



**THE CITY OF WINNIPEG**

# **BID OPPORTUNITY**

**BID OPPORTUNITY NO. 899-2015**

**SOUTH END SEWAGE TREATMENT PLANT (SEWPCC) UPGRADING /  
EXPANSION PROJECT - CONTRACT 3 – BIOREACTORS, BLOWER BUILDING,  
AND SECONDARY CLARIFIERS STRUCTURAL CONCRETE & MISCELLANEOUS  
WORK**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

- B1.1 SOUTH END SEWAGE TREATMENT PLANT (SEWPCC) UPGRADING / EXPANSION PROJECT - CONTRACT 3 – BIOREACTORS, BLOWER BUILDING, AND SECONDARY CLARIFIERS STRUCTURAL CONCRETE & MISCELLANEOUS WORK

### **B2. SUBMISSION DEADLINE**

- B2.1 The Submission Deadline is 12:00 noon Winnipeg time, March 11, 2016.
- B2.2 Bids determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.
- B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. SITE INVESTIGATION**

- B3.1 Further to C3.1, a Site meeting will be held at 10:00 a.m. on February 11, 2016 to provide Bidders access to the Site. Bidders must be at the front entrance of the SEWPCC facility located at 100 Ed Spencer Drive at the time noted above to obtain access.
- B3.2 The Bidder is advised that the excavation, shoring, groundwater depressurization, and piles for the Bioreactors and Secondary Clarifier structures have been installed by others, unless otherwise noted, and therefore should familiarize himself with the existing site conditions.
- B3.3 The Bidder shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.
- B3.4 Bidders attending the Site meeting shall provide and wear their own CSA approved safety footwear, high visible vest, hard hat, and safety glasses.

### **B4. ENQUIRIES**

- B4.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.
- B4.2 If the Bidder finds errors, discrepancies or omissions in the Bid Opportunity, or is unsure of the meaning or intent of any provision therein, the Bidder shall notify the Contract Administrator of the error, discrepancy or omission, or request a clarification as to the meaning or intent of the provision at least five (5) Business Days prior to the Submission Deadline.
- B4.3 Responses to enquiries which, in the sole judgment of the Contract Administrator, require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator to all Bidders by issuing an addendum.
- B4.4 Responses to enquiries which, in the sole judgment of the Contract Administrator, do not require a correction to or a clarification of the Bid Opportunity will be provided by the Contract Administrator only to the Bidder who made the enquiry.
- B4.5 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

### **B5. CONFIDENTIALITY**

- B5.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any

way without the prior written authorization of the Contract Administrator. The use and disclosure of the confidential information shall not apply to information which:

- (a) was known to the Bidder before receipt hereof; or
- (b) becomes publicly known other than through the Bidder; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B5.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Bid Opportunity to the media or any member of the public without the prior written authorization of the Contract Administrator.

## **B6. ADDENDA**

B6.1 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.

B6.2 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.

B6.2.1 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>

B6.2.2 The Bidder is responsible for ensuring that he/she 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.

B6.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

## **B7. SUBSTITUTES**

B7.1 The Work is based on the Plant, Materials and methods specified in the Bid Opportunity.

B7.2 Substitutions shall not be allowed unless application has been made to and prior approval has been granted by the Contract Administrator in writing.

B7.3 Requests for approval of a substitute will not be considered unless received in writing by the Contract Administrator at least five (5) Business Days prior to the Submission Deadline.

B7.4 The Bidder shall ensure that any and all requests for approval of a substitute:

- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
- (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
- (c) identify any anticipated cost or time savings that may be associated with the substitute;
- (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
- (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same

function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.

- B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her 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.
- B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Bidder who requested approval of the substitute.
- B7.6.1 The Contract Administrator will issue an Addendum, disclosing the approved materials, equipment, methods and products to all potential Bidders. The Bidder requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her 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 B17.
- B7.9 No later claim by the Contractor for an addition to the Total Bid Price because of any other changes in the Work necessitated by the use of an approved equal or an approved alternative will be considered.

## **B8. BID COMPONENTS**

- B8.1 The Bid shall consist of the following components:
- (a) Form A: Bid;
  - (b) Form B: Prices;
  - (c) Bid Security;
    - (i) Form G1: Bid Bond and Agreement to Bond, or Form G2: Irrevocable Standby Letter of Credit and Undertaking, or a certified cheque or draft;
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 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.
- B8.4 The Bid shall be submitted enclosed and sealed in an envelope clearly marked with the Bid Opportunity number and the Bidder's name and address.
- B8.4.1 Samples or other components of the Bid which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the Bid Opportunity number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Bid.
- B8.5 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.
- B8.6 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 B17.1(a).

B8.7 Bids submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B8.8 Bids shall be submitted to:

The City of Winnipeg  
Corporate Finance Department  
Materials Management Division  
185 King Street, Main Floor  
Winnipeg MB R3B 1J1

**B9. BID**

B9.1 The Bidder shall complete Form A: Bid, making all required entries.

B9.2 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/her own name, his/her 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/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.

B9.2.1 If a Bid is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B9.2.

B9.3 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.

B9.4 Paragraph 12 of Form A: Bid shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in his/her 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/her 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.

B9.4.1 The name and official capacity of all individuals signing Form A: Bid should be printed below such signatures.

B9.5 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.

**B10. PRICES**

B10.1 The Bidder shall state the price in Canadian funds for each item of the Work identified on Form B: Prices.

B10.1.1 Notwithstanding C12.2.3(c), except where otherwise indicated in Form B: Prices, the unit prices on Form B: Prices shall include the Manitoba Retail Sales Tax (MRST, also known as PST). The applicable MRST for Electrical Work and Mechanical Work shall be shown separately and shall be included in the applicable Subtotals and in the TOTAL BID PRICE.

- B10.2 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.
- B10.3 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.
- B10.4 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

**B11. DISCLOSURE**

- B11.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.
- B11.2 The Persons are:
- (a) N/A

**B12. QUALIFICATION**

- B12.1 The Bidder shall:
- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract.
- B12.2 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>
- B12.3 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);
- B12.4 Further to B12.3(c), the Bidder shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Bidder/Subcontractor has a workplace safety and health program meeting the requirements of The Workplace Safety and Health Act (Manitoba), by providing:
- (a) a copy of their valid Manitoba COR certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Certificate of Recognition (COR) Program administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or
- (b) a copy of their valid Manitoba SECOR™ certificate and Letter of Good Standing (or Manitoba equivalency) as issued under the Small Employer Certificate of Recognition

Program (SECOR™) administered by the Construction Safety Association of Manitoba or by the Manitoba Heavy Construction Association's WORKSAFELY™ COR™ Program; or

- (c) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>).

