



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 716-2006**

**SUPPLY AND INSTALL NEW WINDOW UNITS  
1400 HENDERSON HWY.**

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## **PART B - BIDDING PROCEDURES**

### **B1. PROJECT TITLE**

- B1.1 SUPPLY AND INSTALL NEW WINDOW UNITS  
1400 HENDERSON HWY.

### **B2. SUBMISSION DEADLINE**

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, November 23, 2006.
- B2.2 Bid Submissions determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.
- B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. SITE INVESTIGATION**

- B3.1 Further to GC:3.1, the Contract Administrator or an authorized representative will be available at the Site from 1:30 p.m. to 2:00 p.m. on November 16, 2006 to provide Bidders access to the Site.
- B3.2 The Bidder shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

### **B4. ENQUIRIES**

- B4.1 All enquiries shall be directed to the Contract Administrator identified in D3.1.
- B4.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.
- B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.
- B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

### **B5. ADDENDA**

- B5.1 The Contract Administrator may, at any time prior to the Submission Deadline, issue addenda correcting errors, discrepancies or omissions in the Bid Opportunity, or clarifying the meaning or intent of any provision therein.
- B5.2 The Contract Administrator will issue each addendum at least two (2) Business Days prior to the Submission Deadline, or provide at least two (2) Business Days by extending the Submission Deadline.

- B5.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.
- B5.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Branch internet site for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B5.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 8 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B6. SUBSTITUTES**

- B6.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.
- B6.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B6.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.
- B6.4 The Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
  - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
  - (c) identify any anticipated cost or time savings that may be associated with the substitute;
  - (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
  - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B6.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B6.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B6.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he wishes to inform.
- B6.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.

- B6.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative shall base his Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B14.
- B6.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

## **B7. BID SUBMISSION**

- B7.1 The Bid Submission consists of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices.
- B7.2 The Bid Submission shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B7.2.1 Samples or other components of the Bid Submission which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid Submission.
- B7.3 Bid Submissions submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B7.4 Bid Submissions shall be submitted to:
- The City of Winnipeg  
Corporate Finance Department  
Materials Management Branch  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1

## **B8. BID**

- B8.1 The Bidder shall complete Form A: Bid, making all required entries.
- B8.2 Paragraph 2 of Form A: Bid shall be completed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his own name, his name shall be inserted;
  - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
  - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
  - (d) if the Bidder is carrying on business under a name other than his own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B8.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.
- B8.3 In Paragraph 3 of Form A: Bid, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.
- B8.4 Paragraph 10 of Form A: Bid shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his own name, it shall be signed by the Bidder;
- (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
- (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers;
- (d) if the Bidder is carrying on business under a name other than his own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

B8.4.1 The name and official capacity of all individuals signing Form A: Bid shall be printed below such signatures.

B8.4.2 All signatures shall be original.

B8.5 If a Bid is submitted jointly by two or more persons, the word "Bidder" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Bidders in the Bid Submission and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

B9.1 The Bidder shall state the lump sum price in Canadian funds for the Work on Form B: Prices.

## **B10. QUALIFICATION**

B10.1 The Bidder shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba;
- (b) be responsible and not be suspended, debarred or in default of any obligation to the City;
- (c) be financially capable of carrying out the terms of the Contract;
- (d) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract;
- (e) have successfully carried out work, similar in nature, scope and value to the Work;
- (f) employ only Subcontractors who:
  - (i) are responsible and not suspended, debarred or in default of any obligation to the City (a list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>); and
  - (ii) have successfully carried out work similar in nature, scope and value to the portion of the Work proposed to be subcontracted to them, and are fully capable of performing the Work required to be done in accordance with the terms of the Contract;
- (g) have a written workplace safety and health program in accordance with The Workplace Safety and Health Act (Manitoba);

B10.2 The Bidder shall be prepared to submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B10.3 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

## **B11. OPENING OF BIDS AND RELEASE OF INFORMATION**

B11.1 Bid Submissions will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Branch, or in such other office as may be designated by the Manager of Materials.

