



THE CITY OF WINNIPEG

BID OPPORTUNITY

BID OPPORTUNITY NO. 415-2010

**SUPPLY AND INSTALLATION OF AN AUTOMATED ANALYZER FOR
BIOCHEMICAL OXYGEN DEMAND/DISSOLVED OXYGEN**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 SUPPLY AND INSTALLATION OF AN AUTOMATED ANALYZER FOR BIOCHEMICAL OXYGEN DEMAND/DISSOLVED OXYGEN

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, September 30, 2010.

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 The price 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.

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.

B9.6 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.

B9.7 The Bidder shall be responsible for all freight costs associated with the delivery and return of equipment.

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 supply and installation of an Automated Analyzer for Biochemical Oxygen Demand / Dissolved Oxygen. The major components of the Work are as follows:

- (a) Supply and installation of the equipment
- (b) Supply and installation of a computer and all required software;
- (c) Run/analyze real samples and standards for method performance evaluation;
- (d) In-house training of analysts using and familiar with BOD/Dissolved Oxygen analyzers and method.

D3. DEFINITIONS

D3.1 When used in this Bid Opportunity:

- (a) "**mg/L**" means milligrams per litre;
- (b) "**Method**" means a recognized and published method based on Standard Methods for The Determination of Water and Wastewater or an EPA method;
- (c) "**MDL**" means Minimum Detectable Limits;
- (d) "**BOD**" means biochemical oxygen demand. The oxygen demand measured is the sum of carbonaceous and nitrogenous demands;
- (e) "**Seed**" means a population of microorganisms capable of oxidizing the biodegradable organic matter in a sample. Un-disinfected effluents from biological waste treatment plants contain satisfactory microbial populations;
- (f) "**Dilution**" means reducing the concentration of an analyte using deionized water or a solvent;
- (g) "**DO**" means the amount of dissolved oxygen in a sample;
- (h) "**LDO**" means luminescent dissolved oxygen;
- (i) "**CBOD**" means carbonaceous biochemical oxygen demand. If an inhibiting chemical is used, the results are due to carbonaceous demand;
- (j) "**LIMS**" means Laboratory Information Management System (database);
- (k) "**QA**" means Quality Assurance;
- (l) "**QC**" means Quality Control;
- (m) "**GGA**" means Glucose Glutamic Acid, a standard solution used to assess the effectiveness of a seed in the BOD test;
- (n) "**EPA**" means United States Environmental Protection Agency;
- (o) "**GLP**" means good laboratory practices, which refers to a system of management controls for laboratories to ensure the consistency and reliability of results.

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Steve Fletcher
Water and Waste Department
2230 Main Street
Winnipeg MB R2V 4T8
Telephone No.: (204) 986-4752
Facsimile No.: (204) 986-4809

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. INSURANCE

D7.1 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; such liability policy to also contain a cross-liability clause, non-owned automobile liability and products and completed operations cover, to remain in place at all times during the performance of the Work;
- (b) if required, 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), to remain in place at all times during the performance of the Work.

D7.2 Deductibles shall be borne by the Contractor.

D7.3 The Contractor shall provide the Contract Administrator 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 for the return of the executed Contract.

D7.4 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

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.

D9. DELIVERY

D9.1 Goods shall be delivered within sixty(60) Calendar Day(s) of the award of contract, f.o.b. destination, freight prepaid to:

Steve Fletcher
Water and Waste Department
2230 Main Street
Winnipeg MB R2V 4T8

MEASUREMENT AND PAYMENT

D10. INVOICES

D10.1 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

D10.2 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.

D10.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D10.4 Bids Submissions must be submitted to the address in B6.5.

D11. EMPLOYEE BEHAVIOUR AND SUPERVISION

D11.1 The Contractor shall provide adequate supervision and ensure that its employee(s) conduct themselves in a manner appropriate to people and shall without limitation ensure that its employee(s):

- (a) behave in a courteous and polite manner (no profanity or excess noise) to City staff and other personnel;
- (b) do not smoke within a City facility;
- (c) obey all posted safety rules;
- (d) leave all furnishings, equipment etc. moved during the inspection and testing, in an "as found" condition at the completion of the work;
- (e) use their own radio(s) or telephones or cellular telephones necessary for on site communication; and
- (f) when employee(s) are in the facility, that it is kept secure from entry by unauthorized persons,

D11.2 The Contractor and its employee(s) are prohibited from entering the premises of any location other than to perform the work of this Contract unless accompanied by City staff. The Contractor or its personnel will not be allowed to operate equipment other than described

herein. No one other than the Contractor and its employee(s) shall be allowed on the City of Winnipeg owned property.

