



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 760-2008**

**ELECTRONIC BUS DEPARTURE DISPLAY SIGNAGE**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 ELECTRONIC BUS DEPARTURE DISPLAY SIGNAGE

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, October 21, 2008. .

B2.2 Bids 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 C3.1, the Bidder may view the Site without making an appointment.

B3.2 The Bidder is advised that they will be responsible for understanding the construction of the existing signs including but not limited to location of wiring, materials, structural design and dimensions for signs. .

### **B4. ENQUIRIES**

B4.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.

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 Division 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 Division 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 10 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 may 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 B15.

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 COMPONENTS**

B7.1 The Bid shall consist of the following components:

- (a) Form A: Bid;
- (b) Form B: Prices;
- (c) Bid Security
  - (i) Form G1: Bid Bond and Agreement to Bond, or  
Form G2: Irrevocable Standby Letter of Credit and Undertaking, or  
a certified cheque or draft;
- (d) Design Drawings.

B7.2 Further to B7.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B6.

B7.3 All components of the Bid shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Bid.

B7.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.

B7.4.1 Samples or other components of the Bid 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.

B7.5 Bidders are advised not to include any information/literature except as requested in accordance with B7.1.

B7.6 Bidders are advised that inclusion of terms and conditions inconsistent with the Bid Opportunity document, including the General Conditions, may result in the Bid being determined to be non-responsive.

B7.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B7.8 Bids shall be submitted to:

The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
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 12 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 and the corporate seal, if the corporation has one, should be affixed;
- (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 should be printed below such signatures.

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 and the Contract, when awarded, shall be both joint and several.

## **B9. PRICES**

B9.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B9.1.1 Notwithstanding C12.2.3(c), prices on Form B: Prices shall not include the Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.

B9.2 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Bids.

B9.3 The quantities for which payment will be made to the Contractor are to be determined by the Work actually performed and completed by the Contractor, to be measured as specified in the applicable Specifications.

B9.4 Prices from Non-Resident Bidders are subject to a Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **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; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.

B10.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations 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 Division internet site at <http://www.winnipeg.ca/matmgt/debar.stm>.

B10.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
- (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba);

B10.4 Further to B10.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:

- (a) a valid COR certification number under the Certificate of Recognition (COR) Program administered by the Manitoba Construction Safety Association or by the Manitoba Heavy Construction Association's Safety, Health and Environment Program; or
- (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>.)

B10.5 The Bidder shall 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.

B10.6 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.

B10.7 The Contractor shall submit dimensioned detailed design drawings with their Bid. The drawings shall show all details of construction, fastenings, materials and colours for each sign type. The design is to be based on the Drawings included in this Bid Opportunity and will be the basis for the construction of the signs. The design drawings will be evaluated as part of the Bid Submission.

## **B11. BID SECURITY**

B11.1 The Bidder shall provide bid security in the form of:

- (a) a bid bond, in the amount of at least ten percent (10%) of the Total Bid Price, and agreement to bond of a company registered to conduct the business of a surety in Manitoba, in the form included in the Bid Submission (Form G1: Bid Bond and Agreement to Bond); or
- (b) an irrevocable standby letter of credit, in the amount of at least ten percent (10%) of the Total Bid Price, and undertaking 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 included in the Bid Submission (Form G2: Irrevocable Standby Letter of Credit and Undertaking); or
- (c) a certified cheque or draft payable to "The City of Winnipeg", in the amount of at least fifty percent (50%) of the Total Bid Price, drawn on a bank or other financial institution registered to conduct business in Manitoba.

B11.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.

- B11.1.2 All signatures on bid securities shall be original.
- B11.1.3 The Bidder shall sign the Bid Bond.
- B11.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.
- B11.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.
- B11.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B11.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.
- B11.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.
- B11.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

## **B12. OPENING OF BIDS AND RELEASE OF INFORMATION**

- B12.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.
  - B12.1.1 Bidders or their representatives may attend.
- B12.2 Following the Submission Deadline, the names of the Bidders and their Total Bid Prices (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 Division internet site at <http://www.winnipeg.ca/matmgt>.
- B12.3 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 Division internet site at <http://www.winnipeg.ca/matmgt>.
- B12.4 The Bidder is advised that any information contained in any Bid 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.