B11.1.1 Bidders or their representatives may attend.

B11.2 After the public opening, the names of the Bidders and their Total Bid Prices as read out (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B11.3 After award of Contract, the name(s) of the successful Bidder(s) and the Contract Amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

B11.4 The Bidder is advised that any information contained in any Bid Submission may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.

## **B12. IRREVOCABLE BID**

B12.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.

B12.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work for the time period specified in Paragraph 9 of Form A: Bid.

## **B13. WITHDRAWAL OF BIDS**

B13.1 A Bidder may withdraw his Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B13.1.1 Notwithstanding GC:23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.

B13.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid, and only such person, has authority to give notice of withdrawal.

B13.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials shall:

- (a) retain the Bid Submission until after the Submission Deadline has elapsed;
- (b) open the Bid Submission to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 10 of Form A: Bid; and
- (c) if the notice has been given by any one of the persons specified in B13.1.3(b), declare the Bid withdrawn.

B13.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B12.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative

Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

#### **B14. EVALUATION OF BIDS**

B14.1 Award of the Contract shall be based on the following bid evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Bid Opportunity (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B10 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B6.

B14.2 Further to B14.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements if the interests of the City so require.

B14.3 Further to B14.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid Submission or in other information required to be submitted, that he is responsible and qualified.

B14.4 Further to B14.1(c), the Total Bid Price shall be the lump sum price shown on Form B: Prices.

B14.4.1 If there is any discrepancy between the lump sum price written in figures and the lump sum price written in words, the price written in words shall take precedence.

#### **B15. AWARD OF CONTRACT**

B15.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B15.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Bids are determined to be responsive.

B15.2.1 Without limiting the generality of B15.2, the City will have no obligation to award a Contract where:

- (a) the prices exceed the available City funds for the Work;
- (b) the prices are materially in excess of the prices received for similar work in the past;
- (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
- (d) only one Bid is received; or
- (e) in the judgment of the Award Authority, the interests of the City would best be served by not awarding a Contract.

B15.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the lowest evaluated responsive Bid.

B15.4 Notwithstanding GC:4, the City will issue a Purchase Order to the successful Bidder in lieu of the execution of a Contract.

B15.5 The Contract, as defined in GC:1.1, in its entirety shall be deemed to be incorporated in and to form a part of the Purchase Order notwithstanding that it is not necessarily attached to or accompany said Purchase Order.

## **PART C - GENERAL CONDITIONS**

### **C1. GENERAL CONDITIONS**

C1.1 The *General Conditions for Construction Contracts* (Revision 2000 11 09) are applicable to the Work of the Contract.

C1.1.1 The *General Conditions for Construction Contracts* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

## **PART D - SUPPLEMENTAL CONDITIONS**

### **GENERAL**

#### **D1. GENERAL CONDITIONS**

- D1.1 In addition to the *General Conditions for Construction Contracts*, these Supplemental Conditions are applicable to the Work of the Contract.
- D1.2 The General Conditions are amended by striking out "The City of Winnipeg Act" wherever it appears in the General Conditions and substituting "The City of Winnipeg Charter".
- D1.3 The General Conditions are amended by striking out "Tender Package" wherever it appears in the General Conditions and substituting "Bid Opportunity".
- D1.4 The General Conditions are amended by striking out "Tender Submission" wherever it appears in the General Conditions and substituting "Bid Submission".
- D1.5 The General Conditions are amended by deleting GC:6.16 and GC:6.17. The City of Winnipeg is now within the jurisdiction of the Manitoba Ombudsman pursuant to The Ombudsman Act.

#### **D2. SCOPE OF WORK**

- D2.1 The Work to be done under the Contract shall consist of supply all labour, materials and equipment for the removal of existing windows, supply and install of new window units.

