Manufacturer's Technical Representative.
 - .3 Ensure meeting agenda includes review of methods and procedures related to aluminum window installation including co-ordination with related work.
 - .4 Record meeting proceedings including corrective measures and other actions required to ensure successful completion of work and distribute to each attendee within 1 week of meeting.

1.9 MOCK – UP:

- .1 Co-ordinate mock-up of aluminum-framed storefront at location determined by Owner & Consultant for approval before proceeding with the project installation.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS AND MATERIALS

- .1 Manufacturer: Alumatic Limited, 290 Humberline Drive, Toronto, Ontario, Canada M9W 5S2, Phone: (416) 745-4222 or (877) ALUMICOR, e-mail: info@Alumatic.com, URL: www.Alumatic.com.

2.2 DESCRIPTION

- .1 Aluminum-framed glazed storefront constructed from prefinished aluminum extrusions.
- .2 Storefront Framing: Fin tube framing 101.6mm (4 inches) deep.
 - .1 Aluminum-framed storefront: 44.5mm (1.75inches) wide profile.

2.3 DESIGN CRITERIA

- .1 Design aluminum-framed storefront to AAMA CW-DG-1.
- .2 Design aluminum components to CAN/CSA S157.
- .3 Design and size aluminum-framed storefront to withstand dead and live loads caused by pressure and suction of wind, acting normal to plane of wall using design pressure of 0.95 kPa (20 psf) to AAMA CW 11 ASTM E330.

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

- .1 Design aluminum-framed storefront system for expansion and contraction caused by cycling temperature range of 95 degrees C (171 degrees F) over 12 hour period without causing detrimental effect to system components.
- .2 Thermal expansion: Ensure aluminum-framed storefront system can withstand temperature differential of [85] degrees C ([153] degrees F) and is able to accommodate interior and exterior system expansion and contraction without damage to components or deterioration of seals.
- .3 Design vertical expansion joints with baffled overlaps and compressed resilient air seal laid between mullion ends.
- .4 Ensure system is designed to accommodate:
 - .1 Movement within aluminum-framed storefront assembly.
 - .2 Movement between system and perimeter framing components.
 - .3 Dynamic loading and release of loads.
 - .4 Deflection of structural support framing.
- .5 Limit mullion deflection to flexure limit of glass, with full recovery of glazing materials.
- .6 Ensure interior surfaces have no condensation before exposed edges of sealed units reach dew point temperatures during testing to AAMA 501.
- .7 Ensure no vibration harmonics, wind whistles, noises caused by thermal movement, thermal movement transmitted to other building elements, loosening, weakening, or fracturing of attachments or components of system occur.

2.4 MATERIALS

- .1 Aluminum-Framed Storefront System and Components:
 - .1 Extruded aluminum: To ASTM B221, 6063 alloy with T6 temper.
 - .2 Sheet aluminum: To [ASTM B209], utility grade for unexposed surfaces.
 - .3 Fasteners, screws and bolts: Cadmium plated stainless steel [300] [or] [400] series to meet aluminum-framed storefront requirements and as recommended by manufacturer.
 - .4 Anchors: Ensure anchors have three-way adjustment.
 - .5 Aluminum panels: 3 mm (0.125 inches) thick factory formed panels.
 - .6 Vision Glass 6mm (0.25 inches) safety glass. Refer to Section 08 80 00.
- .2 Acceptable Material: Alumatic Ltd., FlushGlaze 1800 Series Storefront.

2.5 ALUMINUM-FRAMED STOREFRONT SYSTEM FABRICATION

- .1 Do aluminum welding to CAN/CSA W59.2.
- .2 Fabricate aluminum assemblies of extruded sections to sizes and profiles indicated.
 - .1 Ensure verticals and horizontals are extrusions designed for either shear block or screw spline corner construction.

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

- .3 Construct units square, plumb and free from distortion, waves, twists, buckles or other defects detrimental to performance or appearance.
- .4 Fabricate aluminum-framed storefront with minimum clearances and shim spacing around panel perimeter and ensure installation and dynamic movement of perimeter seal is enabled.
- .5 Fabricate infill panels with metal covered edge seals around perimeter of panel assembly, enabling installation and minor movement of perimeter seal.
- .6 Accurately fit and secure joints and corners.
 - .1 Ensure joints are flush, hairline, and weatherproof.
- .7 Prepare aluminum-framed storefront to receive anchor devices.
- .8 Use only stainless steel or zinc plated concealed fasteners.
 - .1 Where fasteners cannot be concealed, countersunk screws finished to match adjacent material may be used upon receipt of written approval from Consultant.
- .9 Reinforce framing members for exterior imposed loads where required.
- .10 Visible manufacturer's labels are not permitted.

2.6 FINISHES

- .1 Acceptable material; PPG Industries Inc., Duranar XL.
- .2 Exterior exposed aluminum surfaces: To AA DAF-45-M10C21A41, Architectural Class I, 18 µm (0.0007 inches) minimum thickness, coloured Dark Bronze #42 anodized finish.
 - .1 Acceptable material: Alumicor Ltd., Class I Anodic Finish.

2.7 ACCESSORIES

- .1 Gasketing: To CCD-45 Silicone compatible rubber or extruded silicone gaskets.
- .2 Setting Blocks: To CCD-45 and ASTM D2240, neoprene, 80 - 90 Shore A Durometer hardness. Manufacturer's standard, notched to permit water drainage through the glazing cavity.
- .3 Spacers: To CCD-45 and ASTM D2240, neoprene 50 - 60 Shore A Durometer hardness.
- .4 Sealant: To CAN/CGSB-19.13, Class 40, one-component, cold-applied, non-sagging silicone.
 - .1 Acceptable material: Dow Corning 795.
- .5 Sealant Bond Breaker: Open cell foam backer rod sized to suit project requirements.
- .6 Flashings: 3 mm (0.125 inches) thick aluminum flashing to profiles indicated and in accordance with Section 07 62 00 - Sheet Metal Flashing and Trim.
- .7 Fasteners: Tamperproof, cadmium plated stainless steel 300 or 400 series to meet window requirements and as recommended by manufacturer.

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

2.8 PRODUCT SUBSTITUTIONS

- .1 Substitutions: No substitutions permitted.
- .2 Ensure components come from one manufacturer.

PART 3 - EXECUTION

3.1 INSTALLERS

- .1 Use only Alumicor authorized dealers for work of this Section.

3.2 EXAMINATION

- .1 Verification of Conditions: Verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for window installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Consultant.
 - .2 Inform Consultant of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Consultant.

3.3 INSTALLATION

- .1 Install aluminum-framed storefront in accordance with manufacturer's written recommendations.
- .2 Do aluminum welding to CAN/CSA W59.2.
- .3 Attach aluminum-framed storefront assemblies to structure plumb and level, free from warp, and allow for sufficient adjustment to accommodate construction tolerances and other irregularities.
 - .1 Maintain dimensional tolerances and align with adjacent work.
 - .2 Use alignment attachments and shims to permanently fasten elements to building structure.
 - .3 Clean welded surfaces and apply protective primer to field welds and adjacent surfaces.

