



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 586-2008

SUPPLY AND DELIVERY OF POLYCARBONATE TRAFFIC SIGNAL HEADS

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 SUPPLY AND DELIVERY OF POLYCARBONATE TRAFFIC SIGNAL HEADS

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, August 13, 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. ENQUIRIES

B3.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.

B3.2 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 promptly notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.

B3.3 If the Bidder is unsure of the meaning or intent of any provision therein, the Bidder should request clarification as to the meaning or intent prior to the Submission Deadline.

B3.4 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.

B3.5 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.

B3.6 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B3 unless that response or interpretation is provided by the Contract Administrator in writing.

B4. ADDENDA

B4.1 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.

B4.2 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.

B4.2.1 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>

B4.2.2 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.

B4.3 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.

B5. SUBSTITUTES

- B5.1 The Work is based on the materials, equipment, methods and products specified in the Bid Opportunity.
- B5.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.
- B5.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least seven (7) Business Days prior to the Submission Deadline.
- B5.4 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 material, equipment, method or product 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 Contract;
 - (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 Contract.
- B5.5 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.
- B5.6 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.
- B5.6.1 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.
- B5.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B5.8 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 B13.
- B5.9 No later claim by the Contractor for an addition to the price(s) because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

B6. BID SUBMISSION

- B6.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
 - (b) Form B: Prices.

- B6.2 Further to B6.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B5.
- B6.3 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.
- B6.4 The Bid Submission may be submitted by mail, courier or personal delivery, or by facsimile transmission.
- B6.5 If the Bid Submission is submitted by mail, courier or personal delivery, it shall be enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address, and shall be submitted to:
- The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1
- B6.5.1 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.
- B6.6 Bidders are advised not to include any information/literature except as requested in accordance with B6.1.
- B6.7 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.
- B6.8 If the Bid Submission is submitted by facsimile transmission, it shall be submitted to (204) 949-1178.
- B6.8.1 The Bidder is advised that the City cannot take responsibility for the availability of the facsimile machine at any time.
- B6.9 Bids submitted by internet electronic mail (e-mail) will not be accepted.
- B7. BID**
- B7.1 The Bidder shall complete Form A: Bid, making all required entries.
- B7.2 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.
- B7.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B7.2.
- B7.3 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.
- B7.4 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 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.

B7.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B7.5 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.

B8. PRICES

B8.1 The Bidder shall state a price in Canadian funds for each item of the Work identified on Form B: Prices.

B8.1.1 Prices on Form B: Prices shall include:

- (a) duty;
- (b) freight and cartage;
- (c) Provincial and Federal taxes [except the Goods and Services Tax (GST) and Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable] and all charges governmental or otherwise paid;
- (d) profit and all compensation which shall be due to the Contractor for the Work and all risks and contingencies connected therewith.

B8.1.2 Prices on Form B: Prices shall not include the Manitoba Association for Resource Recovery Corporation (MARRC) Environmental Handling Charge (EHC) which shall be extra where applicable.

B8.2 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.

B8.3 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.

B8.4 Prices from Non-Resident Bidders are subject to a Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B9. QUALIFICATION

B9.1 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, or if the Bidder does not carry on business in Manitoba, in the jurisdiction where the Bidder does carry on business; 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.

- B9.2 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> .
- B9.3 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;
 - (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba);
- B9.4 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.
- B9.5 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.

Representative Sample

- B9.6 The Bidder shall submit, within fifteen (15) Business Days of a request by the Contract Administrator, a sample for detailed inspection and approval.
- B9.7 Should the Bidder not submit a sample that meets the approval of the Contract Administrator, the bid may be determined to be non-responsive in accordance with B13.2.
- B9.8 The sample if required shall be fully assembled when sent to the Contract Administrator.
- B9.9 The Bidder shall be responsible for all freight costs associated with the delivery and return of samples.
- B9.10 The detailed inspection, testing and approval will be based upon meeting the requirements of the specifications in the Bid Opportunity document.
- B9.11 Upon completion of testing and inspection the Contract Administrator will communicate to the Bidder that the pre-production sample has been:
- (a) approved as submitted;
 - (b) approved subject to changes; or
 - (c) rejected and must be resubmitted.
- B9.12 Where the Contract Administrator has requested the sample be modified and re-submitted, in accordance with the specifications of the Bid Opportunity document, the Bidder shall:
- (a) re-submit the modified sample within five (5) Business Days unless otherwise directed by the Contract Administrator;
 - (b) notify the Contract Administrator, in writing, of any changes to the sample other than those requested;
- B9.13 be responsible for all freight costs associated with the delivery and return of samples.