#### **D3. CONTRACT ADMINISTRATOR**

- D3.1 The Contract Administrator is:  
Ruby Li  
Architect/Interior Designer  
Planning, Property and Development Department  
3<sup>rd</sup> Floor – 65 Garry Street  
Telephone No. (204) 986-3984  
Facsimile No. (204) 947-2284
- D3.2 At the pre-construction meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

#### **D4. CONTRACTOR'S SUPERVISOR**

- D4.1 At the pre-construction meeting, the Contractor shall identify his designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

#### **D5. NOTICES**

- D5.1 Except as provided for in GC:23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the address or facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

- D5.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D5.3, D5.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D3.1.
- D5.3 All notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following address or facsimile number:  
The City of Winnipeg  
Chief Administrative Officer Secretariat  
Administration Building, 3rd Floor  
510 Main Street  
Winnipeg MB R3B 1B9  
Facsimile No.: (204) 949-1174
- D5.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following address or facsimile number:  
The City of Winnipeg  
Corporate Services Department  
Legal Services Division  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

## **SUBMISSIONS**

### **D6. INSURANCE**

- D6.1 The Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) all inclusive, with The City of Winnipeg being added as an additional insured, with a cross-liability clause, such liability policy to also contain a contractual liability, an unlicensed motor vehicle liability and a products and completed operations endorsement to remain in place at all times during the performance of the Work and throughout the warranty period;
  - (b) automobile liability insurance for owned and non-owned automobiles used for or in connection with the Work in the amount of at least two million dollars (\$2,000,000.00) at all times during the performance of the Work and until the date of Total Performance.
- D6.2 Deductibles shall be borne by the Contractor.
- D6.3 The Contractor shall provide the City Solicitor with a certificate of insurance of each policy, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

### **D7. PERFORMANCE SECURITY**

- D7.1 If the Contract Price exceeds twenty-five thousand dollars (\$25,000.00), the Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:

- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
- (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
- (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.

D7.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D7.2 The Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of Purchase Order and prior to the commencement of any Work on the Site.

#### **D8. SUBCONTRACTOR LIST**

D8.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than seven (7) Calendar Days from notification of the award of Contract.

### **SCHEDULE OF WORK**

#### **D9. COMMENCEMENT**

D9.1 The Contractor shall not commence any Work until he is in receipt of a Purchase Order from the Award Authority authorizing the commencement of the Work.

D9.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
  - (i) evidence that the Contractor is in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba;
  - (ii) evidence of the workers compensation coverage specified in GC:6.14;
  - (iii) evidence of the insurance specified in D6;
  - (iv) the performance security specified in D7; and
  - (v) the Subcontractor list specified in D8.
- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

D9.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the Purchase Order.

D9.4 The City intends to award this Contract by November 30, 2006.

## **D10. TOTAL PERFORMANCE**

- D10.1 The Contractor shall achieve Total Performance by December 22, 2006.
- D10.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.
- D10.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

## **D11. LIQUIDATED DAMAGES**

- D11.1 If the Contractor fails to achieve Substantial Performance in accordance with the Contract by the day fixed herein for Substantial Performance, the Contractor shall pay the City fifty dollars (\$50.00) per Working Day for each and every Working Day following the day fixed herein for Substantial Performance during which such failure continues.
- D11.2 The amount specified for liquidated damages in D11.1 is based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.
- D11.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **CONTROL OF WORK**

### **D12. JOB MEETINGS**

- D12.1 If required, a job meeting will be held at the Site after two week should progress not be satisfactory to the Contract Administrator. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at this meeting.
- D12.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he deems it necessary.

## **MEASUREMENT AND PAYMENT**

### **D13. PAYMENT SCHEDULE**

- D13.1 Further to GC:12, payment shall be in accordance with the following payment schedule:
- (a) Full payment on completion of project.