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 shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.

D14. WARRANTY

D14.1 Warranty is as stated in C11.

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

D14.3 Further to C.11.4, 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.

D14.4 Notwithstanding C.11.3, if any law of Manitoba or of the jurisdiction in which the Work was manufactured requires, or if the manufacturer provides, a longer warranty period or a warranty which is more extensive in its nature, then the provisions of such law or manufacturer's warranty shall apply.

D14.5 For the purpose of warranty repairs, the Bidder shall have an authorized service facility located within Canada. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the type equipment being offered. Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request by the Contract Administrator.

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

- E1.1 These Specifications shall apply to the Work.
- E1.2 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B5.

E2. GOODS

- E2.1 The Contractor shall supply and install an Automated Analyzer System for Biochemical Oxygen Demand/Dissolved Oxygen in accordance with the requirements hereinafter specified. The instrument is of compact and modern design consisting of an automated sampler, BOD oxygen measure probe, racks, caps, pumps for the addition of dilution water, seed and nutrients; a desktop computer, and instrument software for remote operation. The instrument shall be supplied with all communication and power cables, which interfaces with the desktop computer and software. The instrument and the analytical methods shall be based on Standard Methods for the Examination of Water and Wastewater 5210 B. 5-Day BOD Test.
- E2.2 Item No. 1 – Automatic Sampler shall be
- (a) Configured to handle and work with 60 mL Wheaton BOD bottles; Compatible with a YSI 5100 Dissolved Oxygen Meter; Configured to handle and operate the YSI 5010 Self Stirring BOD Probe; Equipped with an automatic capping and uncapping of 60 mL (with option for using 300 mL) Wheaton BOD bottles using custom stoppers;
 - (e) Capable of mixing or homogenizing samples independently and in conjunction with measurement of the dissolved oxygen;
 - (f) Equipped with a built-in removable sample rack/tray each holding a minimum of eighteen (18) samples per rack
 - (g) Supplied with the necessary set of communication cables;
 - (h) Supplied with reagent tubing, needles or syringes used to dispense chemicals and reagents;
 - (i) Supplied with a water overflow tray located beneath the sample rack;
 - (j) Operated and controlled remotely by the instrument software, with the ability to pause, restart from any sample point or add samples to the run;
 - (k) Capable of rinsing probe and stirrer between each sample or reading;
 - (l) Constructed as “xyz” design with a physical dimension not exceeding twenty-eight (28”) inch x thirty-three (33”) inch x fifty-seven (57”) inch’s (H x D x W).;
 - (m) Capable of adding / upgrading to multi-parameter analysis such as pH, turbidity, etc.;
 - (n) CSA (Canadian Standard Association) certified; acceptable prior to shipping
 - (o) Equipped with a power supply of 120V, 50/60 Hz.
 - (p) Supplied with a documented method specific to this equipment for the determination of DO and BOD in water and waste water compliant with “Standard Methods for the Examination of Water and Wastewater 5210 B. 5-Day BOD Test”. This method will include the preparation of all reagents, sample preparation, instrument set-up conditions, maintenance, and method performance data such as precision, accuracy, range, and reproducibility/repeatability
 - (q) Supplied with instruction manual that includes a routine maintenance schedule

E2.3 Item No. 2 – Desktop Computer shall be;

- (a) Windows XP (2000, Vista ready) software compliant;
- (b) Capable of communicating with the instrument software;
- (c) Include a 21" LCD wide screen monitor;
- (d) RS232 Interface board and cable;
- (e) Include a minimum of two (2) USB ports;
- (f) Include a network card;
- (g) Supplied with all power and communication cables;
- (h) CSA (Canadian Standard Association) certified; acceptable prior to shipping;
- (i) Equipped with a power supply of 120V, 50/60 Hz.