## **B13. IRREVOCABLE BID**

- B13.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.
- B13.2 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 until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid.

## **B14. WITHDRAWAL OF BIDS**

- B14.1 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.

- B14.1.1 Notwithstanding C23.3, 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.
- B14.1.2 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 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B14.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
  - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
  - (c) if the notice has been given by any one of the persons specified in B14.1.3(b), declare the Bid withdrawn.
- B14.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B13.2 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, including the right to retain the Bidder's bid security.

## **B15. EVALUATION OF BIDS**

- B15.1 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 B11 (pass/fail);
  - (c) Total Bid Price (40%);
  - (d) Design Drawings (60%);
  - (e) economic analysis of any approved alternative pursuant to B6.
- B15.2 Further to B15.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid 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 or minor informalities or irregularities, if the interests of the City so require.
- B15.3 Further to B15.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his Bid or in other information required to be submitted, that he is responsible and qualified.
- B15.4 Further to B15.1(c), the Total Bid Price shall be the sum of the quantities multiplied by the unit prices for each item shown on Form B: Prices.
- B15.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.
- B15.4.2 Further to B15.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.
- B15.4.3 Total Bid Price shall be evaluated with a weighting of 40 points out of a total of 100 possible points. As such, the lowest Bidder shall receive the full 40 points, and the second lowest Bidder and subsequent Bidders shall be pro-rated accordingly.
- B15.5 Further to B15.1(d), the design drawings will be evaluated based upon a weighting of 60 points out of a total of 100 possible points. The design drawing that best meets the requirements

stated below receiving the highest points and subsequent Bidders shall be pro-rated accordingly.

- (a) overall sign dimensions and styles are consistent with Drawings S1 and S2;
- (b) detailed dimensions are appropriate to requirements of viewing angle and distance;
- (c) material for sign construction meet all Specifications;
- (d) mounting technique is indicated and is appropriate to existing sign structure type;
- (e) sign face layouts are consistent with the Drawings;
- (f) electrical connections are in locations to match existing sign structures;
- (g) technical data sheets for power supply, controller and single board computer are provided and manufacturer is acceptable to the City of Winnipeg;
- (h) manufacturer of LED board is acceptable to the City of Winnipeg;
- (i) fasteners and closures are shown on the drawings.

## **B16. AWARD OF CONTRACT**

B16.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B16.2 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.

B16.2.1 Without limiting the generality of B16.2, 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.

B16.3 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, in accordance with B15.

B16.3.1 Part B of Form B: Prices will be contingent upon the successful manufacture, installation and testing of Part A of Form B: Prices in accordance with E5.34. The City reserves the right to eliminate all or any portion of Part B if the manufacturer, installation and testing of Part A is not satisfactory.

B16.3.2 Following the award of contract, a Bidder will be provided with information related to the evaluation of his Bid upon written request to the Contract Administrator.

## **PART C - GENERAL CONDITIONS**

### **C0. GENERAL CONDITIONS**

C0.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Work of the Contract.

C0.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](http://www.winnipeg.ca/matmgt/gen_cond.stm) .

C0.2 A reference in the Bid Opportunity to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Construction*.

## **PART D - SUPPLEMENTAL CONDITIONS**

### **GENERAL**

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

D1.1 In addition to the *General Conditions for Construction*, these Supplemental Conditions are applicable to the Work of the Contract.

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

D2.1 The Work to be done under the Contract shall consist of the supply and installation of two sided electronic bus display signs on existing structures.

D2.2 The major components of the Work are as follows:

- (a) LED board for testing;
- (b) Prototypes for Type A and B signs;
- (c) Type A signs for installation on illuminated signs;
- (d) Type B signs for installation on totem signs.