**FORM H1: PERFORMANCE BOND**  
(See D7)

KNOW ALL MEN BY THESE PRESENTS THAT

\_\_\_\_\_ ,  
(hereinafter called the "Principal"), and

\_\_\_\_\_ ,  
(hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), in the sum of

\_\_\_\_\_ dollars (\$\_\_\_\_\_.)

of lawful money of Canada to be paid to the Obligee, or its successors or assigns, for the payment of which sum the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS the Principal has entered into a written contract with the Obligee dated the

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_, for:

BID OPPORTUNITY NO. 716-2006

SUPPLY AND INSTALL NEW WINDOW UNITS  
1400 HENDERSON HWY.

which is by reference made part hereof and is hereinafter referred to as the "Contract".

NOW THEREFORE the condition of the above obligation is such that if the Principal shall:

- (a) carry out and perform the Contract and every part thereof in the manner and within the times set forth in the Contract and in accordance with the terms and conditions specified in the Contract;
- (b) perform the Work in a good, proper, workmanlike manner;
- (c) make all the payments whether to the Obligee or to others as therein provided;
- (d) in every other respect comply with the conditions and perform the covenants contained in the Contract; and
- (e) indemnify and save harmless the Obligee against and from all loss, costs, damages, claims, and demands of every description as set forth in the Contract, and from all penalties, assessments, claims, actions for loss, damages or compensation whether arising under "The Workers Compensation Act", or any other Act or otherwise arising out of or in any way connected with the performance or non-performance of the Contract or any part thereof during the term of the Contract and the warranty period provided for therein;

THEN THIS OBLIGATION SHALL BE VOID, but otherwise shall remain in full force and effect. The Surety shall not, however, be liable for a greater sum than the sum specified above.

AND IT IS HEREBY DECLARED AND AGREED that the Surety shall be liable as Principal, and that nothing of any kind or matter whatsoever that will not discharge the Principal shall operate as a discharge or release of liability of the Surety, any law or usage relating to the liability of Sureties to the contrary notwithstanding.

IN WITNESS WHEREOF the Principal and Surety have signed and sealed this bond the

\_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ .

SIGNED AND SEALED  
in the presence of:

\_\_\_\_\_  
(Witness)

\_\_\_\_\_  
(Name of Principal)

Per: \_\_\_\_\_ (Seal)

Per: \_\_\_\_\_

\_\_\_\_\_  
(Name of Surety)

By: \_\_\_\_\_ (Seal)  
(Attorney-in-Fact)

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT  
(PERFORMANCE SECURITY)**  
(See D7)

\_\_\_\_\_  
(Date)

The City of Winnipeg  
Corporate Services Department  
Legal Services Division  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 716-2006

SUPPLY AND INSTALL NEW WINDOW UNITS  
1400 HENDERSON HWY.

Pursuant to the request of and for the account of our customer,

\_\_\_\_\_  
(Name of Contractor)

\_\_\_\_\_  
(Address of Contractor)

WE HEREBY ESTABLISH in your favour our irrevocable Standby Letter of Credit for a sum not exceeding in the aggregate

\_\_\_\_\_ Canadian dollars.

This Standby Letter of Credit may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you. It is understood that we are obligated under this Standby Letter of Credit for the payment of monies only and we hereby agree that we shall honour your demand for payment without inquiring whether you have a right as between yourself and our customer to make such demand and without recognizing any claim of our customer or objection by the customer to payment by us.

The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn upon it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that it be made.

Partial drawings are permitted.

We engage with you that all demands for payment made within the terms and currency of this Standby Letter of Credit will be duly honoured if presented to us at:

\_\_\_\_\_  
(Address)

and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by us.

All demands for payment shall specifically state that they are drawn under this Standby Letter of Credit.

Subject to the condition hereinafter set forth, this Standby Letter of Credit will expire on

\_\_\_\_\_  
(Date)

It is a condition of this Standby Letter of Credit that it shall be deemed to be automatically extended from year to year without amendment from the present or any future expiry date, unless at least 30 days prior to the present or any future expiry date, we notify you in writing that we elect not to consider this Standby Letter of Credit to be renewable for any additional period.

This Standby Letter of Credit may not be revoked or amended without your prior written approval.