B12.5 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B12.6 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

### **B13. BID SECURITY**

B13.1 The Bidder shall provide bid security in the form of:

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

B13.1.1 If the Bidder submits alternative bids, the bid security shall be in the amount of the specified percentage of the highest Total Bid Price submitted.

B13.1.2 All signatures on bid securities shall be original.

B13.1.3 The Bidder shall sign the Bid Bond.

B13.1.4 The Surety shall sign and affix its corporate seal on the Bid Bond and the Agreement to Bond.

B13.2 The bid security of the successful Bidder and the next two lowest evaluated responsive and responsible Bidders will be released by the City when a Contract for the Work has been duly executed by the successful Bidder and the performance security furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.

B13.2.1 Where the bid security provided by the successful Bidder is in the form of a certified cheque or draft pursuant to B13.1(c), it will be deposited and retained by the City as the performance security and no further submission is required.

B13.2.2 The City will not pay any interest on certified cheques or drafts furnished as bid security or subsequently retained as performance security.

B13.3 The bid securities of all Bidders will be released by the City as soon as practicable following notification by the Contract Administrator to the Bidders that no award of Contract will be made pursuant to the Bid Opportunity.

#### **B14. OPENING OF BIDS AND RELEASE OF INFORMATION**

- B14.1 Bids will be opened publicly, after the Submission Deadline has elapsed, in the office of the Corporate Finance Department, Materials Management Division, or in such other office as may be designated by the Manager of Materials.
- B14.1.1 Bidders or their representatives may attend.
- B14.1.2 Bids determined by the Manager of Materials, or his/her designate, to not include the bid security specified in B13 will not be read out.
- B14.2 Following the submission deadline, the names of the Bidders and their Total Bid Prices (unevaluated, and pending review and verification of conformance with requirements) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B14.3 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/>
- B14.4 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.

#### **B15. IRREVOCABLE BID**

- B15.1 The Bid(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 11 of Form A: Bid.
- B15.2 The acceptance by the City of any Bid shall not release the Bids of the next two lowest evaluated responsive Bidders and these Bidders shall be bound by their Bids on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any Bid shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 11 of Form A: Bid.

#### **B16. WITHDRAWAL OF BIDS**

- B16.1 A Bidder may withdraw his/her Bid without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B16.1.1 Notwithstanding C23.3, the time and date of receipt of any notice withdrawing a Bid shall be the time and date of receipt as determined by the Manager of Materials.
- B16.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Bid or the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid, and only such person, has authority to give notice of withdrawal.
- B16.1.3 If a Bidder gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:
- (a) retain the Bid until after the Submission Deadline has elapsed;
  - (b) open the Bid to identify the contact person named in Paragraph 3 of Form A: Bid and the Bidder's authorized representatives named in Paragraph 12 of Form A: Bid; and
  - (c) if the notice has been given by any one of the persons specified in B16.1.3(b), declare the Bid withdrawn.
- B16.2 A Bidder who withdraws his/her Bid after the Submission Deadline but before his/her Bid has been released or has lapsed as provided for in B15.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative

Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law, including the right to retain the Bidder's bid security.

## **B17. EVALUATION OF BIDS**

B17.1 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 there from (pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B12 (pass/fail);
- (c) Total Bid Price;
- (d) economic analysis of any approved alternative pursuant to B7.

B17.2 Further to B17.1(a), the Award Authority may reject a Bid as being non-responsive if the Bid is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Bid, or waive technical requirements or minor informalities or irregularities, if the interests of the City so require.

B17.3 Further to B17.1(b), the Award Authority shall reject any Bid submitted by a Bidder who does not demonstrate, in his/her Bid or in other information required to be submitted, that he/she is responsible and qualified.

B17.4 Further to B17.1(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.

B17.5 Further to B17.1(c), 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

## **B18. AWARD OF CONTRACT**

B18.1 The City will give notice of the award of the Contract or will give notice that no award will be made.

B18.2 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.

B18.2.1 Without limiting the generality of B18.2, 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.

B18.3 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 B17.

B18.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Bid upon written request to the Contract Administrator.

## PART C - GENERAL CONDITIONS

### C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at [http://www.winnipeg.ca/matmgt/gen\\_cond.stm](http://www.winnipeg.ca/matmgt/gen_cond.stm)
- C0.2 A reference in the Bid Opportunity to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Construction*.

## **PART D - SUPPLEMENTAL CONDITIONS**

### **GENERAL**

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

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

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

D2.1 The Work to be done under the Contract shall consist of the items of work identified in detail in the drawings and specifications which are attached.

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

- (a) Construction of Three Bioreactors and One Blower Building concrete structures
- (b) Construction of Two Secondary Clarifier concrete structures
- (c) Supply and Installation of precast concrete piles for the Bioreactors and Blower Building
- (d) Supply and Installation of a 2100mm diameter concrete pipe and concrete chambers
- (e) Supply and Installation of piping embeds
- (f) Supply and Installation of concrete encased piping
- (g) Supply and Installation of aluminum grating, aluminum handrails, aluminum checkered plate, aluminum stairs
- (h) Excavation to facilitate the construction of the Bioreactor concrete structure
- (i) Excavation to facilitate the construction of the Secondary Clarifiers concrete structures
- (j) Excavation and backfilling to facilitate the construction of the 2100mm diameter concrete pipe
- (k) Removal of shoring to facilitate construction of the Bioreactors and Secondary Clarifiers structures
- (l) Water leak testing and backfill of the Bioreactors and Secondary Clarifiers Structures
- (m) Site dewatering and ground water depressurization
- (n) Miscellaneous site maintenance

#### **D3. DEFINITIONS**

D3.1 When used in this Bid Opportunity:

- (a) "SEWPCC" means South End Sewage Treatment Plant or South End Water Pollution Control Centre;
- (b) "Supply Contractor" means a contractor engaged by the City to supply equipment and services that may require installation and coordination by the Contractor;
- (c) "Installation Contractor" has the same meaning as Contractor;

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

D4.1 The Contract Administrator is CH2M HILL Canada Limited, represented by:

John Wiebe, P.Eng.  
Project Engineer

Telephone No. 204 488.2214 ext.73075  
Email john.wiebe@ch2m.com

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

D4.3 Bids Submissions must be submitted to the address in B8.8.

**D5. CONTRACTOR'S SUPERVISOR**

D5.1 At the pre-construction meeting, the Contractor shall identify his/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

**D6. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE**

D6.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor are the property of the City and shall not be appropriated for the Contractors own use, or for the use of any third party.

