



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 900-2011

**SUPPLY AND DELIVERY OF GATE VALVES, FITTINGS AND FLOWMETERS FOR
THE MONTCALM WASTEWATER PUMPING STATION**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 SUPPLY AND DELIVERY OF GATE VALVES, FITTINGS AND FLOWMETERS FOR THE MONTCALM WASTEWATER PUMPING STATION

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, November 3, 2011.

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 website at <http://www.winnipeg.ca/matmgt/bidopp.asp>

B4.2.2 The Bidder is responsible for ensuring that he has received all addenda and is advised to check the Materials Management Division website 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.
- B5.10 Notwithstanding B5.2 to B5.9, and in accordance with B6.7, deviations inconsistent with the Bid Opportunity document shall be evaluated in accordance with B13.1(a).

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 in ink, 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, will be evaluated in accordance with B13.1(a).
- 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;
 - (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.
- B7.4.2 All signatures shall be original.
- 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.

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 website 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; and
 - (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.

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 website 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 website 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, or acceptable deviation therefrom (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 of Form A: Bid, 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 of Goods* (Revision 2008 05 26) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for the Supply of Goods* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website 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 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 the supply and delivery of cast iron gate valves, fittings and magnetic flowmeter flowtubes complete with transmitters for installation by others at a later date..

D3. DEFINITIONS

D3.1 Notwithstanding C1.1, when used in this Bid Opportunity:

- (a) "**ANSI**" means American National Standards Institute;
- (b) "**ASME**" means American Society of Mechanical Engineers;
- (c) "**ASTM**" means American Society for Testing and Materials;
- (d) "**AWWA**" means American Waterworks Association.
- (e) "**NEMA**" means National Electrical Manufacturers Association

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Doug Berg, C.E.T.
Project Coordinator
110-1199 Pacific Avenue
Winnipeg, MB, R3E 3S8
Telephone No.: (204) 986-4452
Facsimile No.: (204) 986-5345

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 facsimile number:

The City of Winnipeg
Chief Financial Officer
Facsimile No.: (204) 949-1174

SUBMISSIONS

D6. AUTHORITY TO CARRY ON BUSINESS

D6.1 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.

D7. MATERIAL SAFETY DATA SHEETS

- D7.1 The Contractor shall provide the Contract Administrator with one (1) copy of Material Safety Data Sheets (MSDS's) for each product to be supplied under the Contract at least two (2) Business Days prior to the commencement of Work but in no event later than seven (7) Calendar Days from notification of the award of Contract.
- D7.2 Throughout the term of the Contract, the Contractor shall provide the Contract Administrator with revisions or updates of the MSDS's as soon as may be reasonably possible.

SCHEDULE OF WORK

D8. COMMENCEMENT

- D8.1 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.
- D8.2 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 D6;
 - (ii) evidence of the workers compensation coverage specified in C6.16;
 - (iii) the Material Safety Data Sheets specified in D7;
 - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.

D9. DELIVERY

- D9.1 Items 1 – 4 shall be delivered by January 16, 2012, with the exception of the Flowmeters identified as item 5 in Form B: Prices which shall be delivered by February 8, 2012.
- D9.2 All Goods shall be delivered, f.o.b. destination, freight prepaid to:
Mr. Terry Wazny
Supervisor of Regional Wastewater Services
360 McPhillips Street,
Winnipeg , MB, R3E 2L1
- D9.3 The Contractor shall confirm each delivery with the Contract Administrator or his/her designate, at least two (2) Business Days before delivery.
- D9.4 Goods shall be delivered between 9:00 a.m. and 3:00 p.m. on Business Days.
- D9.5 The Contractor shall off-load goods as directed at the delivery location.

D10. LIQUIDATED DAMAGES

- D10.1 If the Contractor fails to achieve delivery of the goods within the time specified in D9.1 Delivery the Contractor shall pay the City one thousand dollars (\$1000.00) per Calendar Day for each and every Calendar Day until the goods have been delivered.
- D10.2 The amount specified for liquidated damages in D10.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Delivery by the day fixed herein for same.
- D10.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

MEASUREMENT AND PAYMENT

D11. INVOICES

D11.1 Further to C10, the Contractor shall submit an invoice for each order delivered to:

The City of Winnipeg
Corporate Finance - Accounts Payable
4th Floor, Administration Building, 510 Main Street
Winnipeg MB R3B 1B9

Facsimile No.: (204) 949-0864
Email: CityWpgAP@winnipeg.ca

D11.2 Invoices must clearly indicate, as a minimum:

- (a) the City's purchase 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.