This credit is subject to the Uniform Customs and Practice for Documentary Credit (1993 Revision), International Chamber of Commerce Publication Number 500.

\_\_\_\_\_  
(Name of bank or financial institution)

Per: \_\_\_\_\_  
(Authorized Signing Officer)

Per: \_\_\_\_\_  
(Authorized Signing Officer)



## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS, STANDARD DETAILS AND DRAWINGS

E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.

E1.1.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Branch internet site at <http://www.winnipeg.ca/matmgt>.

E1.1.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.

E1.1.3 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.

E1.2 The following Drawings are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
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A-1	Police Service Centre Window Replacement
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**PART 1 GENERAL**

**1.1 ARCHITECT OR ENGINEER**

- .1 Wherever the word Architect or Engineer or Consultant is used in the construction specifications, it shall be replaced with Contract Administrator as defined in GC.1.01(8) of the General Conditions, or his agent.

**1.2 COORDINATION AND COOPERATION**

**.1 OTHER TRADES**

- .1 Further to GC:6.1, Specifications shall be read by all trades to acquaint them with the nature of the Work required. Failure to do so will not relieve them of any responsibilities for cooperation in coordinating the Work and preventing delay and for the supply and installation of materials required for this Work.

**.2 CUTTING AND PATCHING**

- .1 Each trade shall do all necessary cutting and patching required for their Work. Existing adjacent surfaces shall be accurately matched. Cutting through any structural member shall only be done with the prior approval of the Contract Administrator.
- .2 Perform all cutting and patching required to make the several parts of the Work come together properly.

**PART 2 PRODUCTS**

**2.1 MATERIALS**

**.1 C.S.A.**

- .1 All materials, where applicable, shall be CSA approved.

**2.2 SUBMITTALS**

**.1 SHOP DRAWINGS**

1. Further to GC:6.9, the Contractor shall submit for approval, at least five (5) sets of detailed shop drawings for all Work as requested by the Contract Administrator at the initial Site meeting and as required thereafter.

**2.3 QUALITY CONTROL**

**.1 INSPECTING AND TESTING MATERIAL**

- .1 The City reserves the right to inspect and test all materials at its own expense and to reject any materials which are not in accordance with the requirements of the specifications. The Contractor shall furnish, at the Contractor's expense, such specimens and samples of materials as may be required for testing.
- .2 The Contractor shall allow the City to test any equipment, and shall provide power, fuel or material required for these standard performance tests on the equipment.

**2.4 CONSTRUCTION FACILITIES AND TEMPORARY CONTROLS**

**.1 SITE PROTECTION**

- .1 The Contractor shall provide adequate protection to prevent any damage to existing structures, furnishings, finishes, etc. during construction. Temporary ramps, barricades, hoardings as required shall be provided to the approval of the Contract Administrator.

.2 The Contractor shall exercise care in the operations relative to the Site. Any unnecessary destruction of the Site will not be permitted. The Contractor shall exercise care in the movement of equipment and materials especially during wet weather. The Contractor shall be held responsible for the repair of damages to the Site, boulevards, roads, other pavements, etc. in the surrounding area of the immediate Site.

.2 LAYOUT OF WORK

.1 The Contractor shall verify all dimensions on the drawings and report any discrepancies to the Contract Administrator before starting the Work.

**PART 3 EXECUTION**

**3.1 PROJECT INFORMATION SIGNS**

.1 SIGNS

.1 No project information signs shall be allowed without the written approval of the Contract Administrator. Any project information signs approved during construction are to be removed by the Contractor upon completion of the project.

**PART 1 GENERAL**

**1.1 REQUIREMENTS INCLUDED**

- .1 Verification of building dimensions.
- .2 Site measurement for new construction.

**1.2 RELATED REQUIREMENTS**

- .1 Section 01 00 00 – General Requirements
- .2 Individual Sections – Site measurements prior to fabrication.