B10. OPENING OF BIDS AND RELEASE OF INFORMATION

- B10.1 Bids will not be opened publicly.
- B10.2 Following the Submission Deadline, the names of the Bidders and their bid prices (unevaluated, and pending review and verification of conformance with requirements or evaluated prices) 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>
- B10.3 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>
- B10.4 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.

B11. IRREVOCABLE BID

- B11.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 9 of Form A: Bid.
- B11.2 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.

B12. WITHDRAWAL OF BIDS

- B12.1 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.
- B12.1.1 Notwithstanding C21, 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.
- B12.1.2 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.
- B12.1.3 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 10 of Form A: Bid; and
 - (c) if the notice has been given by any one of the persons specified in B12.1.3(b), declare the Bid withdrawn.
- B12.2 A Bidder who withdraws his Bid after the Submission Deadline but before his Bid has been released or has lapsed as provided for in B11.2 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.

B13. EVALUATION OF BIDS

- B13.1 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 B9 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B5.

B13.2 Further to B13.1(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 or minor informalities or irregularities if the interests of the City so require.

B13.3 Further to B13.1(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.

B13.4 Further to B13.1(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.

B13.4.1 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.

B13.4.2 Further to B13.1(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.

B13.5 This Contract will be awarded as a whole.

B14. AWARD OF CONTRACT

B14.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B14.2 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.

B14.2.1 Without limiting the generality of B14.2, 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.

B14.3 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 B13.

B14.3.1 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.

B14.4 Notwithstanding C4 and Paragraph 6, the City will issue a purchase order to the successful Bidder in lieu of the execution of a Contract.

B14.5 The Contract Documents, as defined in C1.1(n) (ii), in their entirety shall be deemed to be incorporated in and to form a part of the purchase order notwithstanding that they are not necessarily attached to or accompany said purchase order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for the Supply and Delivery of Goods* (Revision 2008 05 26) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for the Supply and Delivery of Goods* 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
- 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 Supply of Goods*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

D1.1 In addition to the *General Conditions for the Supply and Delivery of Goods*, 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 supply and delivery of polycarbonate traffic signal heads for the period of October 13, 2008 to October 31, 2009.

D2.2 The Work shall be done on an "as required" basis during the term of the Contract.

D2.2.1 The type and quantity of Work to be performed under this Contract shall be as authorized from time to time by the Contract Administrator and/or Users.

D2.2.2 Notwithstanding C7, the City shall have no obligation under the Contract to purchase any quantity of any item in excess of its actual operational requirements.

D2.3 Notwithstanding D2.1, in the event that operational changes result in substantial changes to the requirements for Work, the City reserves the right to alter the type or quantity of work performed under this Contract, or to terminate the Contract, upon thirty (30) Calendar Days written notice by the Contract Administrator. In such an event, no claim may be made for damages on the ground of loss of anticipated profit on Work.

D3. DEFINITIONS

D3.1 When used in this Bid Opportunity:

D3.2 AASHTO STANDARDS – means American Association of State Highways and Transportation Officials all traffic signal heads shall be designed in accordance with the latest revisions of the requirements of the AASHTO standard specifications for structural supports for highway signs, luminaries and traffic signals.

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Mr. Bill Woroby, P. Eng
Project Management Engineer
Public Works
106 – 1155 Pacific Avenue
Winnipeg, MB R3E 3P1

Telephone No.: (204) 794-4346
Facsimile No.: (204) 986-5302

D5. NOTICES

D5.1 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. INSPECTION OF MATERIAL

D6.1 Further to C.7, The City reserves the right to inspect and test all materials at its own expense and to reject any materials that are not in accordance with the requirements of the Specifications. The Contractor shall cooperate with the Contract Administrator in furnishing such specimens and samples of material as may be required for testing.