#### **D3. DEFINITIONS**

D3.1 When used in this Bid Opportunity:

- (a) "RIAS" means remote infrared audible signage;
- (b) "LED" means light emitting diode;
- (c) "EBDD" means electronic bus departure display;

#### **D4. CONTRACT ADMINISTRATOR**

D4.1 The Contract Administrator is McGowan Russell Group Inc., represented by:

Jackie Wilkie  
Vice President  
200-120 Fort Street  
Winnipeg, MB R3C 1C7

Telephone No. (204) 956-0396  
Facsimile No. (204) 956-1265

D4.2 At the pre-construction meeting, Ms. Wilkie will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

#### **D5. CONTRACTOR'S SUPERVISOR**

D5.1 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.

#### **D6. NOTICES**

D6.1 Except as provided for in C23.2.2, 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.

D6.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D6.3, D6.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at the address or facsimile number identified in D4.1.

D6.3 Notwithstanding C21.3, 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 Financial Officer  
Administration Building, 3rd Floor  
510 Main Street  
Winnipeg MB R3B 1B9  
Facsimile No.: (204) 949-1174

D6.4 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  
Internal Services Department  
Legal Services Division  
Attn: City Solicitor  
185 King Street, 3rd Floor  
Winnipeg MB R3B 1J1  
Facsimile No.: (204) 947-9155

## **D7. FURNISHING OF DOCUMENTS**

D7.1 Upon award of the Contract, the Contractor will be provided with three (3) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him at cost.

## **SUBMISSIONS**

### **D8. AUTHORITY TO CARRY ON BUSINESS**

D8.1 The Contractor shall 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, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

### **D9. SAFE WORK PLAN**

D9.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D9.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt/safety/default.stm> .

## **D10. INSURANCE**

- D10.1 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) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
  - (b) automobile liability insurance for 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;
- D10.2 Deductibles shall be borne by the Contractor.
- D10.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D10.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

## **D11. PERFORMANCE SECURITY**

- D11.1 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.
- D11.1.1 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.
- D11.2 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 letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

## **D12. SUBCONTRACTOR LIST**

- D12.1 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 the date specified in C4.1 for the return of the executed Contract.

## **SCHEDULE OF WORK**

### **D13. COMMENCEMENT**

- D13.1 The Contractor shall not commence any Work until he is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.
- D13.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
    - (i) evidence of authority to carry on business specified in D8;
    - (ii) evidence of the workers compensation coverage specified in C6.15;
    - (iii) the Safe Work Plan specified in D9;
    - (iv) evidence of the insurance specified in D10;
    - (v) the performance security specified in D11;
    - (vi) the Subcontractor list specified in D12;
    - (vii) shop drawings for all works as specified in E3.
  - (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.
- D13.3 The City intends to award this Contract by November 3, 2008.

### **D14. CRITICAL STAGES**

- D14.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
- (a) Delivery of LED test board to Winnipeg Transit by November 30, 2008;
  - (b) Delivery of Type A prototype sign to Winnipeg Transit for testing by December 15, 2008;
  - (c) Supply and installation of Type A LED signs for on street testing by January 30, 2009;
  - (d) Supply and installation of Type B prototype sign by March 16, 2009;
  - (e) Delivery of all signs by August 31, 2009.

### **D15. SUBSTANTIAL PERFORMANCE**

- D15.1 The Contractor shall achieve Substantial Performance by November 30, 2009.
- D15.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial 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.
- D15.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

### **D16. TOTAL PERFORMANCE**

- D16.1 The Contractor shall achieve Total Performance by December 15, 2009.
- D16.2 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.

D16.3 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.

#### **D17. LIQUIDATED DAMAGES**

D17.1 If the Contractor fails to achieve critical stages, Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Calendar Day for each and every Calendar Day following the days fixed herein for same during which such failure continues:

- (a) Delivery of LED test board to Winnipeg Transit by November 10, 2008- five hundred dollars (\$500.00);
- (b) Delivery of Type A prototype sign to Winnipeg Transit for testing by December 15, 2008- five hundred dollars (\$500.00);
- (c) Supply and installation of Type A LED signs for on street testing by January 30, 2009- one thousand dollars (\$1,000.00);
- (d) Supply and installation of Type B prototype sign by March 16, 2009- one thousand dollars (\$1,000.00);
- (e) Delivery of all signs by August 31, 2009 – one thousand dollars (\$1000.00);
- (f) Substantial Performance – five hundred dollars (\$500.00);
- (g) Total Performance – one thousand dollars \$1,000.00).