D6.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

D6.3 The following shall be confidential and shall not be disclosed by the Contractor to the media or any member of the public without the prior written authorization of the Contract Administrator;

- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
- (b) the Contract, all deliverables produced or developed; and
- (c) any statement of fact or opinion regarding any aspect of the Contract.

D6.4 A Contractor who violates any provision of D6 may be determined to be in breach of Contract.

**D7. NOTICES**

D7.1 Except as provided for in C23.2.2, all notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the Contractor shall be sent to the facsimile number identified by the Contractor in Paragraph 2 of Form A: Bid.

D7.2 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications to the City, except as expressly otherwise required in D7.3, D7.4 or elsewhere in the Contract, shall be sent to the attention of the Contract Administrator at facsimile number identified in D4.1.

D7.3 Notwithstanding C21., 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

D7.4 All notices, requests, nominations, proposals, consents, approvals, statements, authorizations, documents or other communications required to be submitted or returned to the City Solicitor shall be sent to the following facsimile number:

The City of Winnipeg  
Legal Services Department  
Attn: Director of Legal Services  
Facsimile No.: 204 947-9155

D7.5 **Bids Submissions** must be submitted to the address in B8.8

## **D8. FURNISHING OF DOCUMENTS**

- D8.1 Upon award of the Contract, the Contractor will be provided with five (5) complete sets of the Bid Opportunity. If the Contractor requires additional sets of the Bid Opportunity, they will be supplied to him at cost.

## **SUBMISSIONS**

### **D9. AUTHORITY TO CARRY ON BUSINESS**

- D9.1 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.

### **D10. SAFE WORK PLAN**

- D10.1 The Contractor shall provide the Contract Administrator with a Safe Work Plan at least five (5) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D10.2 The Safe Work Plan should be prepared and submitted in the format shown in the City's template which is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>

### **D11. INSURANCE**

- D11.1 The City shall provide and maintain the following owner controlled project insurance coverage to remain in place at all times during the performance of the Work:
- (a) Wrap-up liability insurance in an amount of no less than twenty-five million dollars (\$25,000,000) inclusive per occurrence and twenty-five millions dollars (\$25,000,000) general aggregate, covering bodily injury, personal injury, property damage and products and completed operations consistent with industry standard insurance policy wordings. Wrap up liability insurance to also include evidence of contractual liability and cross liability clauses.
    - (i) The Contractor shall be responsible for deductibles up to \$50,000 maximum of any one loss.
    - (ii) The City will carry such insurance to cover the City, Province of Manitoba, and Her Majesty the Queen, contractors, subcontractors and all consultants as insured's. Provision of this insurance by the City is not intended in any way to relieve the Contractor from his obligations under the terms of the Contract. Specifically, losses relating to deductibles for insurance, as well as losses in excess of limits of coverage and any risk of loss that is not covered under the terms of the insurance provided by the City remains with the Contractor.
    - (iii) Wrap-up liability insurance shall be maintained from the date of the commencement of the Work until the date of Total Performance of the work and shall include an additional 24 months completed operation coverage which will take affect after Total Performance.
  - (b) Broad form builder's risk Insurance including testing and commissioning, insuring 100% of the total Project Cost written in the name of the City, Province of Manitoba, Her Majesty the Queen, Contractors, and subcontractors. The Contractor shall be responsible for deductibles up to a \$50,000 maximum of any one loss except \$100,000 for flood and water damage.

- D11.2 The Contractor shall provide and maintain the following insurance coverage at all times during the performance of the work and throughout the warranty period:
- (a) Commercial general liability insurance, in the minimum amount of ten million dollars (\$10,000,000) inclusive per occurrence and ten million dollars (\$10,000,000) general aggregate. The said commercial general liability insurance shall include coverage for products and completed operations, blanket contractual liability, non-owned automobile, and unlicensed motor vehicle liability. Such policy shall not contain any exclusions or limitations for demolition work. The Province of Manitoba, Her Majesty the Queen and their ministers, officers, employees and agents and the City shall be added as additional insureds;
  - (b) Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Contractor directly or indirectly in the performance of the Work. The Limit of Liability shall not be less than \$5,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence.
  - (c) Property insurance for equipment and tools used on the project that may be owned, rented, leased or borrowed.
  - (d) Contractor's Pollution Liability (CPL) insurance in the amount of at least one million dollars (\$1,000,000) per occurrence and one million dollars (\$1,000,000) aggregate insuring against claims for clean-up costs, diminution in value and natural resource damages and consistent with industry standard insurance policy wordings.
- D11.3 Deductibles shall be borne by the Contractor.
- D11.4 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D11.5 The Contractor shall require each of its subcontractors to provide comparable insurance to that set forth under D11.2 (a), (b) and (c) at all times during the performance of the work and throughout the warranty period.
- D11.6 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.
- D11.7 Upon request from the Contract Administrator, the Contractor shall provide, within five (5) Business Days, the Contractor's insurance loss history for the past five years together with details of their experience on similar types of projects.

## **D12. PERFORMANCE SECURITY**

- D12.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
  - (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or
  - (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.
- D12.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D12.2 If the bid security provided in his/her Bid was not a certified cheque or draft pursuant to B13.1(c), the Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award of the Contract by way of letter of intent and prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

### **D13. DETAILED PRICES**

D13.1 The Contractor shall provide the Contract Administrator with a detailed price breakdown (Form I: Detailed Prices) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D13.2 The Contractor shall state a price for each item or sub-item of the Work identified on Form I: Detailed Prices. The detailed prices must be consistent with the price(s) provided in the Contractor's Bid.

### **D14. SUBCONTRACTOR LIST**

D14.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors whom the Contractor proposes to engage (Form J: Subcontractor List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

### **D15. EQUIPMENT LIST**

D15.1 The Contractor shall provide the Contract Administrator with a complete list of the equipment which the Contractor proposes to utilize (Form K: Equipment List) at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

### **D16. DETAILED WORK SCHEDULE**

D16.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.

D16.2 The detailed work schedule shall consist of the following:  
(a) a critical path method (C.P.M.) schedule for the Work;  
(b) a Gantt chart for the Work based on the C.P.M. schedule; and  
(c) a daily manpower schedule for the Work  
all acceptable to the Contract Administrator.

D16.3 Further to D16.2(a), the C.P.M. schedule shall clearly identify the start and completion dates of all of the following activities/tasks making up the Work as well as showing those activities/tasks on the critical path:

D16.4 Further to D16.2(b), the Gantt chart shall show the time on a weekly basis, required to carry out the Work of each trade, or specification division. The time shall be on the horizontal axis, and the type of trade shall be on the vertical axis.

D16.5 Further to D16.2(c), the daily manpower schedule shall list the daily number of individuals on the Site for each trade.