D7. RETURNED GOODS

D7.1 Further to C.7 and C.11, The Contract Administrator or his/her designate shall inform the Contractor of the item(s) being returned and the reason for the return. The Contractor shall provide the Contract Administrator with Return Material Authorization (RMA) including shipping instructions, within five (5) Calendar Days of the request.

D7.1.1 The Contractor shall be responsible for all transportation charges on returned goods and further to C.8 the goods will be held at the Contractor's risk pending instruction.

D7.2 Further to D7.1 (above) the RMA shall include the following information, as a minimum:

- (a) Company name, if different than Contractor, and ship to addresses;
- (b) Written authorization for the return and for a collect shipment;
- (c) Preference of carrier / shipping method, a contact person with either a local Winnipeg telephone number or a toll-free telephone number;
- (d) A contact person, responsible for the returned goods, with a toll-free telephone number.

D7.3 The Contract Administrator shall provide, as a minimum:

- (a) The City department returning the goods, including an address and contact information for pick up;
- (b) The City account number; if applicable;
- (c) The City of Winnipeg's Department and address;
- (d) Two (2) copies of the written authorization / RMA, one (1) copy on the outside and (1) one within the package;
- (e) Total number of packages, weight and dimensions.

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.

SCHEDULE OF WORK

D9. COMMENCEMENT

D9.1 The Contractor shall not commence any Work until he is in receipt of a notice of award from the City authorizing the commencement of the Work.

D9.2 The Contractor shall not commence any Work 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 C6.16.
- (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.

D10. DELIVERY

- D10.1 Goods shall be delivered on an "as required" basis during the term of the Contract, f.o.b. destination, freight prepaid, to various locations within the City.
- D10.1.1 Goods shall be delivered within twenty-five(25) Calendar Day(s) of the placing of an order, unless otherwise allowed by the User at the time of ordering.
- D10.2 Goods shall be delivered between 8:30 a.m. and 3:30 p.m. on Business Days.

D11. PACKING

- D11.1 Each assembled traffic signal head shall be packaged separately, in a manner suitable to protect the unit from damage.
- D11.2 Each package shall have the configuration of the Head clearly indicated.
- D11.3 Visors, if packaged separately, shall be protected from damaging each other in packaging and have the size, colour type and amount in package clearly indicated on the package.
- D11.4 Backboards shall be packaged in suitable quantities for handling manually and, if required by the paint manufacturer, separated with suitable packing material.

D12. ORDERS

- D12.1 The Contractor shall provide a local Winnipeg telephone number or a toll-free telephone number at which orders for delivery may be placed.

D13. RECORDS

- D13.1 The Contractor shall keep detailed records of the goods supplied under the Contract.
- D13.2 The Contractor shall record, as a minimum, for each item listed on Form B: Prices:
 - (a) user name(s) and addresses;
 - (b) order date(s);
 - (c) delivery date(s);
 - (d) description and quantity of goods supplied.
- D13.3 The Contractor shall provide the Contract Administrator with a copy of the usage records for the year within fifteen (15) Calendar Days of the end of that Contract.

MEASUREMENT AND PAYMENT

D14. INVOICES

- D14.1 Further to C10, the Contractor shall submit an invoice for each order delivered.
- D14.2 Further to C21.4, the Contractor shall submit invoices to the locations designated at the time of ordering.
- D14.3 Invoices must clearly indicate, as a minimum:

- (a) the City's order number;
- (b) date of delivery;
- (c) delivery address;
- (d) type and quantity of goods delivered;
- (e) the amount payable with GST and MRST shown as separate amounts; and
- (f) the Contractor's GST registration number.

D14.4 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D15. PAYMENT

D15.1 Further to C10, payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.

D15.2 Further to C10, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D16. WARRANTY

D16.1 Warranty is as stated in C11.

D16.2 The Manufacture shall warrant that all the LED units be guaranteed against failure of any component, and maintaining of ITE Lumen Output and Chromaticity, for five (5) years from date of acceptance by the City of Winnipeg.

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

E1.1 These Specifications shall apply to the Work.

E2. GOODS

E2.1 The Contractor shall supply and deliver polycarbonate traffic signal heads in accordance with the requirements hereinafter specified.