D17.2 The amounts specified for liquidated damages in D17.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve critical stages, Substantial Performance or Total Performance by the days fixed herein for same.

D17.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

#### **CONTROL OF WORK**

##### **D18. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

D18.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

#### **MEASUREMENT AND PAYMENT**

##### **D19. PAYMENT**

D19.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

#### **WARRANTY**

##### **D20. WARRANTY**

D20.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

- D20.2 Notwithstanding C13.2 or D20.1, the Contract Administrator may permit the warranty period for a portion or portions of the Work to begin prior to the date of Total Performance if:
- (a) a portion of the Work cannot be completed because of unseasonable weather or other conditions reasonably beyond the control of the Contractor but that portion does not prevent the balance of the Work from being put to its intended use; or
  - (b) the test units and prototype units may start warranty upon acceptance of on street testing.
- D20.2.1 In such case, the date specified by the Contract Administrator for the warranty period to begin shall be substituted for the date specified in C13.2 for the warranty period to begin..

**FORM H1: PERFORMANCE BOND**  
(See D11)

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 for

BID OPPORTUNITY NO. 760-2008

ELECTRONIC BUS DEPARTURE DISPLAY SIGNAGE

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 as to Principal if no seal)

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

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

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

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

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

**FORM H2: IRREVOCABLE STANDBY LETTER OF CREDIT  
(PERFORMANCE SECURITY)**  
(See D11)

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

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

RE: PERFORMANCE SECURITY - BID OPPORTUNITY NO. 760-2008  
ELECTRONIC BUS DEPARTURE DISPLAY SIGNAGE

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 AND DRAWINGS

- E1.1 These Specifications shall apply to the Work.
- E1.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>.
- E1.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 The following are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
S1	Sign Type A
S2	Sign Type B
S3	Sign Installations
S4	LED Sample Display

#### E2. BUS STOP SIGNAGE LOCATIONS

- E2.1 The signs for street testing are to be placed at the following locations. The locations for the remaining signs will be determined by Winnipeg Transit following the Award of Contract. All signs will be within the City of Winnipeg.
- (a) Southbound Pembina Highway N/S Stafford;
  - (b) Southbound Pembina Highway F/S Plaza;
  - (c) Southbound Pembina Highway F/S Opp. University Crescent;
  - (d) Northbound Pembina Highway N/S Plaza; and
  - (e) University of Manitoba Terminal (two signs).

#### E3. SHOP DRAWINGS

- E3.1 The Contractor shall submit stamped Engineer's drawings for review and approval within five (5) Working Days of approval of design drawings and prior to commencement of Work. Engineer's drawings shall show all details of construction and fastenings for erections and shall be as specified or approved. Engineer shall be a Structural Engineer licensed to practice in Manitoba with extensive experience in the design and manufacturing of aluminium and stainless steel signs and structures for public transit. Drawings to include wind and snow loading requirements for signs and structures.
- E3.2 Autocad files of the drawings are available to be emailed upon written request to the Contract Administrator.

#### E4. LED TEST BOARD

- E4.1 The Contractor shall supply to Winnipeg Transit two (2) sample boards of LED with a standard sign filter and basic controls or connections to a computer provided by the Contractor to demonstrate the type of LED proposed.

- E4.2 The colour of LED on one board is to be amber and the other is to be red.
- E4.3 The pixel size is to be 3mm with a 4mm pitch. Each board is to be a minimum of 12 pixels high by 48 pixels wide.
- E4.4 The boards are to be able to produce a font that is 6x9 pixel and one at 10x12 pixels.
- E4.5 The brightness level is to be adjustable. Optimum level for application under all weather conditions and time of day to be determined and set by manufacturer.
- E4.6 The Contractor will demonstrate the LED boards for Winnipeg Transit personnel and leave the boards and equipment for testing by Winnipeg Transit.