D11.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D11.4 Bids Submissions must be submitted to the address in B6.5.

D12. PAYMENT

D12.1 Further to C10, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

D13. PAYMENT SCHEDULE

D13.1 Further to C10, payment for items 1 – 4, and item 6 (as requested) in Form B: Prices shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.

D13.2 Further to C10, payment for item 5 Form B: Prices shall be in accordance with the following payment schedule:

- (a) Seventy-five (75) percent upon delivery to the location identified in D9.1.
- (b) Twenty (20) percent upon successful installation (by others) and commissioning of the flow meters.
- (c) Five (5) percent upon delivery and acceptance of Operation and maintenance manuals.

WARRANTY

D14. WARRANTY

D14.1 Further to C11, if a defect or deficiency prevents the full and normal use or operation of the Work or any portion thereof, for purposes of calculating the warranty period, time shall be deemed to cease to elapse for the defective or deficient portion, and for any portion of the Work whose use or operation is prevented by such defect or deficiency, as of the date on which the defect or deficiency is observed or the use or operation is prevented and shall begin to run again when the defect or deficiency has been corrected or the Work may be used or operated to the satisfaction of the Contract Administrator.

D14.2 Notwithstanding C11.2, the warranty period for each item of Work supplied shall begin on the date of successful installation and expire one (1) year thereafter unless extended pursuant to C11.3, in which case it shall expire when provided for thereunder.

PART E - SPECIFICATIONS

E1. GENERAL

E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B5.

E2. GOODS

E2.1 The Contractor shall supply and deliver the following equipment in accordance with the requirements hereinafter specified.

E2.1.1 Item No. 1. – Three (3) 600 mm dia. Gate Valves with non-rising stems and complete with pedestal mounted manual operators as specified in E5.

E2.1.2 Item No. 2. – Two (2) 600 mm dia. Gate Valves with outside rising stems, screws, yokes and complete with handwheels as specified in E5.

E2.1.3 Item No. 3. – Two (2) Flanged 600mm X 600mm X 200mm Tees as specified in E6.

E2.1.4 Item No. 4. – Three (3) 600mm Diameter Uni-Flanges or Adaptor Flanges as specified in E6.

E2.1.5 Item No. 5. – Two (2) 600 mm dia. Magnetic Flow Meters, complete with transmitters, shall be as specified in E7.

E2.2 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.

E2.2.1 *The City of Winnipeg Standard Construction Specifications* is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Spec/Default.stm>

E2.2.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.

E2.2.3 Further to C2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.

E3. EXPEDITED SHOP DRAWINGS

E3.1 Further to E4, in order to expedite Shop Drawings with critical timeliness, the Lowest Responsive Bidder, as outlined in B13, will be permitted, after receiving written approval from the Contract Administrator, to arrange for the preparation of Shop Drawings for the following items with critical timelines:

- (a) Gate Valves as indicated in E5.
- (b) Fittings as indicated in E6.
- (c) Magnetic Flow Meters as indicated in E7.

E3.2 If Award is made to the Lowest Responsive, then as indicated in E4.1(a)(iii), no payment for the preparation of Shop Drawings will be made.

E3.3 If no contract is awarded, then the City of Winnipeg will pay the requested Bidder up to a maximum of five hundred dollars (\$500.00) for each of the requested submissions noted above, for the preparation and delivery of Shop Drawings. Delivery of the Shop Drawings to the City and payment of the above amounts will constitute full and final consideration of each party to the other, and neither party will have any further liability to the other with respect to this Bid Opportunity.