## **SCHEDULE OF WORK**

### **D17. COMMENCEMENT**

D17.1 The Contractor shall not commence any Work until he/she is in receipt of a letter of intent from the Award Authority authorizing the commencement of the Work.

D17.2 The Contractor shall not commence any Work on the Site until:

- (a) the Contract Administrator has confirmed receipt and approval of:
  - (i) evidence of authority to carry on business specified in D9;
  - (ii) evidence of the workers compensation coverage specified in C6.15;
  - (iii) the Safe Work Plan specified in D10;
  - (iv) evidence of the insurance specified in D11;
  - (v) the performance security specified in D12;
  - (vi) the detailed price breakdown specified in D13;
  - (vii) the Subcontractor list specified in D14;
  - (viii) the equipment list specified in D15; and
  - (ix) the detailed work schedule specified in D16.
- (b) the Contractor has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.

D17.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the letter of intent.

D17.3 The City intends to award this Contract by May 6, 2016

D17.3.1 If the actual date of award is later than the intended date, the dates specified for Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

### **D18. WORKING DAYS**

D18.1 Further to C1.1(jj), the Contract Administrator's determination of whether or not atmospheric and Site conditions are such that a Working Day is deemed to have elapsed may be based at one time on one type of work while at another time a Working Day may be based on another type of work. When more than one type of major work is involved, the quantity of equipment that must be able to work in order to meet the requirements of a Working Day may vary considerably from that specified in the General Conditions.

D18.2 In the event that incidental work is behind schedule which, in the opinion of the Contract Administrator, should have been or could have been carried out by the Contractor in conjunction with or immediately following work of a major type, the City hereby reserves the right to charge Working Days on the incidental work until such time as it is up to schedule.

D18.3 When the major type of work involves restoration of the site to the condition it was prior to rainfall, Working Days shall not be charged.

D18.4 The Contract Administrator will furnish the Contractor with a daily record for each major type of work showing various information concerning the equipment, the time it worked, could have worked and Working Days charged. This report is to be signed each day by an authorized representative of the Contractor.

### **D19. SUBSTANTIAL PERFORMANCE**

D19.1 The Contractor shall achieve Substantial Performance by October 2, 2017.

D19.2 When the Contractor considers the Work to be substantially performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Substantial Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D19.3 The date on which the Work has been certified by the Contract Administrator as being substantially performed to the requirements of the Contract through the issue of a certificate of Substantial Performance is the date on which Substantial Performance has been achieved.

## **D20. TOTAL PERFORMANCE**

D20.1 The Contractor shall achieve Total Performance by December 15, 2017.

D20.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D20.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

## **D21. LIQUIDATED DAMAGES**

D21.1 If the Contractor fails to achieve Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Working Day for each and every Working Day following the days fixed herein for same during which such failure continues:

- (a) Substantial Performance – Ten thousand dollars (\$10,000.00);
- (b) Total Performance – Ten thousand dollars (\$10,000.00).

D21.2 The amounts specified for liquidated damages in D21.1 are based on a genuine pre-estimate of the City's losses in the event that the Contractor does not achieve, Substantial Performance or Total Performance by the days fixed herein for same.

D21.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

## **CONTROL OF WORK**

### **D22. JOB MEETINGS**

D22.1 Regular weekly job meetings will be held at the Site. These meetings shall be attended by a minimum of one representative of the Contract Administrator, one representative of the City and one representative of the Contractor. Each representative shall be a responsible person capable of expressing the position of the Contract Administrator, the City and the Contractor respectively on any matter discussed at the meeting including the Work schedule and the need to make any revisions to the Work schedule. The progress of the Work will be reviewed at each of these meetings.

D22.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

**D23. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

D23.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

**D24. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS**

D24.1 Further to B12.4, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B12.4.

**MEASUREMENT AND PAYMENT**

**D25. INVOICES**

D25.1 Further to C12, the Contractor shall submit an invoice for each portion of Work performed :

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](mailto:CityWpgAP@winnipeg.ca)

D25.2 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 work performed;
- (e) the amount payable with GST and MRST shown as separate amounts; and
- (f) the Contractor's GST registration number.

D25.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D25.4 Bids Submissions must be submitted to the address in B8.8

**D26. PAYMENT**

D26.1 Further to C12, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

D26.2 For each individual line item within Form B sections A, B, and C, up to a maximum of 97% of each line may be submitted for progress payments prior to the Total Performance of the Work. The remaining 3% will be paid out upon Total Performance of the Work.

D26.3 For items A.1 and B.1 listed in Form B, up to a maximum of 95% for each item may be submitted for progress payments prior to the successful completion of water leak testing as defined in Section 01 35 13. Upon successful water leak testing as determined by the Contract Administrator, remaining payment of items A.1 and B.1 may be submitted for progress payment up to the maximum percentage defined in D26.2.

## **WARRANTY**

### **D27. WARRANTY**

- D27.1 Notwithstanding C13.2, the warranty period shall begin on the date of Total Performance and shall expire two (2) years thereafter, except where longer warranty periods are specified in the respective Specification sections, unless extended pursuant to C13.2.1 or C13.2.2, in which case it shall expire when provided for thereunder.

**FORM H1: PERFORMANCE BOND**  
(See D12)

KNOW ALL MEN BY THESE PRESENTS THAT

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

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

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

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

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

BID OPPORTUNITY NO. 899-2015

SOUTH END SEWAGE TREATMENT PLANT (SEWPCC) UPGRADING / EXPANSION PROJECT -  
CONTRACT 3 – BIOREACTORS, BLOWER BUILDING, AND SECONDARY CLARIFIERS STRUCTURAL  
CONCRETE & MISCELLANEOUS WORK

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

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

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

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

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

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

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

**SIGNED AND SEALED**  
in the presence of:

\_\_\_\_\_  
(Witness as to Principal if no seal)

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

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

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

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

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



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

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

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

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

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

This credit is subject to the Uniform Customs and Practice for Documentary Credit (2007 Revision), International Chamber of Commerce Publication Number 600.