3.4 FIELD QUALITY CONTROL

- .1 Field Inspection: Coordinate field inspection in accordance with Section 01 45 00 - Quality Control.
- .2 Site Installation Tolerances: Install windows square and true with tolerance of plus or minus 1.5 mm (0.06 inches) maximum for units with diagonal measurement of 1800 mm (6 feet) maximum and plus or minus 3 mm (0.125 inches) maximum for units with diagonal measurement greater than 1800 mm (6 feet).
- .3 Contractor's Services:
 - .1 Schedule with the Consultant a review of work procedures at stages listed:
 - .1 Installation: site reviews at commencement of Work, during the duration of the installation, and upon completion of Work.
- .2 Maintain a record of daily activities (working log), consisting of:

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

- .1 The planned scope of work.
- .2 Date, time, weather, personnel and location.
- .3 Procedures performed.
- .4 Observed or detected non-compliances or inconsistencies with manufacturers' recommended instructions.
- .5 Limitations or disclaimers regarding the procedures performed.
- .6 Provide reports at end of week to Consultant.

3.6 CLEANING

- .1 Progress Cleaning: Perform cleanup as work progresses in accordance with Section 01 74 00 – Cleaning.
 - .1 Remove sealant and caulking drippings as work progresses.
 - .2 Remove all stickers and wipe framing clean.
 - .3 Leave work area clean end of each day.
- .2 Final Cleaning: Upon completion, remove surplus materials, rubbish, tools, and equipment in accordance with Section 01 74 00 – Cleaning.

3.7 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by aluminum-framed storefront installation.

END OF SECTION

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- .1 This Section specifies glazed, non-thermally broken aluminum-framed storefronts and accessories.

1.2 RELATED WORK

- .1 Vapour Retarders Section 07 26 00
- .2 Air Barriers Section 07 27 00
- .3 Metal Flashing and Trim Section 07 62 00
- .4 Joint Sealing Section 07 92 00
- .5 Glazing: Insulating Glazing Units Section 08 80 50

1.3 REFERENCES

- .1 Aluminum Association (AA), Designation System for Aluminum Finishes (2003)
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.40-[97], Anticorrosive Structural Steel Alkyd Primer.
 - .2 CAN/CGSB-79.1-[M91], Insect Screens.
- .3 Canadian Standards Association (CSA) International
 - .1 CSA-A440-[00]/A440.1-[00], A440-[00], Windows / Special Publication A440.1-[00], User Selection Guide to CSA Standard A440-[00], Windows
 - .2 CAN/CSA-G164-[M92(R1998)], Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .3 CAN/CSA-Z91-[M90(R2000)], Safety Code for Window Cleaning Operations

1.4 SUBMITTALS

- .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Technical Information: Submit product data including manufacturer's literature for aluminum window frames, glazing, components and accessories, indicating compliance with specified requirements and material characteristics.
 - .1 Submit list on window manufacturer's letterhead of materials, components and accessories to be incorporated into Work.
 - .2 Include product names, types and series numbers.
 - .3 Include contact information for manufacturer and their representative for this Project.
- .3 Shop Drawings:
 - .1 Submit drawings stamped and signed by Professional Engineer registered or licensed in Province of Ontario, Canada.
 - .2 Indicate materials and details in full size scale for head, jamb and sill, profiles of components, interior and exterior trim, junction between combination units, elevations of

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

unit, anchorage details, description of related components and exposed finishes, fasteners, and caulking.

- .3 Indicate location of manufacturer's nameplates.
- .4 Samples for following products:
 - .1 Submit duplicate 300 x 300 mm (12 x 12 inches) sample sections showing prefinished aluminum surface, finish, colour and texture, and including frame corner details.
 - .2 Submit duplicate 300 x 300 mm (12 x 12 inches) sample sections of insulating glass unit showing glazing materials and edge and corner details.
- .5 Thermal Performance: Submit verification that Insulating Glass Units used meet (U) centre of glass values specified.
- .6 Test Reports:
 - .1 Submit test reports showing compliance with specified performance characteristics and physical properties including air and water infiltration.
- .7 Field Reports: Submit manufacturer's field reports within 3 days of manufacturer representative's site visit and inspection.
- .8 Installer Qualifications:
 - .1 Submit letter verifying installer's experience with work similar to work of this Section.

1.5 CLOSEOUT SUBMITTALS

- .1 Operation and Maintenance Data: Supply maintenance data for windows for incorporation into manual specified in Section 01 70 00 - Closeout Procedures.
- .2 Record Documentation: In accordance with Section 01 70 00 - Closeout Procedures.
 - .1 List materials used in windows work.
 - .2 Warranty: Submit warranty documents specified.

1.6 DELIVERY, STORAGE AND HANDLING

- .1 Delivery and Acceptance Requirements:
 - .1 Deliver material in accordance with Section 01 61 00 - Common Product Requirements.
 - .2 Deliver aluminum windows in manufacturer's original packaging with identification labels intact and in sizes to suit project.
 - .3 Brace frames to maintain squareness and rigidity during shipment.

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

- .2 Material Handling: To AAMA CW-10.
- .3 Storage and Handling Requirements: Store materials off ground and protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
 - .1 Material storage: To AAMA CW-10.

1.7 WARRANTY

- .1 Manufacturer's warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to and not intended to limit other rights Owner may have under Contract Conditions.
- .2 Warranty period: 2 years commencing on Date of Substantial Performance of Work.
 - .1 Insulating glass units: 10 years, on Date of Substantial Performance of Work.

1.8 ADMINISTRATIVE REQUIREMENTS

- .1 Co-ordination: Co-ordinate work of this Section with work of other trades for proper time and sequence to avoid construction delays.
- .2 Pre-installation Meeting: Convene pre-installation meeting after Award of Contract and one week prior to commencing work of this Section to verify project requirements, substrate conditions and coordination with other building sub-trades, and to review manufacturer's written installation instructions.
 - .1 Comply with Section [01 31 19 - Project Meetings] and co-ordinate with other similar pre-installation meetings.
 - .2 Notify attendees 2 weeks prior to meeting and ensure meeting attendees include as minimum:
 - .1 Owner;
 - .2 Consultant;
 - .3 Glazing subcontractor;
 - .4 Manufacturer's Technical Representative.
 - .3 Ensure meeting agenda includes review of methods and procedures related to aluminum window installation including co-ordination with related work.
 - .4 Record meeting proceedings including corrective measures and other actions required to ensure successful completion of work and distribute to each attendee within 1 week of meeting.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS AND MATERIALS

- .1 Manufacturer: Alumicor Limited, 290 Humberline Drive, Toronto, Ontario, Canada M9W 5S2, Phone: (416) 745-4222 or (877) ALUMICOR, e-mail: info@Alumicor.com, URL: www.Alumicor.com.

2.2 DESCRIPTION

- .1 Thermally broken, rain screened, aluminum framed, windows with double glazed insulating glass units and bull nose front design. Note: provide separate price for triple glazed insulating glass units.

2.3 DESIGN CRITERIA

- .1 Design aluminum components to CAN/CSA S157.
- .2 Window Classification: To NAFS – AAMA/WDMA/CSA 101/I.S.2/A440-11.

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- .1 Air tightness: FW-CW – Canadian level: Fixed.
- .2 Water tightness: FW-CW100 – Canadian level: B7.
- .3 Wind load resistance: FW-CW70 – Canadian level: C5.
- .4 Forced entry resistance test: Grade 40. Canadian level: F20.