E4. SHOP DRAWINGS

E4.1 Description

- (a) This Specification shall revise, amend and supplement the requirements of CW 1100 of the City of Winnipeg's Standard Construction Specifications.
 - (i) The term 'shop drawings' means drawings, diagrams, illustrations, schedules, performance charts, brochures, and other data, which are to be provided by the Contractor to illustrate details of a portion of the Work.
 - (ii) The Contractor shall submit specified shop drawings to the Contract Administrator for review. All submissions must be in metric units. Where data is in imperial units, the correct metric equivalent shall also be show on all submissions for Engineering review.
 - (iii) Provision of Shop Drawings will be considered incidental to the price for supply and delivery of equipment and materials.
- (b) Shop Drawings
 - (i) Original drawings are to be prepared by the Contractor, Subcontractor, Supplier, Distributor, or Manufacturer, which illustrate appropriate portion of Work; showing fabrication, layout, setting or erection details as specified in appropriate sections.
- (c) Contractor's Responsibilities
 - (i) Review shop drawings, product data and samples prior to submission and stamp and sign drawings indicating conformance to the Contract requirements.
 - (ii) Verify:
 - (a) Field measurements
 - (b) Field construction criteria
 - (c) Catalogue numbers and similar data
 - (iii) Coordinate each submission with requirements of Work and Contract Documents. Shop drawings of separate components of a larger system will not be reviewed until all related drawings are available.
 - (iv) Notify Contract Administrator, in writing at time of submission, of deviations from requirements of Contract Documents.
 - (v) Responsibility for deviations in submission from requirements of Contract Documents is not relieved by Contract Administrator's review of submission, unless Contract Administrator gives written acceptance of specified deviations.
 - (vi) Responsibility for errors and omissions in submission is not relieved by Contract Administrator's review of submittals.
 - (vii) The Contractor shall make any corrections required by the Contract Administrator and shall resubmit the required number of corrected copies of Shop Drawings. The Contractor shall direct specific attention in writing or on resubmitted Shop Drawings to revisions other than the corrections requested by the Contract Administrator on previous submission.
 - (viii) After Contract Administrator's review and return of copies, distribute copies to sub-trades as appropriate.
 - (ix) Maintain one (1) complete set of reviewed shop drawings, filed by Specification Section Number, at the Site for use and reference of the Contract Administrator and Subcontractors.
- (d) Submission Requirements
 - (i) Schedule submissions at least fourteen (14) Calendar days before dates reviewed submissions will be needed, and allow for a (14) Calendar day period for review by the Contract Administrator of each individual submission and re-submission, unless noted otherwise in the Contract Documents.
 - (ii) Submit five (5) paper prints of shop drawings. The Contractor is advised that the Contract Administrator will retain three (3) copies of all submittals and return two (2) copies to the Contractor.
 - (iii) Accompany submissions with transmittal letter, containing:
 - (a) Date
 - (b) Project title and Bid Opportunity number
 - (c) Contractor's name and address

- (d) Number of each shop drawing, product data and sample submitted
 - (e) Specification Section, Title, Number and Clause
 - (f) Drawing Number and Detail/Section Number
 - (g) Other pertinent data
 - (iv) Submissions shall include:
 - (a) Date and revision dates.
 - (b) Project title and Bid Opportunity number.
 - (c) Name of:
 - ◆ Contractor
 - ◆ Subcontractor
 - ◆ Supplier
 - ◆ Manufacturer
 - ◆ Separate detailer when pertinent
 - (d) Identification of product of material.
 - (e) Relation to adjacent structure or materials.
 - (f) Field dimensions, clearly identified as such.
 - (g) Specification section name, number and clause number or drawing number and detail/section number.
 - (h) Applicable standards, such as CSA or CGSB numbers.
 - (i) Contractor's stamp, initialled or signed, certifying review of submission, verification of field measurements and compliance with Contract Documents.
 - (e) Other Considerations
 - (i) Fabrication, erection, installation or commissioning may require modifications to equipment or systems to conform to the design intent. Revise pertinent shop drawings and resubmit.
 - (ii) Material and equipment delivered to the Site will not be paid for until pertinent shop drawings have been submitted and reviewed.
 - (iii) Incomplete shop drawing information will be considered as stipulated deductions for the purposes of progress payment certificates.
 - (iv) No delay or cost claims will be allowed that arise because of delays in submissions, re-submissions and review of shop drawings.
- E4.1.1 Preparation and submittal of Shop Drawings will be included in the Contract Work and no additional payment will be made for such work.