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

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

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

**FORM I: DETAILED PRICES**  
 (See D13)

**SOUTH END SEWAGE TREATMENT PLANT (SEWPCC) UPGRADING / EXPANSION PROJECT -  
 CONTRACT 3 – BIOREACTORS, BLOWER BUILDING, AND SECONDARY CLARIFIERS STRUCTURAL  
 CONCRETE & MISCELLANEOUS WORK**

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
<b>A.1</b>	<b>Supply and Install Bioreactor and Blower Building Concrete Structures</b>	<b>Division 3</b>				
1.	Bioreactor 1 – Base Slab		LS	1		
2.	Bioreactor 1 – Walls		LS	1		
3.	Pre-Anoxic Zone 1 – Base Slab		LS	1		
4.	Pre-Anoxic Zone 1- Walls		LS	1		
5.	Pre-Anoxic Zone 1- Roof		LS	1		
6.	Anaerobic Zone 1 – Base Slab		LS	1		
7.	Anaerobic Zone 1 – Walls and Channel		LS	1		
8.	Anaerobic Zone 1 – Roof		LS	1		
9.	Anoxic Zone 1 – Base Slab		LS	1		
10.	Anoxic Zone 1 – Walls and Channel		LS	1		
11.	Anoxic Zone 1 – Roof		LS	1		
12.	Post Aerobic Zone 1 – Slab and Walls		LS	1		
13.	Post Aerobic Zone 1 – Roof		LS	1		
14.	WAS Sump and Pipe Gallery 1		LS	1		
15.	Pipe Gallery 2 & Stair 1		LS	1		
16.	Pipe Gallery 3 & Stair 2		LS	1		
17.	Bypass Channel		LS	1		
18.	Primary Effluent and RAS Channels		LS	1		
19.	Mixed Liquor Channel		LS	1		
20.	Bioreactor 2 – Base Slab		LS	1		
21.	Bioreactor 2 – Walls		LS	1		
22.	Pre-Anoxic Zone 2 – Base Slab		LS	1		
23.	Pre-Anoxic Zone 2- Walls		LS	1		
24.	Pre-Anoxic Zone 2 - Roof		LS	1		
25.	Anaerobic Zone 2 – Base Slab		LS	1		
26.	Anaerobic Zone 2 – Walls and Channel		LS	1		
27.	Anaerobic Zone 2 – Roof		LS	1		

**FORM I: DETAILED PRICES**  
 (See D13)

**SOUTH END SEWAGE TREATMENT PLANT (SEWPCC) UPGRADING / EXPANSION PROJECT -  
 CONTRACT 3 – BIOREACTORS, BLOWER BUILDING, AND SECONDARY CLARIFIERS STRUCTURAL  
 CONCRETE & MISCELLANEOUS WORK**

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
28.	Anoxic Zone 2 – Base Slab		LS	1		
29.	Anoxic Zone 2 – Walls and Channel		LS	1		
30.	Anoxic Zone 2 – Roof		LS	1		
31.	Post Aerobic Zone 2 – Slab and Walls		LS	1		
32.	Post Aerobic Zone 2 – Roof		LS	1		
33.	Bioreactor 3 – Base Slab		LS	1		
34.	Bioreactor 3 – Walls		LS	1		
35.	Pre-Anoxic Zone 3 – Base Slab		LS	1		
36.	Pre-Anoxic Zone 3 - Walls		LS	1		
37.	Pre-Anoxic Zone 3 - Roof		LS	1		
38.	Anaerobic Zone 3 – Base Slab		LS	1		
39.	Anaerobic Zone 3 – Walls and Channel		LS	1		
40.	Anaerobic Zone 3 – Roof		LS	1		
41.	Anoxic Zone 3 – Base Slab		LS	1		
42.	Anoxic Zone 3 – Walls and Channel		LS	1		
43.	Anoxic Zone 3 – Roof		LS	1		
44.	Post Aerobic Zone 3 – Slab and Walls		LS	1		
45.	Post Aerobic Zone 3 – Roof		LS	1		
46.	Blower Building – Base Slab		LS	1		
47.	Blower Building - Walls		LS	1		
<b>B.1</b>	<b>Supply and Install Secondary Clarifier No.4 and No.5 Concrete Structures</b>	<b>Division 3</b>	LS	1		
1.	Clarifier 4 – Base Slab		LS	1		
2.	Clarifier 4 – Circular Wall		LS	1		
3.	Clarifier 5 – Base Slab		LS	1		
4.	Clarifier 5 – Circular Wall		LS	1		
5.	Mechanical Room – Slabs and Walls		LS	1		
6.	Pump Room - Slabs and Walls		LS	1		

**FORM I: DETAILED PRICES**  
 (See D13)

**SOUTH END SEWAGE TREATMENT PLANT (SEWPCC) UPGRADING / EXPANSION PROJECT -  
 CONTRACT 3 – BIOREACTORS, BLOWER BUILDING, AND SECONDARY CLARIFIERS STRUCTURAL  
 CONCRETE & MISCELLANEOUS WORK**

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
7.	Storage Room – Slabs and Walls		LS	1		
8.	Electrical Room – Slabs and Walls		LS	1		
9.	Service Tunnel		LS	1		
10.	Stair 1, Loading Room, & Sump Pump Area		LS	1		
11.	Stair 2		LS	1		
12.	Mixed Liquor Channel & Walkway		LS	1		



**FORM K: EQUIPMENT**  
(See D15)

**SOUTH END SEWAGE TREATMENT PLANT (SEWPCC) UPGRADING / EXPANSION PROJECT -  
CONTRACT 3 – BIOREACTORS, BLOWER BUILDING, AND SECONDARY CLARIFIERS STRUCTURAL  
CONCRETE & MISCELLANEOUS WORK**

<p>1. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>2. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p>3. Category/type:</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>

**FORM K: EQUIPMENT**  
(See D15)

**SOUTH END SEWAGE TREATMENT PLANT (SEWPCC) UPGRADING / EXPANSION PROJECT -  
CONTRACT 3 – BIOREACTORS, BLOWER BUILDING, AND SECONDARY CLARIFIERS STRUCTURAL  
CONCRETE & MISCELLANEOUS WORK**

<p><b>4. Category/type:</b></p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p><b>5. Category/type:</b></p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>
<p><b>6. Category/type:</b></p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p> <p>Make/Model/Year: _____ Serial No.: _____</p> <p>Registered owner: _____</p>

## PART E - SPECIFICATIONS

### GENERAL

#### E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

<u>Specification No.</u>	<u>Specification Title</u>
	Table of Contents

### NMS

#### SPECIFICATIONS

##### DIVISION 01 – GENERAL REQUIREMENTS

01 11 00	Summary of Work
01 31 13	Project Coordination
01 31 19	Project Meetings
01 32 00	Construction Progress Documentation
01 33 00	Submittal Procedures
01 35 13	Special Project Procedures
01 35 29.01	Health and Safety
01 41 00	Regulatory Requirements
01 43 33	Contractor Field Services
01 45 16.13	Contractor Quality Control
01 50 00	Temporary Facilities and Controls
01 52 10	Construction Sequencing
01 61 00	Common Product Requirements
01 64 00	City-Supplied Products
01 77 00	Closeout Procedures

### CIVIL

All Specs	City of Winnipeg Standard Construction Specifications
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##### DIVISION 03 – CONCRETE