**1.3 PROJECT CONDITIONS**

- .1 The drawings in these bid documents are based on drawings of existing facility, actual site dimensions may vary.

**PART 2 PRODUCTS**

Not Used

**PART 3 EXECUTION**

**3.1 SITE MEASUREMENT**

- .1 Verify all fixed dimensions prior to commencing with Work.
- .2 Site check all dimensions prior to fabrication.
- .3 Notify Contract Administrator of any discrepancies between Site checked dimensions and drawing dimensions.

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**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

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

**1.2 REFERENCE STANDARDS**

- .1 Conform to these standards, in whole or in part as specifically requested in specifications.
- .2 If there is question as to whether any product or system is in conformance with applicable standards, Contract Administrator reserves the right to have such products or systems tested to prove or disprove conformance.
- .3 The cost for such testing will be borne by the City in event of conformance with Contract Documents or by Contractor in the event of non-conformance.
- .4 Conform to latest date of issue of referenced standards in effect on date of submission of Bids, except where specific date or issue is specifically noted.

**1.3 QUALITY**

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

**1.4 STORAGE HANDLING AND PROTECTION**

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.

- 
- .6 Store sheet materials and lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
  - .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
  - .8 Remove and replace damaged products at own expense and to satisfaction of Contract Administrator.
  - .9 Touch-up damaged factory finished surfaces to Contract Administrator's satisfaction. Use touch-up materials to match original. Do not paint over name plates.
- 1.5 **TRANSPORTATION**
- .1 Pay costs of transportation of products required in performance of Work.
  - .2 Contractor to pay transportation costs on recycled products supplied by the City. Unload, handle and store such products.
- 1.6 **MANUFACTURER'S INSTRUCTIONS**
- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
  - .2 Notify Contract Administrator in writing, of conflicts between specifications and manufacturer's instructions, so that the Contract Administrator may establish a course of action.
  - .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes the Contract Administrator to require removal and re-installation at no increase in Contract Price or Contract Time.
- 1.7 **QUALITY OF WORK**
- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Contract Administrator if required Work is such as to make it impractical to produce required results.
  - .2 Do not employ anyone unskilled in his or her required duties. Contract Administrator reserves right to require dismissal from Site, workers deemed incompetent or careless.
  - .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Contract Administrator, whose decision is final.
- 1.8 **CO-ORDINATION**
- .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
  - .2 Be responsible for coordination and placement of openings, sleeves, and accessories.
- 1.9 **CONCEALMENT**
- .1 In finished areas, conceal pipes, ducts, and wiring in floors, walls and ceilings, except where indicated otherwise.
  - .2 Before installation, inform Contract Administrator if there is interference. Install as directed by Contract Administrator.

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1.10           **REMEDIAL WORK**

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

1.11           **LOCATION OF FIXTURES**

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

1.12           **FASTENINGS**

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

1.13           **FASTENINGS- EQUIPMENT**

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

1.14           **PROTECTION OF WORK IN PROGRESS**

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

1.15           **EXISTING UTILITIES**

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

**PART 2      PRODUCTS**

2.1            **NOT USED**

    .1          Not used.

**PART 3      EXECUTION**

3.1            **NOT USED**

    .1          Not used.

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**PART 1 GENERAL**

**1.1 REQUIREMENTS INCLUDED**

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

**1.2 RELATED REQUIREMENTS**

- .1 Individual Sections: cutting and patching incidental to Work of the section.

**1.3 SUBMITTALS**

- .1 Submit written request in advance of cutting or alteration which affects:
  - .1 Structural integrity of any element of Projects.
  - .2 Integrity of weather-exposed or moisture resistant elements.
  - .3 Efficiency, maintenance, or safety of any operational element.
  - .4 Visual qualities of sight-exposed elements.
- .2 Include in request:
  - .1 Identification of project.
  - .2 Location and description of affected Work.
  - .3 Statement on necessity for cutting or alteration.
  - .4 Description of proposed Work and products to be used.
  - .5 Alternatives to cutting and patching.
  - .6 Effect of Work on the City.
  - .7 Date and time Work will be executed.