#### **Method of Measurement**

- E4.7 Supply and delivery of LED test boards shall be measured on a lump sum basis for all Work as specified herein and accepted by the Contract Administrator, as computed by the Contract Administrator.

#### **Basis of Payment**

- E4.8 Supply and delivery of LED test boards will be paid for at the contract lump sum price for 'Supply and deliver LED test boards' measured and specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this specification.

### **E5. LED SIGNS**

#### **Description**

- E5.1 The Work of this specification comprises the furnishing of all labour, equipment and materials required to complete the supply, fabrication and installation of all LED signs and related Work as shown on the Drawings and as hereinafter specified.

#### **Design / Shop Drawings**

- E5.2 The Contractor shall submit design and shop drawings as per E3.

#### **Delivery and Storage**

- E5.3 Store units in a protected location, immediately upon arrival on the Site.
- E5.4 Remove from Site any units which have been damaged during transportation and replace.

#### **Materials**

- E5.5 Main housing:
- (a) Materials shall be free from defects impairing strength, durability or appearance, and be of best commercial quality for use intended.
  - (b) Materials and methods used to assemble Work of this section shall be of such properties and construction to safely sustain the loads normally imposed thereon, as would be required of this type of installation.
  - (c) All exposed fastenings shall be of the same material, colour and finish as the metals to which these are supplied, unless otherwise specified or called for on the Drawings.
  - (d) All metal shall be free from scale, buckles, pits and other defects.
  - (e) Housing components and construction shall be as shown on the Drawings and as approved by the Contract Administrator.
  - (f) Housing to be constructed of die cast aluminium with mounting bracket, powder coated Protech PM211S11 (sparkle silver).

- (g) Lamps to be white LED modules with electronic ballast as required. Bidder to provide lighting schematic including ballast. Lamps and ballast to be high output. Lighting output to match lighting levels of sign box on illuminated structures.
- (h) Glands for electrical connection to be IP68, M20 cable glands or approved equivalent.
- (i) Mounting holes, cable entry holes and venting to be as formed as part of the casting.
- (j) Mounting hardware to include all required gaskets, O rings and fasteners to mount to existing signs.
- (k) Housing to be weather proof and have drain holes as required.

E5.6 Front frames:

- (a) Materials shall be free from defects impairing strength, durability or appearance, and be of best commercial quality for use intended.
- (b) Materials and methods used to assemble Work of this section shall be of such properties and construction to safely sustain the loads normally imposed thereon, as would be required of this type of installation.
- (c) All exposed fastenings shall be of the same material, colour and finish as the metals to which these are supplied, unless otherwise specified or called for on the Drawings.
- (d) All metal shall be free from scale, buckles, pits and other defects.
- (e) Frame components and construction shall be as shown on the Drawings and as approved by the Contract Administrator.
- (f) Frames to be constructed of die cast aluminium with mounting bracket, powder coated Protech PM211S11 (sparkle silver).
- (g) Acrylic to be SG (sign grade)
- (h) Polycarbonate face to be 0.6 mm clear Lexan with anti-reflective surface and scratch resistant coating.
- (i) Background to be screen printed 3M vinyl day/night film in blue to match existing signs with white lettering installed on second face of polycarbonate.
- (j) Screening type to be determined during testing of LED board and be appropriate for sign type and location.
- (k) Hinges to be stainless steel.
- (l) Door stays to be slide form stainless steel, self locking, with mounting on the side of the frame and face of the main housing.
- (m) Locks to be tamper resistant key locks.
- (n) All components to work in cold weather.
- (o) Door seals to be weather proof.