E2.2 The intent of this specification is to establish minimum acceptable electrical, mechanical, design and performance requirements, which Traffic Signal Heads complete with LED (Light Emitting Diode) indications, shall meet to ensure satisfactory and reliable operation. It is not intended to impose restrictions upon design or materials which conform to the latest ITE (Institute of Transportation Engineers) Technical Standard. All ITE standards per the most current ITE Specification at time of contract shall still apply. Where there is a variation between this specification and the latest ITE Standard, the provisions of this specification shall still apply. Manufacture of the polycarbonate Traffic Signal Heads must conform to the CSA (Canadian Standards Association).

E3. APPROVED PRODUCTS

E3.1 The following manufactured products are approved;

- (a) Siemens; and
- (b) Fortran Traffic Systems Ltd.

E3.2 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B5.

E4. TESTING

E4.1 The Bidder shall make arrangements with the Contract Administrator identified in D4.1 for the testing of their product if not listed in E3.1 after the closing date of the bid submission.

E4.2 The testing is to evaluate their product and may be conducted for a three to four (3 – 4) months period, to determine if the product meets the City of Winnipeg requirements.

E4.3 During the course of the Contract, the Contract Administrator will test alternative solution materials within certain areas of the City of Winnipeg. The Contract Administrator shall provide evidence, satisfactory to the Contractor.

E5. MATERIAL

E5.1 All Traffic Signal Heads shall be UV stabilized flame retardant polycarbonate in construction.

- (a) The visors shall be UV stabilized flame retardant polycarbonate;
- (b) the metallic component of traffic signal head section connecting brackets, visor mounting fasteners, backboard mounting fasteners, hinge pins, reflector pins, door securing bolts and wing-nut hardware shall be stainless steel;
- (c) pins used for the door hinge shall be of roll spring type, unless they are user replaceable;
- (d) stainless steel screws shall be provided for backboard attachment.

Note: The screw holes on the traffic signal heads shall be of sufficient depth to accept the screws and hold the backboard firmly in place. Screw head size must be large

enough such that the backboard withstands wind gust velocities up to and including 80 mph.

(e) backboards shall be UV stabilized flame retardant polycarbonate.

E5.2 All Traffic Signal module indications shall be LED type unless otherwise specified in the contract document.

E6. DESIGN STANDARDS

E6.1 Backboards:

- (a) The thickness of the backboards shall be 0.135 inch +0.02, - 0.00 inch;
- (b) if the backboard mounting screws secure to the hinge or door locking bolt shoulders, the shoulders must not break when the backboard screws are inserted and tightened;
- (c) "J" hook mounting of backboards is not acceptable, and heads that use this mounting system will be rejected;
- (d) all twelve (12") inch diameter vehicle signal heads, when equipped with a backboard, must fit a City of Winnipeg specified ten (10') foot high straight shaft pole, as described below, without deforming the backboard.

Note: City of Winnipeg Ten (10') Foot High Straight Shaft Poles:

- (i) ten (10') foot high straight poles shall consist of a straight shaft which tapers uniformly from the base plate to the nipple plate. **Overall height** of the pole from top surface of the nipple plate to the bottom of the base plate shall be **10 feet, + 1 inch**.
- (ii) The exterior dimensions of the ten (10') foot pole shaft walls measured "across the flats" shall be as follows:
 - a) exterior dimensions "across the flats" at **top** of the shaft (at nipple plate) shall be **4 3/4 inches +0, -1/8 inch**; and
 - b) exterior dimensions "across the flats" at **bottom** of the shaft (at base plate) shall be **7 inches +0, - 1/8 inch**.
- (iii) At the top of each ten (10') foot straight shaft pole shall be a nipple plate made of 1/2-inch steel plate. Centered within that plate shall be a 1-1/2 inch IPS non-tapered threaded nipple extending through and projecting 1-1/2 inch (+ 1/8, -0) above the nipple plate. The nipple shall be fastened to the plate with a circumferential weld on the **interior** side of the nipple plate. The nipple shall be aligned within one (1°) degree of the vertical centre line of the pole. The threads shall be continuous and uninterrupted from the top of the nipple to within a distance of 1/16-inch or less, from the top surface of the nipple plate. The nipple plate shall be level and smooth such that a traffic signal head will sit flat and true on the plate.
- (iv) The nipple plate shall be octagonal in shape to match the internal across flats dimension of the ten (10') foot pole shaft and shall be inserted partially into and welded circumferentially to the top of the pole shaft.
- (e) Backboards designed for plumbizer mounted signal heads shall be continuously adjustable so as to fit any plumbizer bracket ranging from one (1") inch thick to two (2") inches thick (thickness being defined as the separation distance required between the two (2) head sections to accommodate the plumbizer.