03 10 00	Concrete Formwork and Accessories
03 15 00	Concrete Joints and Accessories
03 21 00	Reinforcing Bars
03 30 00	Cast-in-Place Concrete
03 39 00	Concrete Curing and Finishings
03 40 00	Precast Concrete

03 60 00 Grouting

**DIVISION 05 – METALS**

05 05 23 Welding-Quality Assurance  
05 12 00 Structural Steel Framing  
05 50 00 Metal Fabrications (Basic)  
05 50 02 Metal Fabrications (Structural)  
05 50 03 Metal Fabrications (Mechanical)  
05 52 00 Aluminum Guards and Handrails

**DIVISION 07 – THERMAL AND MOISTURE PROTECTION**

07 16 17 Capillary Waterproofing  
07 21 00 Thermal Insulation  
07 52 16 SBS-Modified Bituminous Membrane Roofing

**DIVISION 10 – SPECIALTIES**

10 80 00 Miscellaneous Specialties

**DIVISION 22 – PLUMBING**

22 10 01 Plumbing Piping and Accessories  
22 10 01.01 Plumbing Piping Schedule (Supplement)  
22 10 01.03 Cast Iron Soil Pipe and Fittings (Data Sheet)  
22 40 00 Plumbing Fixtures

**DIVISION 26 – ELECTRICAL**

26 05 01 Common Work Results - Electrical  
26 05 21 Wire and Cables (0-1000V) - Electrical  
26 05 22 Connectors and Terminations  
26 05 28 Grounding and Bonding  
26 05 34 Conduits, Conduit Fasteners, and Conduit Fittings  
26 08 05 Acceptance Testing

**DIVISION 31 – EARTHWORK**

31 09 17 Dynamic Pile Testing  
31 23 16 Excavation  
31 23 19.01 Dewatering  
31 62 13.23 Prestressed Concrete Piles

**DIVISION 35 – WATERWAY AND MARINE CONSTRUCTION**

35 20 16.25 Fabricated Slide Gates and Stop Logs  
Stop Logs and Slide Gate Schedules

**DIVISION 40 – PROCESS INTEGRATION**

40 27 00 Process Piping-General  
Process Piping Schedule  
40 27 00.01 Cement-Mortar Glass-Lined Ductile Iron Pipe and Fittings (Data Sheet)  
40 27 00.03 Carbon Steel Pipe and Fittings (General Service) (Data Sheet)  
40 27 00.08 Stainless Steel Pipe and Fittings-General Service (Data Sheet)

40 27 00.08A	Stainless Steel Pipe and Fittings-Process Air Service (Data Sheet)
40 27 00.10	Polyvinyl Chloride (PVC) Pipe and Fittings (Data Sheet)
40 27 00.13	Copper and Copper Alloy Pipe, Tubing, and Fittings
40 27 01	Process Piping Specialties
40 27 02	Process Valves and Operators
	Manual Valve Schedule (75 mm and Larger)
40 80 01	Process Piping Leakage Testing

## APPENDICES –

Appendix A	Geotechnical Investigation Report Rev.3
Appendix B	Existing Shoring Drawings
Appendix C	Snow Removal Plan
Appendix D	Environmental Management Policy
Appendix E	Backfill Limits

Drawing No.                      Drawing Name/Title

**Please refer to 01 11 00, clause 1.2C for further instructions regarding the drawings listed below.**

### General

	Title Sheet
	Drawing Index 1
	Drawing Index 2
1-0102-DDTL-A007-001	Abbreviations (1)
1-0102-DDTL-A007-002	Abbreviations (2) and Symbols
1-0102-DDTL-A007-003	Area Code Identification

### Civil

SEP-334	Secondary Treatment Plant Expansion - Yard Piping Plan and Details
1-0102-CGAD-R001	Bioreactors/Blower Building - Weeping Tile Plan
1-0102-CGAD-S001	Secondary Clarifiers - Weeping Tile Plan

### Structural

1-0102-SDTL-A001	Legend and General Notes
1-0102-SFDW-R001	Bioreactors/Blower Building Overall Piling Plan
1-0102-SFDW-R002	Bioreactors/Blower Building Part Piling Plan (1)
1-0102-SFDW-R003	Bioreactors/Blower Building Part Piling Plan (2)
1-0102-SFDW-R004	Bioreactors/Blower Building Part Piling Plan (3)
1-0102-SFDW-R005	Blower Building Part Piling Plan (5)
1-0102-SFDW-R006	Bioreactors Part Piling Plan (6)
1-0102-SGAD-R001	Bioreactors/Blower Building Overall Lower Level Plan
1-0102-SGAD-R002	Bioreactor 1 Lower Level Plan
1-0102-SGAD-R003	Bioreactor 2 Lower Level Plan
1-0102-SGAD-R004	Bioreactor 3 Lower Level Plan
1-0102-SGAD-R005	Bioreactors/Blower Building Overall Channel Level Plan
1-0102-SGAD-R006	Bioreactor 1 Channel Level Plan
1-0102-SGAD-R007	Bioreactor 2 Channel Level Plan
1-0102-SGAD-R008	Bioreactor 3 Channel Level Plan
1-0102-SGAD-R009	Bioreactors/Blower Building Overall Upper Level/Roof Plan
1-0102-SGAD-R010	Bioreactor 1 Roof Plan
1-0102-SGAD-R011	Bioreactor 2 Roof Plan
1-0102-SGAD-R012	Bioreactor 3 Roof Plan
1-0102-SGAD-R013	Blower Building Upper Level Plan
1-0102-SGAD-R014	Blower Building Roof Plan