E5. GATE VALVES

- E5.1 Cast iron body with flanged ends; bronze trimmed cast iron wedge; bronze stem, double O-ring stem seals and fifty (50) millimetre square operating nut.
- E5.1.1 Three (3) gate valves shall be equipped with no-rising stems and shall be complete with manual pedestal operators.
- (a) These gate valves with non-rising stems will be installed by others inside the Montcalm Wastewater Pumping Station on the pump room floor which has an approx. floor to ceiling height of 2.16 meters (7.08 feet). The centerline of the of the forcemain pipes which these valves are to be connected to are approx. 762 mm (2.5 feet) above the floor elevation.
 - (b) The gate valve stems will pass through an intermediate floor above with a thickness of 305 mm (1 foot) into the area of the Station known as the motor room floor and the pedestal mounted operators will be installed on this elevation.
 - (c) The pedestal mounted gate valve operators shall meet the following criteria:
 - (i) Body shall be ductile iron or steel with epoxy coating.
 - (ii) Gate valve operators shall have an indicator gauge with a travelling pointer to show if valve is open, closed or a position in between.

- (iii) Bushings to be bronze and all bolting hardware to be Type 304 stainless steel.
- (iv) Contractor to be responsible for confirming all field measurements prior to manufacture to ensure proper function and fit for the pedestal mounted operators.

E5.1.2 Two (2) gate valves shall be equipped with outside rising stems, screws and yokes and complete with handwheels

- (a) The handwheels shall be a minimum 450 mm (18") in diameter.

E5.2 Flanges shall conform in dimension and drilling to ANSI/ASME B16.1, Class 125.

E5.3 Direction of opening shall be counter clockwise and shall be clearly stamped or indicated with raised letters and arrow.

E5.4 Manufacturer's nameplate shall be attached to the valve body with stainless steel fasteners.

E5.5 Gate valves shall be as manufactured by Clow Canada, Crane, Mueller Canada or approved equal.

E5.6 Knife gate valves are not acceptable.

E5.7 Submit shop drawings of gate valves in accordance with E4 of this specification.

E6. FLANGED FITTINGS

E6.1 Cast Iron fittings shall conform to AWWA C110.

E6.2 Fabricated fittings shall conform to ASTM A53 carbon steel grade B, Schedule 800 wall thickness.

E6.3 Flanges bolt holes shall be drilled in accordance with AWWA C115 or ASME B16.1

E6.4 Steel fittings shall be ASTM A234 grade B carbon steel, Schedule 80 wall thickness. Dimensions shall be to ANSI B16.9.

E6.5 All welded steel flanges shall be in conformance with AWWA C207, Class B.

E6.6 Adaptor flanges: Ductile Iron, Grade 65-45-12, conforming to the current ASTM Standard A536 for Ductile Iron Castings. Bolt holes shall be drilled in accordance with AWWA C115 or ASME B16.1.

E6.7 Clamping screws on adaptor flanges shall be zinc-plated, heat treated steel with a minimum tensile strength of 28 Mpa.

E6.8 Submit shop drawings in accordance with E4 of this specification.

E7. MAGNETIC FLOW METERS

E7.1 Supply and deliver two (2) magnetic flow meters, each consisting of a separate flow tube and remote transmitter, complete with cabling, which meets the following specifications:

(a) Service:

- (i) Fluid: Wastewater
- (ii) Fluid Temperature: -10°C to 50°C
- (iii) Ambient Temperature (flowtube): -30°C to 50°C
- (iv) Ambient Temperature (transmitter): 0°C to 40°C
- (v) Pressure: 0 to 100 kPa

(b) Accuracy:

- (i) 0.5% of rate ± 1.0 mm/sec from 0.01 to 2 m/s

- (ii) 0.5% of rate ± 1.5 mm/sec. above 2 m/s
 - (iii) Specified accuracy to include flow rate the combined effects of linearity, hysteresis, repeatability, and calibration uncertainty.
 - (iv) The electronics must be temperature compensated to maintain system accuracy of 0.5% or better across the stated temperature range.
- (c) Flow tube Requirements:
- (i) Size: 600mm
 - (ii) Flange Material: Carbon Steel
 - (iii) Flange Type: Class 150
 - (iv) Junction Box Enclosure: NEMA 4X
 - (v) Design: flanged and all welded flanged flow tube bodies must be a fully welded steel design, and must not rely on gaskets to fully protect the coils and electrode wiring
 - (vi) Electrodes: 316L Stainless Steel or Tantalum
 - (vii) Electrode Housing: Sealed, welded housing
 - (viii) Lining: Neoprene or Teflon
 - (ix) Grounding: Grounding Rings (to be included)
 - (x) Hazardous Area Approvals: Class I, Zone 2
 - (xi) Approvals: CSA or equivalent
 - (xii) The transition between the flow tube and the junction box must be potted to prevent process fluids from reaching the electronics or conduit in the event of a lining or electrode failure.
 - (xiii) The field termination and electronics must be in separate, fully isolated compartments to prevent moisture or contamination to enter these compartments.
 - (xiv) All flow tubes must be hydrostatically tested to 1.5 times their rated pressure.
 - (xv) Provide epoxy paint coating for the entire flowtube.
- (d) Transmitter Requirements:
- (i) Mounting: Wall (remote from flow tube)
 - (ii) Local Display: LCD, capable of indicating flow rates, flow totalizer, etc., and display 2 lines of a minimum of 20 characters.
 - (iii) Local Control: Keypad
 - (iv) Programming and configuration:
 - (i) Fully configurable via transmitter keypad
 - (ii) Configurable via HART field communicator on 4 to 20mA output loop
 - (v) Units of Operation:
 - (i) Flow Rate: l/s
 - (ii) Flow Totalizer: m³
 - (vi) Power Supply: 120 VAC
 - (vii) Output:
 - (i) 4 to 20mA (with HART protocol) for flow rate
 - (ii) Pulse output for flow totalization (24VDC), independently scalable
 - (viii) Enclosure: NEMA 4X rated
 - (ix) Approvals: CSA or equivalent
 - (x) Contain non-volatile memory for all data, including the totalizer.
- (e) Cable Requirements (between flow tube and transmitter):
- (i) The remote mounted transmitter shall utilize readily available Beldon cables between the flow tube and the transmitter.
 - (ii) Installation: Conduit
 - (iii) Purpose: Signal and coil drive (between flow tube and transmitter)

- (iv) Size: As per manufacturer's recommendations for the length specified.
- (v) Ratings: Wet and dry, Class I Zone 2 (in conduit)
- (vi) Length: 50 meters (per flow meter)
- (vii) Supply of cables to be provided with the flow meters.

E7.2 Acceptable Products

- (a) Rosemount 8705 flow tube with Rosemount 8712E transmitter
- (b) Endress & Hauser Promag 50W with remote transmitter
- (c) Krohne OPTIFLUX 2000 with IFC 100 remote transmitter
- (d) Or approved equal in accordance with B5.

E7.2.1 Submit shop drawings of gate valves in accordance with E4 of this specification.

E7.3 Inspection of Installation of Equipment

E7.3.1 General

- (a) The equipment will be installed by the Installation Contractor forces at a later date (Spring, 2012) and the supply Contractor (the Contractor) will be required to provide a qualified technical representative to :
 - (i) Provide training for the installation of the equipment,
 - (ii) Inspect the installation of the equipment,
 - (iii) Be present during the field testing of the equipment,
 - (iv) Provide training to City personnel in the operation and maintenance of the equipment, and
 - (v) Supervise commissioning.
- (b) The Contractor shall attend a turn over inspection with the Contract Administrator and the Installation Contractor, at which time the care and control of the equipment will be assumed by the Installation Contractor.
- (c) Unless otherwise specifically stated in the Specifications, the Contractor shall provide, and shall allow for in his Bid, a factory-trained representative who, in conjunction with the Contract Administrator, shall give instructions regarding the installation of the equipment.
- (d) The Contractor's factory-trained representative shall visit the site as required to ensure that the installation work is being performed in a proper and workmanlike manner. The Contractor shall allow for a minimum of one (1) full working day.
- (e) The Contractor's representative shall be present to supervise the commissioning, initial operation, and functional testing of the equipment. The scheduling of the Contractor's factory-trained representative's visits to the site shall be to the mutual satisfaction of the Contractor and the Installation Contractor, and shall be agreed upon before the work of installing the equipment begins. The Contractor shall allow for a minimum of one (1) full working day for commissioning, testing, and training services.
- (f) If the Contractor is requested by the Installation Contractor or the Contract Administrator to send a representative to the jobsite to investigate or rectify a suspected fault in the equipment furnished by the Contractor but it is found that the said equipment or Contractor is not at fault, the Contractor shall be entitled to be reimbursed for all reasonable costs and expenses incurred by him in sending his representative to the jobsite, at the per diem rate listed in item C 2. of Form B Prices.
- (g) Operating equipment and systems shall be performance tested by the Contractor in the presence of the Contract Administrator to demonstrate compliance with the specified operating requirements. Functional testing shall be conducted under the specified design operating conditions or under such simulated operating conditions as recommended or approved by the Contract Administrator.