**PART 2 PRODUCTS**

**2.1 MATERIALS**

- .1 Required for original installation.

**PART 3 EXECUTION**

**3.1 GENERAL**

- .1 Execute cutting, fitting and patching to complete the Work.
- .2 Fit the several parts together, to integrate with other Work.
- .3 Uncover Work to install ill-timed Work.
- .4 Remove and replace defective and non-conforming Work.
- .5 Provide openings for penetrations of mechanical and electrical Work.

**3.2 INSPECTION**

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

3.3           **PREPARATION**

- .1       Provide supports to assure structural integrity of surroundings; devices and methods to protect other portions of project from damage.
- .2       Provide protection from elements for areas which may be exposed by uncovering Work.
- .3       Conduct Work to minimize interference with operation of existing facility.

3.4           **PERFORMANCE**

- .1       Execute Work by methods to avoid damage to other Work and which will provide proper surfaces to receive patching and finishing.
- .2       Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements and sight-exposed surfaces.
- .3       Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed without prior written approval by the Contract Administrator.
- .4       Restore Work with new products in accordance with requirements of Contract Documents.
- .5       Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
- .6       At penetration of fire-rated wall, ceiling or floor construction, completely seal voids with fire-rated material, full thickness of the construction element.
- .7       Refinish surfaces to match adjacent finishes: for continuous surfaces refinish to nearest intersection or as indicated on schedule and drawings; for equipment refinish entire unit.
- .8       Provide and install steel lintels for new openings in existing masonry construction.
- .9       Restore surfaces and finishes in areas of electrical Work to match surrounding substrate as per above notes.

**PART 1 GENERAL**

**1.1 WORK INCLUDED**

- .1 The Work included under this section shall conform to the definitions in the "Manitoba Trade Definitions" handbook produced by the Winnipeg Construction Association.

**1.2 REFERENCES**

- .1 CAN3-A440-M84 – Omnibus Window Standard and CAN 3-A44-M90.

**1.3 PERFORMANCE**

- .1 Window components to provide for expansion and contraction caused by a cycling temperature range of 100 degrees C without causing detrimental effects to components. Limit mullion deflection to 1/200, or flexure limit of glass with full recovery of glazing materials, whichever is less.

- .2 Classification rating to CAN 3-A44-M90

	<u>Air</u>	<u>Water</u>	<u>Wind</u>
Awning	A3	B7	C4
Casement	A3	B6	C3
Fixed		B7	C4
Single Hung	A3	B7	C5

- .3 There shall be no uncontrolled water penetration under designed loads. Drain water entering joints, condensation occurring in glazing channels, or migrating moisture occurring within system, to exterior.

**1.4 SHOP DRAWINGS AND PRODUCT DATA**

- .1 Submit shop drawings.
- .2 Indicate on shop drawings wall opening and component dimensions; wall opening tolerances required; anchorage and fasteners; affected related Work; installation requirements.

**1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver products to Site, and store and protect products on Site, to requirements Section 01 61 00 – Product Requirements.
- .2 Accept products of this section on site in new condition and verify no damage.

**1.6 WARRANTY**

- .1 Provide a TWENTY (20) year Warranty for all fibreglass frame and sash components. Warranty to cover window system for failure to meet specified requirements. Warranty applies to product only with labour not included.
- .2 Provide a TEN (10) year Warranty for the failure of the air seal due to defects in the material or workmanship. Warranty applies to product only with labour not included.

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**PART 2 PRODUCTS**

**2.1 MATERIALS**

- .1 All frame and sash profiles are made from Pultruded Fiberglass, having a minimum of wall thickness of 0.090" (2.3 mm), with minimum glass content of 60%. Non-structural accessory members are permitted to be in vinyl or aluminum and are identified as such.
- .2 Fasteners: Non magnetic, stain and corrosion resistant stainless steel to ASTM E-149.
- .3 Insect Screen: to CGSB 79-GP-1M and CAN3-A440-M84 Heavy Duty Classification with 18 x 14 aluminum mesh in baked enamel aluminum frame – colour to match window frame.
- .4 Sill and Flashings: aluminum to match window framing.