2.4 WINDOW MATERIALS

- .1 Main Frame and glass stops: Extruded aluminum: To ASTM B221, 6063 alloy with T5 or T6 temper.
 - .1 Main Frame Depth: 133(5.25 inches) for double-glazed and 152 mm (6.00 inches) for triple glazed.
 - .2 Interior Colour:
 - .3 Exterior Colour:
- .2 Double glazed Insulating glass units: To CAN/CGSB-12.8, hermetically sealed, argon filled insulating glass units with low conductance non-metallic warm edge spacer. Overall thickness 25.4mm (1.00 inches).
 - .1 Outer lite: 6 mm (0.25 inches) clear glass type.
 - .3 Separate Price: Triple glazed Insulating glass units: To CAN/CGSB-12.8, hermetically sealed, argon filled insulating glass units with low conductance non-metallic warm edge spacer. Overall thickness 44.4 mm (1.75inches).
 - .1 Outer lite: 6 mm (0.25 inches) clear glass type.
 - .2 Centre lite: 6 mm (.25 inches) clear glass type.
 - .3 Inner lite: 6 mm (0.25 inches) clear glass type.
 - .4 Centre of glass thermal resistance: (U =)
- .4 Thermal Break: Glass fibre reinforced polyamide porthole extrusion.
- .5 Primary seal gasket: Dual Durometer PVC
- .6 Rain screen gasket: EPDM, 60 Durometer
- .7 Glass stop pressure gasket: EPDM, 70 Durometer
- .8 Interior and Exterior Sills: Extruded aluminum to ASTM B209, of type and size as to suit project conditions – to match existing condition; minimum 3 mm thick, complete with joint covers, jamb drip deflectors, chairs, anchors and anchoring devices.

2.5 FIXED WINDOWS

- .1 Acceptable Material: Alumicor Ltd., RainBlade 1970 Series with bullnose front design.

2.6 FIXED WINDOWS

- .1 Acceptable Material: Alumicor Ltd., 1350 univent with bullnose front design.

2.7 WINDOW FABRICATION

- .1 Fabricate windows to CAN/CSA A440/A440.1 and manufacturer's instructions.
 - .1 Do glazing in accordance with Section 08 80 00 – Glazing. Ensure proper installation of prime seal gasket whether shop or field glazed.

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- .2 Fabricate aluminum assemblies of extruded sections to sizes and profiles indicated.
 - .1 Ensure vertical and horizontal members are tubular extrusions designed for shear block and/or screw spline corner construction.
 - .2 Provide drainage path from glazing cavity in accordance with rain screen design practices and manufacturer's instructions to permit drainage of extraneous water to the exterior.
- .3 Construct units square, plumb and free from distortion, waves, twists, buckles or other defects detrimental to performance or appearance.
 - .1 Brace frames to maintain squareness and rigidity during installation.
- .4 Fabricate units square and true with tolerance of plus or minus 1.5 mm (0.06 inches) maximum for units with diagonal measurement of 1800 mm (6 feet) maximum and plus or minus 3 mm (0.125 inches) maximum for units with diagonal measurement greater than 1800 mm (6 feet).
- .5 Accurately fit and secure joints and corners.
 - .1 Ensure joints are flush, hairline, and weatherproof.
 - .2 Seal joints and corners in accordance with manufacturer's instructions
- .6 Face dimensions detailed are maximum permissible sizes.
- .7 Use only concealed tamperproof fasteners.
 - .1 Where fasteners cannot be concealed, countersunk screws finished to match adjacent material may be used upon receipt of written approval from Consultant.
- .8 Visible manufacturer's labels are not permitted.

2.7 FINISHES

- .1 Exterior exposed aluminum surfaces: To AAMA 2605, 3-coat, thermal setting enamel consisting of primer, colour coat and clear coat with 70 % minimum fluoropolymer resin and polvinylidene fluoride (PVDF), 0.03 mm (1.2 mil) minimum total thickness coloured [_____].
- .2 Acceptable material; PPG Industries Inc., Duranar XL.
- .3 Exterior exposed aluminum surfaces: To AA DAF-45-M10C21A41, Architectural Class I, [18 µm (0.0007 inches) minimum thickness coloured [_____]].
 - .1 Acceptable material: Alumatic Ltd., Class I Anodic Finish.
- .4 Interior exposed aluminum surfaces: To AAMA 2604, 2-coat, thermal setting enamel consisting of primer and topcoat with 70 % minimum fluoropolymer resin and polvinylidene fluoride (PVDF), 0.025 mm (1 mil) minimum total thickness coloured [_____].
- .5 Acceptable material; PPG Industries Inc., Duranar.

2.8 AIR BARRIER AND VAPOUR RETARDER

- .1 Equip window frames with factory installed air barrier and vapour retarder material for sealing to building air barrier and vapour retarder] as follows:
 - .1 Material: identical to, or compatible with, building air barrier and vapour retarder materials to provide required air tightness and vapour diffusion control throughout exterior envelope assembly. Acceptable products: Tremco ProGlaze ETA or other approved by Consultant.

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- .2 Material width: adequate to provide required air tightness and vapour diffusion control to building air barrier and vapour retarder from interior.

2.9 ACCESSORIES

- .1 Gasketing: To CCD-45 Black EPDM gaskets.
- .2 Setting Blocks: To CCD-45 and ASTM D2240, neoprene, 80 - 90 Shore A Durometer hardness. Manufacturer's standard, notched to permit water drainage through the glazing cavity.
- .3 Spacers: To CCD-45 and ASTM D2240, neoprene 50 - 60 Shore A Durometer hardness.
- .4 Sealant: To CAN/CGSB-19.13, Class 40, one-component, cold-applied, non-sagging silicone.
 - .1 Acceptable material: Dow Corning 795.
- .5 Sealant Bond Breaker: Open cell foam backer rod sized to suit project requirements.
- .6 Flashings: 3 mm (0.125 inches) thick aluminum flashing to profiles indicated and in accordance with Section 07 62 00 - Sheet Metal Flashing and Trim.
- .7 Liquid Foam Insulation: Single component, moisture cure, low expansion rate spray-in-place polyurethane liquid foam insulation to ULC-S710.1 and in accordance with manufacturer's written recommendations.
- .8 Fasteners: Tamperproof, cadmium plated stainless steel 300 or 400 series to meet window requirements and as recommended by manufacturer.

2.10 PRODUCT SUBSTITUTIONS

- .1 Substitutions: No substitutions permitted.
- .2 Ensure components come from one manufacturer.

PART 3 - EXECUTION

3.1 INSTALLERS

- .1 Use only Alumicor authorized dealers for work of this Section.

3.2 EXAMINATION

- .1 Verification of Conditions: Verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for window installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Consultant.
 - .2 Inform Consultant of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Consultant.

3.3 WINDOW INSTALLATION

SECTION 08 43 13 - ALUMINUM FRAMED STOREFRONT – NON-THERMALLY BROKEN

- .1 Install windows in accordance with manufacturer's written instructions and to CAN/CSA A440/A440.1.
- .2 Install perimeter prime seal gasket in accordance with manufacturer's instructions, seal corners. Continuous wet seal heel beads are not permitted.
- .3 Arrange components to prevent abrupt variation in colour.
- .4 Co-ordinate attachment and seal of perimeter vapour retarder in accordance with Section 07 26 00 – Vapour Retarders.
- .5 Co-ordinate attachment and seal of perimeter air barrier in accordance with Section 07 27 00 – Air Barriers.

3.4 SILL INSTALLATION

- .1 Install aluminum sills with uniform wash to exterior, level in length, straight in alignment with plumb upstands and faces.
- .2 Cut sills to fit window opening.
- .3 Secure sills in place with anchoring devices located at ends and joints of continuous sills and evenly spaced 600 mm (24 inches) on centre in between.
- .4 Fasten expansion joint cover plates and drip deflectors with tamperproof, self tapping cadmium plated stainless steel screws.
- .5 Maintain 6 to 9 mm (0.25 to 0.375 inches) space between butt ends of continuous sills. For sills over 1200 mm in length, maintain 3 to 6 mm space at each end.