E2.4 Item No. 3 – Instrument Software shall be

- (a) Compatible with Windows XP, 2000, Vista Programmed to operate with YSI (Yellow Springs International) Model 5100 Dissolved Oxygen Meter; Issued and licensed and to the buyer; Capable of performing calculations compliant with Standard Methods for the Examination of Water and Wastewater or customized methods including blank correction, seed factor correction, seed dilution correction, sample dilution correction and depletion;
- (e) Capable of reprogramming the sequence and timing of events and procedures;
- (f) Capable of creating, storing, and loading user defined work list templates (or sample groups), with pre-defined sample dilutions, allowing for quick setup of samples in routine operation;
- (g) Capable of direct data transfer, importing/exporting to Micro Soft Access Database (LIMS) or MS Excel Template;
- (h) Capable of automatically alerting to manually cap/uncap bottles and change racks after a sample tray of bottles has been completed;
- (i) Capable of providing an option to change the BOD bottle volumes from sixty (60) mL to three hundred (300) mL, and vice-versa.;
- (j) Capable of reading initial dissolved oxygen values prior to capping and final dissolved oxygen values after uncapping and automatic temperature compensation;
- (k) Capable of BOD and CBOD analysis in the same run;
- (l) Capable of changing dilution unit (mL, %, etc);
- (m) Capable of performing/tracking up to five (5) dilutions per sample;
- (n) Capable of performing/tracking at least two (2) bottles per dilution;
- (o) Capable of identifying samples marked as CBOD, on-screen and on the reports
- (p) Capable of retaining, saving and loading pre-defined batch runs with user specified sample dilutions;
- (q) Capable of providing, retaining or exporting quality control data for each sample tested;
- (r) Capable of allowing the to change sample names;
- (s) Capable of allowing for multiple sample identification fields for both numeric and/or text fields; Capable of extending work list up to a minimum of three hundred (300) bottles (one hundred (100) samples), after finalizing each sample tray; Capable of the addition of bottles/racks and work list extension during run;
- (v) Capable of creating user definable print report;
- (w) Capable of password protection and allowing for access of authorized users only;
- (x) Capable of audit trail;
- (y) Capable of automatic back up of raw and calculated data meeting GLP requirements after run completion;

- (z) Perform auto-calibration using the air saturation method; Capable of maintaining a QC database for GGA's, blanks, duplicates, seed control etc. with charting or trending capabilities; Capable of automatic start-up and shut-down; Capable of automatic sample result averaging applying pre-defined criteria;
- (dd) Capable of displaying and recording sample temperature with each measurement;
- (ee) Capable of user definable data entry fields;
- (ff) Capable of flagging and extracting samples that exceed user defined QA guidelines or control limits;
- (gg) Capable of flagging noisy or drifting DO measurements and determining linearity of a dilution set;
- (hh) Capable of auto-recognition of sample rack and position;
- (ii) Capable of re-processing data after BOD/CBOD set has been closed; Capable of running manually (without auto-sampler) in the event of a service concern. Item No. 4 – Pumps (Dilution and Seed), each shall be:
 - (a) Equipped with the necessary supply of sample needle and/or syringe;
 - (b) Equipped with all communication cables, RS232 or USB;
 - (c) Equipped with the necessary supply of reagent tubing;
 - (d) Equipped with level detection sensor (dilution pump only);
 - (e) Constructed in a compact, integrated or modular design in order to minimize bench space;
 - (f) CSA (Canadian Standard Association) certified; acceptable prior to shipping;
 - (g) Equipped with a power supply of 120V, 50/60 Hz.;

E2.6 Item No. 5 – Nutrient Pump, shall be;

- (a) Nutrient pump shall be a piston operated syringe capable of dispensing increments of 0.01 millimetres (10 micro litres) and supplied with a certificate of calibration by an ISO 17025 Accredited Calibration Laboratory;
- (b) The nutrient pump shall be supplied with two (2) ten (10) millimetre glass syringe, one (1) on the unit and the other as a spare;
- (c) Equipped with all communication cables, RS232 and USB and controlled via the software;
- (d) Equipped with the necessary supply of reagent tubing;
- (e) Constructed in a compact, integrated or modular design in order to minimize bench space utilized;
- (f) CSA (Canadian Standard Association) certified; acceptable prior to shipping;
- (g) Equipped with a power supply of 120V, 50/60 Hz.