E5.7 LED tray:

- (a) Materials shall be free from defects impairing strength, durability or appearance, and be of best commercial quality for use intended.
- (b) Materials and methods used to assemble Work of this section shall be of such properties and construction to safely sustain the loads normally imposed thereon, as would be required of this type of installation.
- (c) All exposed fastenings shall be of the same material, colour and finish as the metals to which these are supplied, unless otherwise specified or called for on the Drawings.
- (d) All metal shall be free from scale, buckles, pits and other defects.
- (e) Board to be painted RAL 9005 black, smooth 25% gloss.
- (f) LED tray to include LED boards and ¼ turn fasteners.
- (g) All connections to controllers to be on internal side of tray.

- (h) All components to be grounded.

**E5.8 LED boards:**

- (a) Displays are to be driven by a DFLED 100 control board to provide the required number of lines of display. Control board is to communicate to the Winnipeg Transit system as described in the Winnipeg Transit EBDD RFP Technical Appendix Controller and Communication.
- (b) Full matrix display with X,Y addressing.
- (c) Clock displays are to be fixed.
- (d) Brightness to be variable. Optimum level for application under all weather conditions and time of day to be determined and set by manufacturer.
- (e) Main display is to have a fixed top row and a page flip or scroll on the remaining lines of display.
- (f) Display to have upper and lower case characters with heights as noted for each type of display.
  - (i) Sign Type A main display 36mm (9 pixels) characters.
  - (ii) Sign Type A clock display 48mm (12 pixels) characters.
  - (iii) Sign Type B main display 36mm (9 pixels) characters.
  - (iv) Sign Type B clock display 48mm (12 pixels) characters.
  - (v) Main display for both sign types to be able to use entire screen for system notices.
- (g) Pixel to be round 3mm.
- (h) Pitch size is to be 4mm.
- (i) Background to be black.
- (j) Number of pixels:
  - (i) Sign Type A main display 36x256 pixels.
  - (ii) Sign Type A clock display 12x48 pixels.
  - (iii) Sign Type B main display 120x128 pixels (portrait).
  - (iv) Sign Type B clock display 12x48 pixels.
- (k) Manufacturer for LED board to be Daktronics or approved equivalent.

**E5.9 Equipment tray:**

- (a) Materials shall be free from defects impairing strength, durability or appearance, and be of best commercial quality for use intended.
- (b) Materials and methods used to assemble Work of this section shall be of such properties and construction to safely sustain the loads normally imposed thereon, as would be required of this type of installation.
- (c) All exposed fastenings shall be of the same material, colour and finish as the metals to which these are supplied, unless otherwise specified or called for on the Drawings.
- (d) All metal shall be free from scale, buckles, pits and other defects.
- (e) Tray to be sheet aluminium preformed and holes pre-cut for mounting and wiring.
- (f) Power supply units to be 12vDC and 5vDC or better as required for sign power load.
- (g) LED Controller board to be DFLED100 or as approved by Winnipeg Transit. Contractor to supply technical data sheet for review and approval prior to manufacture.
- (h) Single board computer to work with Winnipeg Transit computer system as outlined in Appendix the Winnipeg Transit EBDD RFP Technical Appendix Controller and Communication. Contractor to supply technical data sheet for review and approval prior to manufacture.

- (i) Temperature control module to include heater, heat exchanger and fan as required to ensure sign works in temperatures from -50°C to +40°C
- (j) Area is to be reserved for a future RIAS system as supplied by Daktronics.
- (k) Modem to be a Blue Tree BT-6600 (CDMA EVDO Rev. A cellular modem).
- (l) All required cabling and wiring to be supplied to CSA standards.
- (m) All components to be grounded.