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
1-0102-SGAD-R015	Bioreactors/Blower Building Section A - Part A
1-0102-SGAD-R016	Bioreactors/Blower Building Section A - Part B
1-0102-SGAD-R017	Bioreactors/Blower Building Section B - Part A
1-0102-SGAD-R018	Bioreactors/Blower Building Section B - Part B
1-0102-SGAD-R019	Bioreactors/Blower Building Section C - Part A
1-0102-SGAD-R020	Bioreactors/Blower Building Section C - Part B
1-0102-SGAD-R021	Bioreactors/Blower Building Section D - Part A
1-0102-SGAD-R022	Bioreactors/Blower Building Section D - Part B
1-0102-SGAD-R023	Bioreactors/Blower Building Section E - Part A
1-0102-SGAD-R024	Bioreactors/Blower Building Section E - Part B
1-0102-SGAD-R025	Bioreactors/Blower Building Section F - Part A
1-0102-SGAD-R026	Bioreactors/Blower Building Section F - Part B
1-0102-SGAD-R027	Bioreactors/Blower Building Section G
1-0102-SGAD-R028	Bioreactors/Blower Building Sections H and J
1-0102-SGAD-R029	Bioreactors/Blower Building Section K
1-0102-SGAD-R030	Bioreactors/Blower Building Section L
1-0102-SGAD-R031	Bioreactors/Blower Building Section M - Part A
1-0102-SGAD-R032	Bioreactors/Blower Building Section M - Part B
1-0102-SGAD-R033	Bioreactors/Blower Building Section N - Part A
1-0102-SGAD-R034	Bioreactors/Blower Building Section N - Part B
1-0102-SGAD-R035	Bioreactors/Blower Building Section N - Part C
1-0102-SGAD-R036	Bioreactors/Blower Building Section P
1-0102-SGAD-R037	Bioreactors/Blower Building Section Q
1-0102-SGAD-R038	BIOREACTORS/BLOWER BUILDING SECTIONS R, S, T, U, V and W
SEP-339	Oxygen Reactor Expansion - Roof Plan Elev. 234.823
1-0102-SDTL-R001	Bioreactors/Blower Building Precast Double Tee Roof Details
1-0102-SDTL-R002	Bioreactors/Blower Building Details
1-0102-SDTL-R003	Bioreactors/Blower Building Details
1-0102-SDTL-R004	Bioreactors/Blower Building Details
1-0102-SDTL-R005	Bioreactors/Blower Building Details
1-0102-SDTL-R006	Bioreactors/Blower Building Details
1-0102-SDTL-R007	Bioreactors/Blower Building Details
1-0102-SDTL-R008	Bioreactors/Blower Building Details
1-0102-SSCH-R001	Bioreactors/Blower Building Column and Beam Schedule
1-0102-SGAD-S001	Secondary Clarifiers 4 and 5 Overall Basement Plan
1-0102-SGAD-S002	Secondary Clarifier 5 Lower Level Plan At El 228.680
1-0102-SGAD-S003	Secondary Clarifier 4 Lower Level Plan At El 228.680
1-0102-SGAD-S004	Secondary Clarifiers 4 and 5 Basement Plan - Part A
1-0102-SGAD-S005	Secondary Clarifiers 4 and 5 Basement Plan - Part B
1-0102-SGAD-S006	Secondary Clarifiers 4 and 5 Overall Channel Level Plan
1-0102-SGAD-S007	Secondary Clarifier 5 Channel Level Plan
1-0102-SGAD-S008	Secondary Clarifier 4 Channel Level Plan
1-0102-SGAD-S009	Secondary Clarifiers 4 and 5 Channel Level Plan - Part A
1-0102-SGAD-S010	Secondary Clarifiers 4 and 5 Channel Level Plan - Part B
1-0102-SGAD-S011	Secondary Clarifiers 4 and 5 Overall Ground Floor Plan
1-0102-SGAD-S012	Secondary Clarifier 5 Ground Floor Plan
1-0102-SGAD-S013	Secondary Clarifier 4 Ground Floor Plan
1-0102-SGAD-S014	Secondary Clarifiers 4 and 5 Ground Floor Plan - Part A
1-0102-SGAD-S015	Secondary Clarifiers 4 and 5 Ground Floor Plan - Part B
1-0102-SGAD-S016	Secondary Clarifiers 4 and 5 Overall Roof Plan
1-0102-SGAD-S017	Secondary Clarifiers 4 and 5 Roof Plan - Part A
1-0102-SGAD-S018	Secondary Clarifiers 4 and 5 Roof Plan - Part B
1-0102-SGAD-S019	Secondary Clarifiers 4 and 5 Section A
1-0102-SGAD-S020	Secondary Clarifiers 4 and 5 Section B
1-0102-SGAD-S021	Secondary Clarifiers 4 and 5 Section C - Part A
1-0102-SGAD-S022	Secondary Clarifiers 4 and 5 Section C - Part B
1-0102-SGAD-S023	Secondary Clarifiers 4 and 5 Section C - Part C
1-0102-SGAD-S024	Secondary Clarifiers 4 and 5 Section D - Part A

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
1-0102-SGAD-S025	Secondary Clarifiers 4 and 5 Sections D - Part B
1-0102-SGAD-S026	Secondary Clarifiers 4 and 5 Section E
1-0102-SGAD-S027	Secondary Clarifiers 4 and 5 Section F and G
1-0102-SGAD-S028	Secondary Clarifiers 4 and 5 Sections H and J
1-0102-SGAD-S029	Secondary Clarifiers 4 and 5 Sections K and L
1-0102-SGAD-S030	Secondary Clarifiers 4 and 5 Sections M and N
1-0102-SGAD-S031	Secondary Clarifiers 4 and 5 Sections P and Q
1-0102-SGAD-S032	Secondary Clarifiers 4 and 5 Sections R, S and T
1-0102-SGAD-S033	Secondary Clarifiers 4 and 5 Sections U and V
1-0102-SGAD-S050	Secondary Clarifiers - Concrete and CMU Removals Plans (1)
1-0102-SGAD-S051	Secondary Clarifiers - Concrete and CMU Removals Plans (2)
1-0102-SGAD-S052	Secondary Clarifiers - Concrete and CMU Removals Plans (3)
1-0102-SGAD-S053	Secondary Clarifiers - Concrete and CMU Removals Tie-Ins (1)
1-0102-SGAD-S054	Secondary Clarifiers - Concrete and CMU Removals Tie-Ins (2)
1-0102-SDTL-S001	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S002	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S003	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S004	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S005	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S006	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S007	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S008	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S009	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S010	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S011	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S012	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S013	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S014	Secondary Clarifiers 4 and 5 Details
1-0102-SDTL-S015	Secondary Clarifiers 4 and 5 Details
1-0102-SSCH-S001	Secondary Clarifiers 4 and 5 Column and Beam Schedule
1-0102-SDTL-A002	Standard Details (1)
1-0102-SDTL-A003	Standard Details (2)
1-0102-SDTL-A004	Standard Details (3)
1-0102-SDTL-A005	Standard Details (4)
1-0102-SDTL-A006	Standard Details (5)
1-0102-SDTL-A007	Standard Details (6)
1-0102-SDTL-A008	Standard Details (7)
1-0102-SDTL-A009	Standard Details (8)
1-0102-SDTL-A010	Standard Details (9)
1-0102-SDTL-A011	Standard Details (10)
1-0102-SDTL-A012	Standard Details (11)
1-0102-SDTL-A013	Standard Details (12)
1-0102-SDTL-A014	Standard Details (13)
1-0102-SDTL-A015	Standard Details (14)
1-0102-SDTL-A016	Standard Details (15)
1-0102-SDTL-A017	Standard Details (16)