E2.7 Item No. 6 – Sample Racks, shall be;

- (a) A quantity of fifteen (15) racks (three (3) per day);
- (b) Designed to hold Wheaton sixty (60) mL glass BOD bottles;
- (c) Bar-coded, tagged or uniquely identified and automatically recognized by the software;
- (d) Resistant to corrosion from water and weak acids;
- (e) Auto-clavable;
- (f) Stackable;
- (g) Ergonomic in design, so the user can easily pick up and transport a full tray;
- (h) The weight of a full tray (assuming three hundred (300) mL glass bottles) shall not exceed forty (40) pounds.

E2.8 Item No. 7– Consumable items shall include but not be limited to:

- (a) Reagent lines (tubing), in sufficient quantity to last one (1) year when replaced according to manufacturer's written maintenance schedule
- (b) Seals and o-rings (if applicable);
- (c) Reagent bottles, one (1) for each reagent pump;
- (d) Sample needles (if applicable);
- (e) Tool kit (if necessary);
- (f) Seven hundred (700) caps to fit sixty (60) mL Wheaton Bottles.

E2.9 Item No. 8 – The installation of the equipment shall;

- (a) be scheduled at a time acceptable to the Contract Administrator;
- (b) be performed by qualified personnel with an instrumentation or science degree or equivalent education acceptable to the Contract Administrator. Proof of qualification shall be provided in electronic or paper copy prior to commencement;
- (c) be started and completed within five (5) Working Days except where the City of Winnipeg is the cause of delay, planned or unplanned;
- (d) be consist of the complete installation and working of an Automated BOD Analyzer System, including the auto sampler, dilution pump, rinse pump, seed pump, and inhibitor pump, barcode scanner, computer and software;
- (e) include a certificate of calibration, traceable to a standard international unit for all measurement devices supplied with or built-in the equipment. This includes a temperature calibration certificate for any temperature measurement device;
- (f) a final evaluation report/statement of qualification(fit for use) based on the analysis of quality control samples to determine the instrument range, instrument MDL, accuracy, precision, or repeatability. If these performance standards are already documented and available from the manufacturer, then the vendor must demonstrate compliance with the stated quality control specifications via the same process/analysis.

E2.10 Item No. 9 – The training shall:

- (a) be scheduled at a time acceptable to the Contract Administrator;
- (b) be performed on-site by personnel with a science degree or equivalent education acceptable to the Contract Administrator. Proof of qualification shall be supplied in electronic or paper copy prior to commencement;
- (c) include a written routine and preventative maintenance schedule;
- (d) include an operator's manual with instrument set-up procedures;
- (e) include instrument and software demonstration(s);
- (f) include a parts and service manual, including preventative maintenance schedules for the life of the instrument;
- (g) include equipment calibration and analysis of quality control samples and wastewater/water samples;
- (h) include a written evaluation (proof) of analyst competency after completion of the training.

E2.11 Item No. 10 - The Manufacturer's Technical Support shall be

- (a) available through a toll free line for any future support regarding any issues/concerns/questions that may arise regarding the Automated BOD Analyzer System at no extra cost;
- (b) a qualified personnel will respond (call back) within forty eight (48) hours of contact regarding technical problems or concerns;
- (c) available to troubleshoot technical problems or provide answers to questions or concerns that may arise or provide sufficient information and instructions for the buyer to do so.

E2.12 Item No. 11 – Manufacturer’s Warranty period shall be

- (a) one (1) year period from the date of installation and included in the price of the instrument, under conditions of normal operation, against defective material, workmanship or installation. All defective material shall be replaced, where damage is due to normal operation of the instrument;

E2.13 Item No. 12 – Optional Extended Warranty shall be

- (a) pursuant to D15.4, provided with the terms for extension of the original manufacturer’s warranty on defective parts, workmanship or installation, the cost of which will be added to the bid price.