3.5 CAULKING

- .1 Apply sealant in accordance with Section 07 92 00 - Joint Sealing. Conceal sealant within window units except where exposed use is approved in writing by Consultant.
- .2 Seal joints between windows and window sills with sealant. Bed sill expansion joint cover plates and drip deflectors in bedding compound.
 - .1 Caulk between sill upstand and window frame. Caulk butt joints in continuous sills.

3.6 FIELD QUALITY CONTROL

- .1 Field Inspection: Coordinate field inspection in accordance with Section 01 45 00 - Quality Control.
- .2 Site Installation Tolerances: Install windows square and true with tolerance of plus or minus 1.5 mm (0.06 inches) maximum for units with diagonal measurement of 1800 mm (6 feet) maximum and plus or minus 3 mm (0.125 inches) maximum for units with diagonal measurement greater than 1800 mm (6 feet).
- .3 Contractor's Services:
 - .1 Schedule with the Consultant a review of work procedures at stages listed:
 - .1 Installation: site reviews at commencement of Work, during the duration of the installation, and upon completion of Work.
 - .2 Maintain a record of daily activities (working log), consisting of:
 - .1 The planned scope of work.
 - .2 Date, time, weather, personnel and location.

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- .3 Procedures performed.
- .4 Observed or detected non-compliances or inconsistencies with manufacturers' recommended instructions.
- .5 Limitations or disclaimers regarding the procedures performed.
- .6 Provide reports at end of week to Consultant.

3.6 CLEANING

- .1 Progress Cleaning: Perform cleanup as work progresses in accordance with Section 01 74 00 – Cleaning.
 - .1 Remove sealant and caulking drippings as work progresses.
 - .2 Remove all stickers from windows and wipe windows clean.
 - .3 Leave work area clean end of each day.
- .2 Final Cleaning: Upon completion, remove surplus materials, rubbish, tools, and equipment in accordance with Section 01 74 00 – Cleaning.

END OF SECTION

SECTION 08 80 50 - GLAZING

PART 1 - GENERAL

1.1 GENERAL SCOPE

- .1 Replacement of all exterior windows and installation of new balcony glazing.

1.2 RELATED WORK

- .1 Finish Carpentry: Section 062000
- .2 Joint Sealants: Section 079200
- .3 Aluminium Windows: Section 085200
- .4 Painting: Section 099000

1.3 REFERENCES

- .1 ANSI/ASTM E330-90 Test Method for Structural Performance of Exterior Windows, Curtain Walls and Doors by Uniform Static Air Pressure Difference.
- .1 ASTM D2240-91 Test Method for Rubber Property - Durometer Hardness.
- .2 CAN/CGSB-12.1M90 Tempered or Laminated Safety Glass.
- .3 CAN/CGSB-12.8-M90 Insulating Glass Units.

1.4 QUALITY ASSURANCE

- .1 Perform work in accordance with FGMA Glazing Manual for glazing installation methods.
- .2 Every pane of glass shall be factory labelled and label shall remain in place until final cleaning. Safety glass shall have permanent identification.

1.5 PERFORMANCE REQUIREMENTS

- .1 Provide continuity of building enclosure vapour and air barrier using glass and glazing materials as follow:
 - .1 Utilize inner light of multiple light sealed units for continuity of air and vapour seal.
- .4 Size glass to withstand wind loads, dead loads and positive and negative live loads acting normal to plane of glass to a design pressure of kPa as measured in accordance with ANSI/ASTM E330.
- .5 Limit glass deflection to 1/200 flexural limit of glass with full recovery of glazing materials.

1.6 SAMPLES

- .1 Submit samples in accordance with Section 013300.
- .6 Submit duplicate 300 mm size samples of glazed units, tinting glazing and sealant material.

1.7 SHOP DRAWINGS

- .1 Submit shop drawings in accordance with Section 013300.

SECTION 08 80 50 - GLAZING

1.8 CLOSE OUT SUBMITTALS

- .1 Provide maintenance data including cleaning instructions for incorporation into manuals as per Section 017800 requirements.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Setting blocks: neoprene, Shore 'A' durometer hardness of 70 to 90 points; spacer shims, 40 to 50 points, as recommended by glass manufacturer.
- .2 Glazing sealant: one part polysulphide to CAN/CGSB-19.13 -M87 or one part silicone to CAN/CGSB-19.18-M87.
- .3 Glazing tape: polyisobutylene tape; acceptable product: Tremco 440 tape.
- .4 Glazing gasket: Tremco Vision Strip; colour selected by Consultant.
- .5 Float glass: clear float glass to CAN/CGSB-12.3-M91 Glazing Quality.
- .6 Safety Glass:
 - .1 Balcony Safety glass: to CAN/CGSB-12.1, transparent, 6 mm thick.
 - .1 Type 2 - tempered.
 - .2 Glass panels for balcony applications are designed and engineered to meet the latest 2015 IBC Building Codes and are produced with a rigid Ionoplast™ interlayer.
- .7 Sealed Insulating Glass:
 - .1 Insulating glass units: to CAN/CGSB-12.8, double unit, 25 mm overall thickness.
 - .1 Glass: to CAN/CGSB-12.3 float Glass, CAN/CGSB-12.1
 - .2 Glass thickness: 6 mm each light.
 - .3 Inter-cavity space thickness: 12 mm.
- .8 Balcony Glazing:
 - .1 **(G1)** Safety glass: to CAN/CGSB-12.1, 6 mm thick.
 - .2 **(G2)** Heat strengthened float glass (tinted) faced on No. 2 surface with 0.01 mm thick self-adhesive opaque polyester film: Therma-Span by Prelco; up to 3 custom colours selected by Consultant.
- .4 Sealant: Multi-component, chemical curing, conforming to CAN2-19.24-M80, type 2, or one component type, chemical curing, conforming to CAN2-19.13-M82, colour as selected by Consultant.

2.2 ACCESSORIES

- .1 Setting blocks: neoprene, 80 - 90 Shore A durometer hardness to ASTM D2240, minimum 100 mm x width of glazing rabbet space minus 1.5 mm x height, , as recommended by glass manufacturer.
- .2 Spacer shims: Neoprene , 50 - 60 Shore A durometer hardness to ASTM D2240, 75 mm long x one half height of glazing stop x thickness to suit application. Self adhesive on one face.
- .3 Glazing tape: to CAN2-19.13-M82, Polyshim II tape by Tremco (Canada) Ltd.; black colour or manufactures standard factory glazing system.
- .4 Glazing splines: resilient polyvinyl chloride , extruded shape to suit glazing channel retaining slot, colour as selected.
- .5 Lock-strip gaskets: to ASTM C542.

PART 3 - EXECUTION

3.1 EXAMINATION

- .1 Verify that openings for glazing are correctly sized and within tolerance.
- .2 Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.

3.2 PREPARATION

- .1 Clean contact surfaces with solvent and wipe dry.
- .2 Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- .3 Prime surfaces scheduled to receive sealant.

3.3 GLASS INSTALLATION GENERAL

- .1 Do not glaze when ambient or surface temperature is less than 5°C. Ensure that glazing rabbets, stops and glass are dry, free of frost, grease, oil, dust, rust or other substances detrimental to adhesion of compounds and sealants.
- .2 Provide clearance at perimeter edge of glass on all four sides, minimum equal to glass thickness. Accurately cut glass to fit openings, allowing for expansion in accordance with glass manufacturer's recommendations.
- .3 Provide sealer space between face of glass and glazing stops of minimum 3 mm.
- .4 Clean sealing surfaces at perimeter of glass and sealing surfaces of rabbets and stop beads before applying glazing tapes, gaskets and compounds. Use solvents and cleaning agents recommended by manufacturer of sealing materials.
- .5 Install glazing tapes uniformly with accurately formed corners and bevels. Ensure that proper contact is made with glass and rabbet interfaces.
- .6 Set glass on setting blocks, spaced as recommended by glass manufacturer. Provide at least one setting block at quarter points from each corner.
- .7 Centre glass in glazing rabbet to maintain specified clearances at perimeter on all four sides. Maintain centered position of glass in rabbet and provide the required sealer thickness on both sides of glass.
- .8 Use spacers and shims in accordance with glass manufacturer's recommendations.
- .9 Carefully remove glazing stops and reinstall after glazing.