### **Workmanship**

- E5.10 Proportion items to meet the National Building Code and Manitoba Building Code. Items shall support loads recommended by the Code and local standards for wind and snow loading unless specific loads are indicated on the Drawings.
- E5.11 Fabricate Work to shape and size with sharp lines, even curves and smooth surfaces. Connections shall be securely welded, bolted or riveted. Bolted and riveted connections are not permitted in exposed areas of the sign. Welds shall be dressed smooth on exposed surfaces. Welds/joins shall not be visible upon completion of painting operations. Rabbits, lugs and brackets shall be provided so that the Work can be assembled in a neat substantial manner. Thickness of metal and design of assembly and support shall give ample strength and stiffness.
- E5.12 Exposed ends and edges of metal shall be smooth. Joints exposed to the weather shall be formed to exclude water or to drain.
- E5.13 Insofar as possible, fit and shop assemble Work and deliver to the Site in largest practical sections.
- E5.14 Prior to proceeding with shop fabrication, take all necessary field measurements to verify dimensions or calculations from Drawings.
- E5.15 Fabricate Work in strict accordance with shop drawings, and in general to details, sizes, materials shown on Drawings and specified herein.
- E5.16 Assembly: Material intended for use in the various assemblies shall be straight, clean, sharply defined profiles, assembled in such a way that no disfigurements will show in the finished Work, or impair the strength.
- E5.17 Welding: All welding shall conform to the requirements of the current CSA Standard W.59 and the fabricator shall be fully approved by the Canadian Welding Bureau, in conformance with the requirements of the current CSA Standard W.47. Welding shall be done by currently licensed welders only.
- E5.18 Welding splatter and other fabrication burrs where exposed shall be ground or filed smooth and left ready for subsequent operations.
- E5.19 Finish: Fabricated material Work shall be delivered with e-coating, shop coat primer and paint, or other finish as specified.
- E5.20 Following installation, apply a touch up coat of shop primer and paint to match finish to all surfaces where finish has been removed and to installation devices such as bolts, screws, welds and the like.

## Quality Control

- E5.21 All workmanship and all material furnished and supplied under this Section are subject to close and systematic inspection and testing by the Contract Administrator including all operations from the selection and production of materials through to final acceptance of the Work. The Contractor shall be wholly responsible for the control of all operations, incidental thereto notwithstanding any inspection or approval that may have been previously given. The Contract Administrator reserves the right to reject any materials or Works which are not in accordance with the requirements of this Section.
- E5.22 All signs are to be operable in temperatures from -50° C to +40° C.

## Fabrication

### General

- E5.23 Fabrication shall be carried out in accordance with these Specifications and Drawings which form a part of this Contract.
- E5.24 The workmanship shall meet established practice in modern shops.
- E5.25 If damage occurs during fabrication, the Contract Administrator shall be notified to facilitate the implementation of remedial measures. Remedial repair measures will be subject to the approval of the Contract Administrator. Their cost will be paid by the Contractor.
- E5.26 Dimensions and fabrication which control the field matching of parts shall receive careful attention in order to avoid field adjustments.

## Clean Material

- E5.27 The material shall be clean, free from rust, mill scale, and other foreign matter before being worked in the shop.

## Finish

- E5.28 All portions of the Work shall be neatly finished. Shearing, cutting, chipping and machining shall be done neatly and accurately. Finished members shall be true to line, free from twists, bends open joints, sharp corners and edges.

## Painting

- E5.29 Clean all metal thoroughly and apply recommended primer.
- E5.30 All aluminium to be sanded prior to painting.
- E5.31 Apply all materials under adequate illumination, spread evenly and flow on smoothly without runs or sags.
- E5.32 All coats must be thoroughly dry before applying succeeding coats.
- E5.33 All Work where a coat of material has been applied must be inspected and approved by the Contract Administrator before the application of the succeeding specified coat, otherwise no credit for the coat applied will be given, and the Contractor shall then assume the responsibility and recoat the Work in question. Report each coat applied to the Contract Administrator when completed for inspection and approved to comply with the above. Where manufacture is not in Winnipeg all contractor to supply digital photos via email of each step for review and approval.

## Samples / Prototypes

- E5.34 A prototype of each sign is to be manufactured and delivered to Winnipeg Transit at 421 Osborne Street for testing and approval prior to manufacture of remaining signs. The prototype shall be the minimum acceptable standard for all materials, workmanship and finishes. If prototype is acceptable it may be used for construction.