- (h) The Contractor shall provide training to City staff in accordance with Clause E7.5.
- (i) Immediately following the Training, the City reserves the right to operate this equipment to suit system requirements.

E7.4 Operation and Maintenance Manuals

- E7.4.1 The Contractor shall provide five (5) sets of Operation and Maintenance Manuals to the Contract Administrator for review. The Contractor shall provide these manuals ten (10) Calendar Days in advance before commencement of equipment startup and commissioning. Provision of Operation and Maintenance Manuals shall be considered incidental to the price paid for supply of equipment.
- E7.4.2 All instructions in these manuals shall be in the English language to guide the City in the proper operation and maintenance of the equipment.
- E7.4.3 Bind contents in a three (3)-"D-Ring", hard-covered, plastic-jacketed binder with full cover and spine insert. Organize contents into applicable sections of work, parallel to Specifications breakdown.
- E7.4.4 Provide all required data in electronic format. Text documents shall be Microsoft Word or Adobe format. Drawings, scanned documents, parts lists, test forms shall be in Adobe format. If possible, documents shall be an original electronic format. Documents that require scanning shall be high quality scans and fully legible. Documents shall be submitted on a high quality compact disk. Compact disk and case shall be labelled in type, with the following:
 - (a) Bid opportunity number,
 - (b) Job Title, and
 - (c) Description of Equipment.
- E7.4.5 In addition to information called for in the Specifications, the following shall be included:
 - (a) Title sheet, labelled "Operation and Maintenance Instructions", containing project name and date;
 - (b) List of contents;
 - (c) Reviewed shop drawings of all equipment;
 - (d) Certified factory test results;
 - (e) Full description of entire mechanical system, operation, and control. Provide "as programmed" parameter list for each electric valve actuator;
 - (f) Names, addresses, and telephone numbers of all major sub-contractors and suppliers;
 - (g) Detailed specification and operating and maintenance instructions for all items of equipment provided including a preventative maintenance program;
 - (h) An itemized list of spare parts recommended for five years of service, particularly those components where failure of which will render the equipment supplied inoperative. Any special tools or other ancillary items necessary for commissioning and/or proper operation and maintenance shall also be listed. These prices shall be available to the City at any time prior to the issuance of the Certificate of Acceptance;
 - (i) Part books that illustrate and list all assemblies, sub-assemblies, and components.
 - (j) Routine test procedures for all electronic and electrical circuits;
 - (k) Troubleshooting chart covering the complete controls/electrical power systems, showing description of trouble, probable cause, and suggested remedy;
- E7.4.6 The Contractor shall modify and supplement the manual as required by the Contract Administrator. When accepted, five (5) additional copies, including electronic versions, shall be provided by the Contractor for distribution purposes. The City's staff shall be in

receipt of these manuals prior to the date set out installation and commissioning of the equipment.

E7.5 Training

- E7.5.1 The Contractor shall include costs for providing training to City staff by a factory-trained representative on the operation and maintenance of the equipment.
- E7.5.2 Training for the equipment shall be conducted on site, in conjunction with commissioning. The Contractor shall provide a qualified instructor as well as the necessary course materials.
- E7.5.3 Training shall be provided in one (1) session for operation and maintenance staff. And one (1) session for Electrical and Instrumentation staff.
- E7.5.4 Training shall be completed in conjunction with commissioning of the equipment. The Contract shall not be considered complete until the training has been provided.