3.4 EXTERIOR GLAZING

- .1 Unless otherwise indicated glaze exterior openings as follows:
 - .1 Apply glazing tape to permanent stop; butt tape joints and weld together; do not overlap joints; daub tape corners with sealant.
 - .2 Set glass on setting blocks, align edges and press home to ensure adhesion at all points.
 - .3 Apply heel bead of sealant around perimeter of glass, maintaining 5 mm bite to glass and positive bond to frame. Completely seal void around glass edges. Sealant shall partially fill channel between glass and removable stop.
 - .4 Install removable stops; insert spacer shims between glass and stops at approximately 610 mm o.c. not less than 6 mm below sight lines. Fill remaining void with glazing compound or

SECTION 08 80 50 - GLAZING

sealant to sight line and trim to clean line leaving no voids or depressions.

- .5 Glazing gaskets may be installed in lieu of backfilling with sealant or glazing compound after setting removable stops.

3.5 CLEANING

- .1 Remove dirt, scum, plaster, paint spatter, and other harmful and deleterious matter from glass promptly and completely, before they establish tight adhesion.
- .2 Avoid using abrasives, steel wool, razor blades, solvents, alkaline or other harsh cleaning agents.
- .3 Remove glazing compound droppings promptly from all surfaces as the work progresses.
- .4 Replace scratched or otherwise damaged glass.

3.6 SCHEDULE

- .1 Provide glazing for the following elements and components:
 - .1 Aluminium Balcony Framing: clear and tinted uninsulated glazing.
 - .2 Aluminium Windows: clear and insulated.

END OF SECTION

SECTION 09 21 16 - GYPSUM BOARD ASSEMBLIES

PART 1 - GENERAL

1.1 GENERAL SCOPE

- .1 Replace as required all damaged drywall window jambs and adjacent wall construction resulting from the removal and installation of new windows.

1.2 RELATED WORK

- .1 Finish Carpentry: Section 062000
- .2 Joint Sealants: Section 079200
- .3 Aluminium Windows: Section 085200
- .4 Painting: Section 09900

1.3 DEFINITION

- .1 Drywall = gypsum board.

1.4 WORKMANSHIP STANDARDS

- .1 Interior metal framing and furring: comply with applicable requirements of ASTM C754 and ASTM C840 unless otherwise shown.
- .2 Gypsum board application and finish: comply with requirements of ASTM C840, unless otherwise shown.

1.6 PRODUCT HANDLING & STORAGE

- .1 Handle gypsum board panels to prevent damaged and broken edges.
- .2 Store materials in dry place so as to preserve their quality and fitness for work.

1.7 JOB CONDITIONS

- .1 Install and finish gypsum board when ambient temperature is between 14 and 22°C. Maintain this temperature range in areas to receive gypsum board for 24 hours before and during application and until joint cement and adhesives are fully cured.
- .2 Apply gypsum board after building has been completely enclosed. Ensure that work to be concealed by gypsum board has been installed, tested, inspected and approved before starting work.

PART 2 - PRODUCTS

2.1 GYPSUM BOARD

- .1 Unexposed gypsum board for interior use: backing board: ASTM C1396.

2.3 FASTENING & FINISHING MATERIALS

- .1 Drywall screws: self-drilling, self-tapping, case hardened. Use zinc, nickel or cadmium plated screws for fastening of gypsum sheathing and cementitious board.
- .2 Laminating adhesive: CGC Durabond 90 compound by CGC.
- .3 Joint tape: 50 mm perforated type.
- .4 Joint filler and topping cement: vinyl or latex base, slow setting.

PART 3 - EXECUTION

3.1 GYPSUM BOARD INSTALLATION

- .1 Unless otherwise specified, erect gypsum board vertically or horizontally, whichever results in fewer end joints.
- .2 Locate board end joints over supporting members.
- .3 Cut and fit gypsum board as required to accommodate other work.
- .4 Unless otherwise shown or specified, extend gypsum board on both sides of partitions to underside of structural deck above. Fasten gypsum board to studs, not to top channel. Allow for 13 mm deflection.
- .5 Do not install gypsum board until wood blocking or other back-up components are installed. Remove and reinstall gypsum board at no extra cost to Contract where this requirements is not complied with.
- .6 Provide corner beads at external corners.

3.3 GYPSUM BOARD FINISHING

- .1 Tape and fill exposed joints, fastener heads, edges, corners, to produce an acceptable surface ready for decoration.
- .2 Conceal exposed flanges of corner beads, casing beads and other trim sections with at least 3 coats of cement, feathered out minimum 200 mm.
- .3 Fill depressions at fastener head with cement, then apply 2 additional coats of cement to produce smooth, level surface.
- .4 Treat joints using 3 coat method as follows:
 - .1 Apply thin uniform layer of cement and embed joint tape.
 - .2 Immediately apply thin skim coat of cement over tape and allow to dry.
 - .3 Apply 2 additional coats of cement. Allow first coat to dry before applying second coat.
- .5 Sand each coat of topping cement with fine sandpaper as required to produce smooth surface. Do not sand paper face of gypsum board.

END OF SECTION

SECTION 09 91 20 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Material and installation of site applied paint finishes to existing exterior concrete surfaces.
- .2 Required scope consists of painting existing exposed concrete elements as indicated on the drawings.
- .3 Clean and prepare existing concrete surfaces for new paint finish.

1.2 SUBMITTALS

- .1 Submit under provisions of Section 013000.

1.3 QUALITY ASSURANCE

- .1 Manufacturer Qualifications: All primary products specified in this section will be supplied by a single manufacturer with a minimum of ten years experience.
- .2 Installer Qualifications: All products listed in this section are to be applied by a Painting Contractor with a minimum of five years demonstrated experience in surface preparation and field application of the same type and scope as specified.
- .3 Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 1. Mock-up areas designated by Architect.
 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by the consultant.
 3. Approved mock-up areas will serve as the standard for remaining Work.
 4. Refinish mock-up area as required to produce acceptable Work.

1.4 DELIVERY, STORAGE AND HANDLING

- .1 Store products in manufacturer's unopened packaging until ready for installation.
- .2 Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.
 1. Disposal:
 2. Never pour leftover coating down any sink or drain. Use up material on the job or seal can and store safely for future use.
 3. Do not incinerate closed containers

1.5 WARRANTY

- .1 Inspection of all surfaces to be coated must be done by the manufacturer's representative to insure proper preparation prior to application. All thinners, fillers, primers and finish coatings shall be from the same manufacturer to support a product warranty. Products other than those submitted shall be accompanied by a letter stating its fitness for use and compatibility.
- .2 At project closeout, provide to the Owner or owner's representative an executed copy of the Manufacturer's standard form outlining the terms and conditions of and any exclusions to their Limited Warranty against Manufacturing Defect.

1.6 EXTRA MATERIALS

- .1 At project closeout, supply the Owner or owner's representative one gallon of each product for touch-up purposes. Cans shall be clearly marked with color name, number and type of paint.
- .2 At project closeout, provide the color mixture name and code to the Owner or owner's representative for accurate future color matching.