**2.2 WEATHER-STRIPPING**

- .1 Q-Lon air-seal gasket on interior with Santoprene bulb-type "rain screen" gasket on the exterior to provide weather barrier. Dust seal to be flexible PVC. Secondary seal to be dual Durometer Santoprene.

**2.3 WINDOWS**

- .1 Standard of acceptance:
  - .1 Duxton Windows Ltd. (Inline Fibreglass Ltd.): Sovereign series 325, narrow brick mould, low profile typical.
  - .2 Accurate Dorwin Ltd. Windows (Omniglass Ltd.): Awning series.

**2.4 HARDWARE**

- .1 Concealed Stainless Steel Hinges, E-Gard Roto Gear Operators and metal Cam are manufactured by "TRUTH Hardware" or approved equal. Hardware is installed with fasteners into patented back-up reinforcements.
- .2 All operable windows to have restricted operation, so that no object larger than a 4" diameter sphere may pass through.

**2.5 GLASS**

- .1 Glass thickness shall be in accordance with applicable Building Code.

**2.6 GLAZING METHOD**

- .1 Laid-in glazing using EPDM non-shrink rubberized glass stop locked-in from the interior provides a secure and positive seal for the glass and easier after install glass servicing.

**2.7 INSECT SCREEN**

- .1 Roll-formed aluminum frame with friction fit corner keys. Screen mesh held in place by spline. Screens are mounted on the interior and are removable.

**2.8 FABRICATION**

- .1 Frame and sash corners are connected with moulded reinforced polyester shearblocks and mechanically secured. All joints are factory sealed and neatly fitted together. The perimeter of open-back frames shall be filled with insulation. Fabricate windows allowing for minimum clearances and shim spacing around perimeter of assembly, yet enabling installation. Make corner joints flush, hairline, and weatherproof. Seal corner joints with sealant. Develop drainage holes with moisture pattern to exterior.

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2.9 **FINISHES**

- .1 The exposed surfaces to have 10 year warranty against fading, peeling or cracking are:
  - .1 Isocyanate-free 2 part Polymer Enamel with a minimum dry film thickness of 1.5 mils with a medium gloss of 25-55. Finish shall resist chipping, blistering, chalking discoloration and aging under all atmospheric conditions. Conforms to AAMA 603 and 613 Organic Coatings.
- .2 Concealed Steel Items: Galvanized in accordance with CSA G164M.
- .3 Colours: Standard colour (Commercial Brown)

**PART 3 EXECUTION**

3.1 **INSPECTION**

- .1 Verify that surfaces are ready to receive Work and opening dimensions are as indicated on shop drawings.
- .2 Verify wall openings and adjoining air and vapour seal materials are ready to receive Work of this Section.
- .3 Beginning of installation means acceptance of substrate.

3.2 **INSTALLATION**

- .1 Installation shall be performed by experienced installers in accordance with manufacturer instructions and CSA A-440.4 Standards. Window shall be plumb and square after installation is complete and sealed to both interior and exterior wall with a high quality sealant around the perimeter of the frame. If perimeter cavity is to be foamed, additional anchorage may be required to prevent bowing. It shall be the responsibility of the installers to make all necessary final adjustments to ensure normal and smooth operation.
- .2 Align window frame plumb and level, free of warp or twist. Maintain dimensional tolerances, aligning with adjacent Work.
- .3 Coordinate attachment and seal of air and vapour barrier materials.
- .4 Pack fibrous insulation in shim spaces at perimeter to maintain continuity of thermal barrier.
- .5 Install perimeter type sealant, backing materials. Apply sealant to ends of sill for watertight seal.

3.3 **MAINTENANCE**

- .1 Occasional wash of glass and frame components with non-abrasive detergent is recommended.