## Installation and Co-ordination with Others

- E5.35 The Contractor is advised of the following:
- (a) All signs to be installed on existing sign structures. Confirm dimensions of sign prior to construction.
  - (b) Existing signs must be removed prior to installation of EBDD signs as required for access to electrical and mounting of signs. All signs removed are to be protected from damage during installation of new signs.
  - (c) Mounting hardware is to be hidden from view on signs as shown on the Drawings.
  - (d) Contractor to coordinate connection to existing wiring with Tri-Star Electric, contact Jack Millar 781-7464. All signs will be prewired with 14/3 cab tire. Contractor to ensure all components are compatible with wiring and 110 service. Tri-Star is to perform all final connections.
  - (e) The Contract Administrator will notify Winnipeg Transit of installation date with a minimum of three (3) Working Days.
  - (f) Any damage to the structure or signs, incurred during fabrication, delivery, installation etc., is to be repaired to the satisfaction of the Contract Administrator within three (3) Working Days of installation at Contractors cost.

## Training and Documentation

- E5.36 The Contractor shall provide the following training and documentation:
- (a) Training, course materials and documentation necessary for the proper understanding of the each sign for Winnipeg Transit personnel at the administrative offices. The dates of the training will be mutually agreed to by Winnipeg Transit and the Contractor. Training on the installation, operation, maintenance and troubleshooting of all equipment to the component level must be provided. This course must be taught by a qualified representative of the Contractor who participated in the design of the sign systems. The training session and all associated costs are incidental to the unit prices bid for the project.
  - (b) Four (4) colour copies of a detailed operations and maintenance manual for each sign type to Winnipeg Transit and an Adobe pdf file of the same manuals. Manuals are incidental to the unit prices bid for the project.
  - (c) Four (4) hard copies and one Adobe pdf file of a detailed parts list to Winnipeg Transit including product number, product description, colour and options for all components of all signs for future maintenance ordering including pricing for the next year. The parts list is incidental to the unit prices bid for the project.

## Service Contract

- E5.37 At the end of the warranty period, a service contract that includes at least the following conditions must be provided for all sign components and software maintenance:
- (a) The service Contract must have a one (1) year term and must be renewable on an annual basis as mutually agreed between Winnipeg Transit and the Contractor.
  - (b) Defective components will be removed and shipped by the Contractor to the supplier or authorized repair agency for repair. Repaired or replaced components will be reinstalled by the Contractor.
  - (c) Software maintenance must include telephone support during normal business hours on weekdays, correction of identified software deficiencies, changes to correct logic problems,

minor changes to improve system performance and instructions to install updated versions of any software module.

### **Method of Measurement**

- E5.38 Supply and installation of prototype LED signs shall be measured on a per item basis as specified herein. The number of each item to be paid for will be the total number placed in accordance with this Specification and accepted by the Contract Administrator, as computed by the Contract Administrator.
- E5.39 Supply and installation of LED signs for on street testing shall be measured on a per item basis as specified herein. The number of each item to be paid for will be the total number placed in accordance with this Specification and accepted by the Contract Administrator, as computed by the Contract Administrator.
- E5.40 Supply and installation of LED signs shall be measured on a per item basis as specified herein. The number of each item to be paid for will be the total number placed in accordance with this Specification and accepted by the Contract Administrator, as computed by the Contract Administrator.
- E5.41 The one year service contract shall be measured on a lump sum basis. The lump sum to be paid will be for all Work as specified herein.

### **Basis of Payment**

- E5.42 Supply and installation of prototype LED signs will be paid for at the contract unit price for 'Supply and installation of prototype LED signs' measured and specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this specification.
- E5.43 Supply and installation of LED signs for on street testing will be paid for at the contract unit price for 'Supply and installation of LED signs for on street testing' measured and specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this specification.
- E5.44 Supply and installation of LED signs will be paid for at the contract unit price for 'Supply and installation of LED signs' measured and specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this specification.
- E5.45 The one year service contract will be paid for at the contract lump sum price for 'One year service contract' measured and specified herein, which price shall be payment in full for performing all operations herein described and all other items incidental to the Work included in this specification.