SECTION 09 91 20 - EXTERIOR PAINTING

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- .1 Unless otherwise specified, materials shall be manufactured and supplied by Benjamin-Moore.
- .2 Acceptable alternative: Coronado Paint Company.
- .3 Requests for substitutions will be considered in accordance with the provisions of Section 016100 – Common Product Requirements.

2.2 MATERIALS

- .1 Paint materials listed in the latest edition of the MPI Approved Products List (APL) are acceptable for use on this project.
- .1 Paint materials for each coating formula to be products of a single manufacturer.
- .2 Low odour products: whenever possible, select products exhibiting low odour characteristics. If two products are otherwise equivalent, select the product with the lowest odour. Only qualified products with E2 or E3 "Environmentally Friendly" rating are acceptable for use on this project.
- .3 Paints, primers, coatings, adhesives, solvents, cleaners, lubricants, and other fluids, shall:
 - .1 be water-based, water soluble, water clean-up.
 - .2 be non-flammable
 - .3 be manufactured without compounds which contribute to ozone depletion in the upper atmosphere.
 - .4 be manufactured without compounds which contribute to smog in the lower atmosphere.
 - .5 do not contain methylene chloride, chlorinated hydrocarbons, toxic metal pigments.
- .4 Water-borne surface coatings must be manufactured and transported in a manner that steps of processes, including disposal of waste products arising therefrom, will meet requirements of applicable governmental acts, by-laws and regulations including, for facilities located in Canada, Fisheries Act and Canadian Environmental Protection Act (CEPA).

2.3 EXTERIOR PAINTING SYSTEMS

- .1 The following paint formulas requires a three-coat finish as indicated in the MPI Architectural Painting Specifications Manual.
 - .1 Concrete Vertical Surfaces (including horizontal soffits): EXT 3.1A – Latex G4 finish
 - .2 Latex Systems: Satin Finish
 - .1 1st Coat: Benjamin Moore Super Spec Masonry Interior/Exterior Hi-Build Block Filler K206 (45 g/L), MPI # 4, LEED, CHPS.
 - .2 2nd Coat: Benjamin Moore Ultra Spec EXT Satin K448 (46 g/L), MPI # 15.
 - .3 3rd Coat: Benjamin Moore Ultra Spec EXT Satin K448 (46 g/L), MPI # 15.

2.4 MIXING AND TINTING

- .1 Except where specifically noted in this section, all paint shall be ready-mixed and pre-tinted. Agitate all paint prior to and during application to ensure uniform color, gloss, and consistency.
- .2 Thinner addition shall not exceed manufacturer's printed recommendations. Do not use kerosene or other organic solvents to thin water-based paints.

SECTION 09 91 20 - EXTERIOR PAINTING

2.5 FINISHES

- .1 Paint colours and other finishes will be selected by Consultant. Do not start work until after receiving confirmation of colour schedule.
- .2 Colour selected for painting: HC-103 – Cromwell Groves (Benjamin Moore)

2.6 PRODUCT HANDLING

- .1 Deliver paint materials to site in sealed original labelled containers bearing manufacturer's name, brand name, type of paint and colour designation.
- .2 Store materials in strict accordance with manufacturer's recommendations.
- .3 Store paints, stains, varnishes, equipment in designated area inside building. Maintain separate workshop / storage area for duration of work by this Section.

2.7 JOB CONDITIONS

- .1 Environmental Conditions: Unless specifically pre-approved by Owner and, applied product manufacturer, perform no painting work when:
 - .1 ambient air and substrate temperatures are below 10° C.
 - .2 substrate temperature is over 32° C unless paint is specifically formulated for application at high temperatures.
 - .3 substrate and ambient air temperatures are expected to fall outside MPI or paint manufacturer's prescribed limits.
 - .4 the relative humidity is above 85% or when dew point is less than 3° C variance between air/surface temperature.
 - .5 rain or snow are forecast to occur before paint has thoroughly cured or when it is foggy, misty, raining or snowing at site.
 - .6 Perform no painting work when maximum moisture content of substrate exceeds 12 % for concrete.
 - .7 Conduct moisture tests using a properly calibrated electronic Moisture Meter, except test concrete floors for moisture using a simple "cover patch test".
 - .8 Test concrete, masonry and plaster surfaces for alkalinity as required.
 - .9 Apply paint finish only in areas where dust is no longer being generated by related construction operations or when wind or ventilation conditions are such that airborne particles will not affect quality of finished surface.
 - .10 Apply paint only to adequately prepared surfaces and to surfaces within moisture limits noted herein.
 - .11 Apply paint only when previous coat of paint is dry or adequately cured.
 - .12 Apply paint finishes only when conditions forecast for entire period of application fall within manufacturer's recommendations.
 - .13 Do not apply paint when:
 - .1 Temperature is expected to drop below 10° C before paint has thoroughly cured.

SECTION 09 91 20 - EXTERIOR PAINTING

- .2 Substrate and ambient air temperatures are expected to fall outside MPI or paint manufacturer's limits.
- .3 Surface to be painted is wet, damp or frosted.
- .14 Provide and maintain cover when paint must be applied in damp or cold weather. Heat substrates and surrounding air to comply with temperature and humidity conditions specified by manufacturer. Protect until paint is dry or until weather conditions are suitable.
- .15 Schedule painting operations such that surfaces exposed to direct, intense sunlight are scheduled for completion during early morning.
- .16 Remove paint from areas which have been exposed to freezing, excess humidity, rain, snow or condensation. Prepare surface again and repaint.
- .17 Paint occupied facilities in accordance with approved schedule only.

PART 3 - EXECUTION

3.1 CONDITIONS OF SUBSTRATES

- .1 Perform preparation and operations for exterior painting in accordance with MPI Painting Specifications Manual except where specified otherwise.
- .2 Apply all paint materials in accordance with paint manufacturer's written application instructions.

3.2 EXISTING CONDITIONS

- .1 Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Report to Owner damages, defects, unsatisfactory or unfavourable conditions before proceeding with work.
- .2 Conduct moisture testing of surfaces to be painted using a properly calibrated electronic moisture meter, except test concrete floors for moisture using a simple "cover patch test" and report findings to Owner. Do not proceed with work until conditions fall within acceptable range as recommended by manufacturer.
 - .1 Maximum moisture content: Concrete: 12%.
- .3 Examine surfaces to receive coatings for surface imperfections and contaminants that could impair performance or appearance of coatings, including but not limited to, loose primer, rust, scale, oil, grease, mildew, algae, or fungus, stains or marks, cracks, indentations, or abrasions.
- .4 Correct conditions that could impair performance or appearance of coatings in accordance with specified surface preparation procedures before proceeding with coating application.

3.3 PREPARATION – GENERAL

- .1 Clean surfaces thoroughly prior to coating application.
- .2 Do not start work until surfaces to be finished are in proper condition to produce finished surfaces of uniform, satisfactory appearance.
- .3 Stains and Marks: Remove completely, if possible, using materials and methods recommended by coating manufacturer; cover stains and marks which cannot be completely removed with isolating primer or sealer recommended by coating manufacturer to prevent bleed-through.
- .4 Remove Mildew, Algae, and Fungus using materials and methods recommended by coating manufacturer.
- .5 Remove dust and loose particulate matter from surfaces to receive coatings immediately prior to coating application.

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- .6 Remove or protect adjacent hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items not indicated to receive coatings.
- .7 Move or protect equipment and fixtures adjacent to surfaces indicated to receive coatings to allow application of coatings.
- .8 Protect adjacent surfaces not indicated to receive coatings.
- .9 Prepare surfaces in accordance with manufacturer's instructions for specified coatings and indicated materials, using only methods and materials recommended by coating manufacturer.