E6.2 Signal Heads:

- (a) Vehicle traffic signal heads shall be a **maximum** of fourteen (14") inches square, and must meet the current edition of the ITE specification.

E6.3 Visor Design:

- (a) All visors shall be of cut-away design;
- (b) Tunnel visors for signal heads are not part of this Contract.

E7. WIND LOAD

- E7.1 All traffic signal heads shall be designed to withstand gust wind velocities up to and including one hundred (100) miles per hr, equivalent to a wind pressure $P = 25.6 C_d C_h$ for a single point (top or bottom) head mounting.
- E7.2 All backboard mounting shall be designed to withstand gust wind velocities up to and including 80 miles per hr.

E8. COLOUR

- E8.1 The traffic signal heads shall be U.S.A. Standard colour Federal YELLOW as referenced in the ITE Specifications, or BLACK as required.
- E8.2 The backboards shall be U.S.A. Standard colour Federal YELLOW as referenced in the ITE Specifications, or BLACK as required.
- E8.3 All parts referenced in the ITE specification that must be FLAT BLACK must conform to the ITE requirements.

E9. ASSEMBLY

- E9.1 All burrs and sharp edges must be made smooth on traffic signal heads and backboards.
- E9.2 The traffic signals heads and backboards are to be degreased with a suitable solvent or steam cleaned before delivery.
- E9.3 All heads shall be assembled, excluding backboard, in the configuration specified in the order.
- E9.4 Visors may be packaged separately from the head assembly, if desired.
- E9.5 All sections shall be wired and ready for use.
- E9.6 The traffic signal heads shall have the wiring splitters mounted in the AMBER housing in an electrically secure manner. There shall be not less than 4 circuits on wiring splitters in the three (3) section heads and not less than six (6) circuits on wiring splitters in four (4) section heads.

E10. LIGHT EMITTING DIODE

- E10.1 All traffic signal indications shall be LED (Light Emitting Diode) type unless otherwise specified in the contract document. LED signal indications shall meet the most current ITE LED signal (or otherwise interim) specification. The supplier is required to provide manufacturers' literature and third party test results for any LED model not previously tested/accepted by the City of Winnipeg.
- E10.2 All shall meet the ITE specification for the colour of lens they are replacing.
- E10.3 LED units shall properly fit within all ITE conforming traffic signal heads for eight (8") inch or twelve (12") inch signal sections as per design.
- (a) All light emitting diodes units shall conform to the current ITE specification for LED signals for Lumen Output and Chromaticity;
 - (b) units shall have a diode string failure rate of no more that 1 for 4, that is, for any individual diode failure no more that four (4) diodes may be out unless the ITE specification for LED signals specifies a lower amount;
 - (c) design of symbols shall conform to ITE standards for circular (Red/Amber/Green), Arrows, bus priority;
 - (d) all arrow LED units shall conform to the Manual of Uniform Traffic Control Devices Canadian Standard with respect to configuration and dimensions for arrow indications;

- (e) units shall operate from 90 to 135 volts RMS 60 Hz. alternating and from minus forty (40°) to plus one hundred and sixty-five (165°) degrees Fahrenheit and from zero (0) to one hundred (100%) percent humidity;
- (f) units shall have a sharp voltage turn-off characteristic, decaying to less than fifteen (15) volts A.C. RMS within two hundred (200) milliseconds of removal of power, over the full 90 to 135 VAC specified operating voltage range, so as to not to cause false triggering of a signal Conflict Monitor device due to extended turn-off voltage decay;
- (g) units shall not show any visible light when in the OFF condition when attached to a Model 200 switch pack as used in the 170 type controller 33X control cabinet, (Evaluation of this requirement shall be undertaken in total darkness);
- (h) each UNIT shall be identified with manufacture's name, wattage, voltage range, date of manufacture and serial number, if used. Also must come with sticker stating 'This unit complies with the most current ITE VTCSH Specification';
- (i) all circuit boards, including the LED mounting circuit board shall be conformal coated.