3.4 SURFACE PREPARATION

- .1 Concrete: Clean surfaces free of loose particles, sand, efflorescence, laitance, form oil, curing compounds, and other substances which could impair coating performance or appearance
- .2 Clean and prepare exterior surfaces in accordance with MPI Painting Specification Manual requirements. Refer to the MPI Manual in regard to specific requirements and as follows:
- .3 Remove dust, dirt, and other surface debris by wiping with dry, clean cloths or compressed air.
- .4 Wash surfaces with a biodegradable detergent and bleach where applicable and clean warm water using a stiff bristle brush to remove dirt, oil and other surface contaminants.
- .5 Rinse scrubbed surfaces with clean water until foreign matter is flushed from surface.
- .6 Allow surfaces to drain completely and allow to dry thoroughly.
- .7 Prepare surfaces for water-based painting, water-based cleaners should be used in place of organic solvents.
- .8 Many water-based paints cannot be removed with water once dried. However, minimize the use of kerosene or any such organic solvents to clean up water-based paints.
- .9 Prevent contamination of cleaned surfaces before prime coat is applied and between applications of remaining coats. Apply primer, paint, or pretreatment as soon as possible after cleaning and before deterioration occurs.
- .10 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects visible from a distance up to 1000 mm.
- .11 Do not apply paint until prepared surfaces have been accepted by Consultant.

3.5 PROTECTION

- .1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore such surfaces as directed by Owner.
- .2 Cover or mask windows and other metal siding adjacent to areas being painted to prevent damage and to protect from paint drops and splatters. Use non-staining coverings.
- .3 Protect factory finished products and equipment.
- .4 Protect passing pedestrians, building occupants and general public in and about the building.
- .5 Cover or move exterior furniture and portable equipment around building as necessary to carry out painting operations. Replace as painting operations progress.

3.3 CLEANING AND PREPARATION

- .1 Clean and prepare exterior surfaces in accordance with MPI Painting Specification Manual requirements. Refer to the MPI Manual in regard to specific requirements and as follows:
- .2 Remove dust, dirt, and other surface debris by wiping with dry, clean cloths or compressed air.
- .3 Wash surfaces with a biodegradable detergent and bleach where applicable and clean warm water using a stiff bristle brush to remove dirt, oil and other surface contaminants.

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- .10 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects visible from a distance up to 1000 mm.
- .11 Do not apply paint until prepared surfaces have been accepted by Consultant.

3.4 GENERAL

- .1 Application of primers, paints, stains or coatings, by the Contractor, will serve as acceptance that surfaces were properly prepared in accordance with the manufacturer's recommendation.
- .2 Apply each coat to uniform coating thickness in accordance with manufacturer's instructions, not exceeding manufacturer's specified maximum spread rate for indicated surface; thins, brush marks, roller marks, orange-peel, or other application imperfections are not permitted.
- .3 Allow manufacturer's specified drying time, and ensure correct coating adhesion, for each coat before applying next coat.
- .4 Inspect each coat before applying next coat; touch-up surface imperfections with coating material, feathering, and sanding if required; touch-up areas to achieve flat, uniform surface without surface defects visible from 5 feet (1.5 m).
- .5 Remove dust and other foreign materials from substrate immediately prior to applying each coat.
- .6 Where paint application abuts other materials or other coating color, terminate coating with a clean sharp termination line without coating overlap.
- .7 Re-prepare and re-coat unsatisfactory finishes; refinish entire area to corners or other natural terminations.

3.5 APPLICATION

- .1 Method of application to be as approved by Owner. Apply paint by brush roller, air sprayer, airless sprayer. Conform to manufacturer's application instructions unless specified otherwise.
 - .1 Brush and Roller Application:
 - .1 Apply paint in a uniform layer using brush and/or roller of types suitable for application.
 - .2 Work paint into cracks, crevices and corners.
 - .3 Paint surfaces and corners not accessible to brush using spray, daubers and/or sheepskins.
 - .4 Brush and/or roll out runs and sags, and over-lap marks. Rolled surfaces shall be free of roller tracking and heavy stipple.
 - .5 Remove runs, sags and brush marks from finished work and repaint.
 - .2 Spray Application:
 - .1 Provide and maintain equipment that is suitable for intended purpose, capable of properly atomizing paint to be applied, and equipped with suitable pressure regulators and gauges.
 - .2 Keep paint ingredients properly mixed in containers during paint application either by continuous mechanical agitation or by intermittent agitation as frequently as necessary.

SECTION 09 91 20 - EXTERIOR PAINTING

- .3 Apply paint in a uniform layer, with overlapping at edges of spray pattern. Brush out immediately runs and sags.
- .4 Use brushes to work paint into cracks, crevices and places which are not adequately painted by spray.
- .5 Concrete, if sprayed, must be back rolled.
- .6 Use dipping, sheepskins or daubers only when no other method is practical in places of difficult access and only when specifically authorized by Owner.
- .7 Apply coats of paint as a continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.
- .8 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.
- .9 Sand and dust between coats to remove visible defects.
- .10 Finish surfaces both above and below sight lines as specified for surrounding surfaces, including such surfaces as projecting ledges.

3.6 MOCK UP

- .1 Prepare for review and approval – at building location (ground floor) agreed upon – a portion of wall and balcony edge for prep and painting.
- .2 Upon written approval by Consultant indicating acceptance, proceed with the painting of the exterior elements.

3.7 FIELD QUALITY CONTROL

- .1 Field inspection of exterior painting operations to be carried out by Consultant.
- .2 Advise Consultant when each applied coating is ready for inspection. Do not proceed with subsequent coats until previous coat has been approved.
- .3 Co-operate with Consultant and provide access to areas of work.

3.8 RESTORATION

- .1 Clean and re-install all hardware items removed before undertaken painting operations.
- .2 Remove protective coverings and warning signs as soon as practical after operations cease.
- .3 Remove paint splashings on exposed surfaces that were not painted. Remove smears and spatter immediately as operations progress, using compatible solvent.
- .4 Protect surfaces from paint droppings and dust to approval of Owner. Avoid scuffing newly applied paint.
- .5 Restore areas used for storage, cleaning, mixing and handling of paint to clean condition as approved by Owner.

3.9 CLEANING

- .1 Clean excess coating materials, and coating materials deposited on surfaces not indicated to receive coatings, as construction activities of this section progress; do not allow to dry.
- .2 Re-install hardware, electrical equipment plates, mechanical grilles and louvers, lighting fixture trim, and other items that have been removed to protect from contact with coatings.
- .3 Remove protective materials.

END OF SECTION

SECTION 09 91 23 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 GENERAL REQUIREMENTS

- .1 Material and installation of site applied paint finishes to new and existing interior surfaces, including site painting of shop primed surfaces.
- .2 Required scope consists of painting new window sills, paint touch up to gypsum returns at new window installations, and new schedule 40 pipe handrails at balconies.

1.2 RELATED WORK

- .1 Metal Fabrications Section 05 50 00
- .2 Finish carpentry: Section 06 20 00
- .3 Gypsum Board assemblies: Section 09 21 16

1.3 ACCEPTABLE MANUFACTURERS

- .1 Unless otherwise specified, materials shall be manufactured and supplied by one of the following:
 - .1 Benjamin-Moore
 - .3 Glidden/ICI
 - .4 Para Paints
 - .5 Pratt & Lambert
 - .6 Sherwin-Williams

1.4 LIST OF MATERIALS, SAMPLES

- .1 List of Materials:
 - .1 Before ordering materials, submit written request in form acceptable to Consultant, for approval of paint materials. List each of the materials proposed and surfaces to be covered. State manufacturer's name and brand name of materials.
 - .2 List of materials shall be endorsed by manufacturer as being the best material for the applicable condition.
 - .3 Do not order material or commence work until list of materials is approved by Consultant.
- .2 Samples:
 - .1 Submit two 200 mm x 250 mm drawdowns of each paint colour coated with manufacturer's paint system to confirm colour match with colour chips supplied by Consultant.
 - .2 Submit sample of natural and stained finishes on each species and grade of wood to receive such finishes.
 - .3 Prepare full size samples showing each type of door finish.
 - .4 Prepare sample panels of each wall and ceiling paint system specified, as directed by Consultant.
- .3 Maintenance Materials:
 - .1 Upon completion of work provide three (3) sealed and properly identified 1 L cans of each type and colour paint used on this project.
 - .2 Only top coating paints used in building interior are required.

SECTION 09 91 23 - INTERIOR PAINTING

1.5 PRODUCT HANDLING

- .1 Deliver paint materials to site in sealed original labelled containers bearing manufacturer's name, brand name, type of paint and colour designation.
- .2 Store materials in strict accordance with manufacturer's recommendations.
- .3 Store paints, stains, varnishes, equipment in designated area inside building. Maintain separate workshop / storage area for duration of work by this Section.

1.6 JOB CONDITIONS

- .1 Environmental Conditions:
 - .1 Maintain temperature in interior areas to receive coatings between 15°C and 25°C for at least 24 hours before, during application and until coatings have cured after application. Apply exterior coatings only when temperature is above 10°C.
 - .2 Do not apply exterior coatings during periods of precipitation nor when precipitation is imminent.
 - .3 Do not apply coatings under direct sunlight during hot weather.
 - .4 Adequately ventilate areas where coatings are being applied. Maintain a reasonably dust-free atmosphere for duration of work.
- .2 Protection:
 - .1 Protect adjacent surfaces not scheduled to receive coatings from damage.
 - .2 Remove electrical plates, surface hardware, fittings and fastenings prior to painting operations. These items shall be carefully stored, cleaned and replaced on completion of work in each area. No solvent shall be used to clean hardware that will remove permanent lacquer finish on these items.
 - .3 Keep oily rags, wastes and other combustible materials in closed metal containers and remove at end of each work day. Take every precaution to avoid spontaneous combustion.
- .3 Work Schedule:
 - .1 Unless otherwise permitted, apply coatings only after all other Sections have completed their work.
 - .2 Co-ordinate work of this Section with that of Section 07900 and review order of installation with Consultant where sealants are installed adjacent to painted surfaces.
 - .3 If it becomes necessary for the Owner to occupy areas of the building prior to their completion, schedule work of this Section to hours when occupants have vacated building.

PART 2 - PRODUCTS

2.1 MATERIALS

- .1 Materials shall be "top line quality" products and shall be supplied by a single manufacturer except for specialty products not available from paint manufacturer.
- .2 Materials shall be low odour and low VOC producing, emitting less than 150 g/L VOC for non flat paints and less than 50 g/L for flat paints and meet or exceed current Green Seal GS-11 standard.
- .3 Paints shall be factory mixed unless otherwise specified, except any coating in paste or powder form, or to be field-catalyzed shall be field-mixed in accordance with manufacturer's directions.
- .4 Primers shall be as specified by manufacturer and fully compatible with finish coats.

SECTION 09 91 23 - INTERIOR PAINTING

- .5 Thinners, cleaners: as recommended by paint manufacturer.

2.2 FINISHES

- .1 Paint colours and other finishes will be selected by Consultant. Do not start work until after receiving colour schedule.
- .2 Colours selected by the Consultant will not necessarily be from manufacturer's standard colours.
- .3 A variety of colours may be used. Consultant may select different colours for different elements such as ductwork, bulkheads, exposed decks, slabs and structural steel. Include for up to 15 colours, not including mechanical room colours listed below. Of these colours, up to 50% may be deep tones.
- .4 Confirm gloss levels for all surfaces with Consultant before starting work. Unless otherwise indicated, allow:
 - .1 Gypsum Board Walls: eggshell.
 - .2 Metal Handrail: pearl.
 - .3 Sill, apron, trim: pearl.
- .5 Paint exposed piping, ductwork and conduits in mechanical and boiler rooms in colours directed by Consultant.

PART 3 - EXECUTION

3.1 CONDITIONS OF SUBSTRATES

- .1 Sound, non-dusting, and free of grease, oil, dirt, and other matter detrimental to adhesion and appearance of coatings.
- .2 Temperature: minimum 13°C.
- .3 Moisture content: maximum 12%. Test for moisture content using moisture meter.
- .4 Alkalinity: test cementitious substrates for alkalinity. Use method recommended by coating manufacturer.

3.2 PREPARATION OF SUBSTRATES

- .1 All substrates: clean as required to produce an acceptable surface. If wood, metal or any other surface to be finished cannot be put in proper condition for finishing by cleaning, sanding and filling as specified, notify Consultant in writing or assume responsibility for an rectify any unsatisfactory finish resulting.
- .2 Wood for paint: clean knots, pitch streaks and sappy sections of residue and seal with sealer before applying prime coat.
- .3 Bare ferrous metal: remove rust and scale; wash with solvent; chemically clean; apply coat of metal primer.
- .4 Gypsum board: fill minor cracks, holes and imperfections with patching plaster; allow to dry and sand smooth; sand taped joints and remove dust.

3.3 APPLICATION OF COATINGS

- .1 Apply paint by brush or roller, except on wood and metal surfaces where paint shall be applied by brush only.
- .2 Applied and cured coatings shall be uniform in thickness, sheen, colour and texture and free of brush or roller marks, sags, crawls and other defects detrimental to appearance and performance.

SECTION 09 91 23 - INTERIOR PAINTING

- .3 Regardless of the number of coats specified for any surface, apply sufficient paint to completely cover and hide substrate and to produce a solid uniform appearance.
- .4 Thoroughly mix materials before application. Use same brand of paint for primer, intermediate and finish coats.
- .5 Where two or more coats of same paint are to be applied, undercoats shall be tinted in lighter shades of final coat to differentiate from final coat.
- .6 Touch up suction spots after application of first coat. Sand lightly between coats with fine sandpaper.
- .7 Each coat of finish shall be dry and hard before succeeding coats are applied with a minimum of 24 hours between coats unless manufacturer's instructions state otherwise. Do not proceed with any coat until the last preceding coat is approved by the Consultant.

3.5 PATCHING / TOUCH-UP

- .1 Prior to takeover of project by Owner, inspect work of this Section and touch-up or refinish damaged finishes and finishes unsatisfactory to Consultant.

3.6 SCHEDULE OF FINISHES

- .1 General Requirements:
 - .1 Paint or otherwise finish surfaces of building materials, as shown on Room Finish and Door Schedule, Drawings and as specified herein.
- .2 Interior Finishing:
 - .1 Steel handrails:
 - 1 coat epoxy primer
 - 1 coat epoxy paint, gloss finish
 - .2 Woodwork, painted:
 - 1 coat alkyd enamel undercoat
 - 2 coats acrylic latex
 - .3 Gypsum board:
 - 1 coat drywall primer
 - 2 coats acrylic latex

3.7 SITE TOLERANCES

- .1 Final coat to exhibit uniformity of colour and uniformity of sheen across full surface area.
- .2 Painting contractor shall notify inspector a minimum of one week prior to commencement of work.
- .3 Repair and/or repaint surfaces to the Satisfaction of the Consultant

END OF SECTION