### **Process**

1-0102-PDTL-A001	Legend and General Notes
1-0102-PHYD-A003	Hydraulic Profile (1)
1-0102-PHYD-A004	Hydraulic Profile (2)
1-0102-PHYD-A005	Hydraulic Profile (3)
1-0102-PGAD-R001	Bioreactors/Blower Building Overall Lower Level Plan
1-0102-PGAD-R002	Bioreactor 1 Lower Level Plan - Part A
1-0102-PGAD-R003	Bioreactor 2 Lower Level Plan - Part B
1-0102-PGAD-R004	Bioreactor 3 Lower Level Plan Part C
1-0102-PGAD-R005	Bioreactors/Blower Building Overall Upper Level Plan
1-0102-PGAD-R006	Bioreactor 1 Upper Level Plan Part A

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
1-0102-PGAD-R007	Bioreactor 2 Upper Level Plan Part B
1-0102-PGAD-R008	Bioreactor 3 Upper Level Plan Part C
1-0102-PGAD-R009	Bioreactors/Blower Building Overall Roof Plan
1-0102-PGAD-R010	Bioreactor 1 Roof Plan Part A
1-0102-PGAD-R011	Bioreactor 2 Roof Plan Part B
1-0102-PGAD-R012	Bioreactor 3 Roof Plan Part C
1-0102-PGAD-R013	Bioreactors/Blower Building Blower Room Plan
1-0102-PGAD-R014	Bioreactors/Blower Building Sections A, A1 and B
1-0102-PGAD-R015	Bioreactors/Blower Building Sections C and D
1-0102-PGAD-R016	Bioreactors/Blower Building Sections E and F
1-0102-PGAD-R017	Bioreactors/Blower Building Sections G, H and H1
1-0102-PGAD-R018	Bioreactors/Blower Building Section J - Part A and B
1-0102-PGAD-R019	Bioreactors/Blower Building Section K - Part A and B
1-0102-PGAD-R020	Bioreactors/Blower Building Section L - Part A and B
1-0102-PGAD-R021	Bioreactors/Blower Building Section M - Part A and B
1-0102-PGAD-R022	Bioreactors/Blower Building Section N - Part A and B
1-0102-PGAD-R023	Bioreactors/Blower Building Section P - Part A and B
1-0102-PGAD-R024	Bioreactors/Blower Building Section Q - Part A and B
1-0102-PGAD-S001	Secondary Clarifiers 4 And 5 Overall Lower Level Plan
1-0102-PGAD-S002	Secondary Clarifiers 4 And 5 Lower Level Plan - Part A
1-0102-PGAD-S003	Secondary Clarifiers 4 And 5 Lower Level Plan - Part B
1-0102-PGAD-S004	Secondary Clarifiers 4 And 5 Lower Level Plan - Part C
1-0102-PGAD-S005	Secondary Clarifiers 4 And 5 Lower Level Plan - Part D
1-0102-PGAD-S006	Secondary Clarifiers 4 And 5 Overall Channel Level Plan
1-0102-PGAD-S007	Secondary Clarifiers 4 And 5 Channel Level Plan - Part A, B, C, D
1-0102-PGAD-S008	Secondary Clarifiers 4 And 5 Overall Ground Floor Plan
1-0102-PGAD-S009	Secondary Clarifiers 4 And 5 Ground Floor Plan - Part A
1-0102-PGAD-S010	Secondary Clarifiers 4 And 5 Section A
1-0102-PGAD-S011	Secondary Clarifiers 4 And 5 Section B and C
1-0102-PGAD-S012	Secondary Clarifiers 4 And 5 Section D
1-0102-PGAD-S013	Secondary Clarifiers 4 And 5 Section E
1-0102-PGAD-S014	Secondary Clarifiers 4 And 5 Section F and G
1-0102-PDTL-A004	Standard Details (3)

### **Mechanical**

1-0102-MDTL-A001-001	Legend and General Notes (1)
1-0102-MDTL-A001-002	Legend and General Notes (2)
1-102-MGAD-R501	Bioreactor/Blower Building Plumbing - Overall Lower Level Plan
1-102-MGAD-R502	Bioreactor/Blower Building Plumbing - Lower Level Plan - Part A
1-102-MGAD-R503	Bioreactor/Blower Building Plumbing - Lower Level Plan - Part B
1-102-MGAD-R504	Bioreactor/Blower Building Plumbing - Lower Level Plan - Part C
1-102-MGAD-R505	Bioreactor/Blower Building Plumbing - Lower Level Plan - Part D
1-102-MGAD-R506	Bioreactor/Blower Building Plumbing - Overall Ground Floor Plan
1-102-MGAD-R507	Bioreactor/Blower Building Plumbing - Ground Floor Plan - Part A
1-102-MGAD-R508	Bioreactor/Blower Building Plumbing - Ground Floor Plan - Part B
1-102-MGAD-R509	Bioreactor/Blower Building Plumbing - Roof Plan
1-102-MGAD-R602	Bioreactor/Blower Building HVAC - Lower Level Plan - Part A
1-102-MGAD-R603	Bioreactor/Blower Building HVAC - Lower Level Plan - Part B
1-102-MGAD-R604	Bioreactor/Blower Building HVAC - Lower Level Plan - Part C
1-102-MGAD-R605	Bioreactor/Blower Building HVAC - Lower Level Plan - Part D
1-102-MGAD-R607	Bioreactor/Blower Building HVAC - Overall Ground Floor Plan
1-102-MGAD-R608	Bioreactor/Blower Building HVAC - Ground Floor Plan - Part A
1-102-MGAD-R609	Bioreactor/Blower Building HVAC - Ground Floor Plan - Part B
1-102-MGAD-R610	Bioreactor/Blower Building HVAC - Ground Floor Plan - Part C
1-102-MGAD-R612	Bioreactor/Blower Building HVAC - Section A
1-102-MGAD-R613	Bioreactor/Blower Building HVAC - Section B

Drawing No.

Drawing Name/Title

1-102-MGAD-R621	Bioreactor/Blower Building FOA - Overall Ground Floor Plan
1-102-MGAD-R622	Bioreactor/Blower Building FOA - Sections A And B
1-0102-MGAD-S501	Secondary Clarifiers 4 and 5 Plumbing - Overall Basement Plan
1-0102-MGAD-S502	Secondary Clarifiers 4 and 5 Plumbing - Basement Plan - Part A
1-0102-MGAD-S503	Secondary Clarifiers 4 and 5 Plumbing - Basement Plan - Part B
1-0102-MGAD-S504	Secondary Clarifiers 4 and 5 Plumbing - Basement Plan - Part C
1-0102-MGAD-S505	Secondary Clarifiers 4 and 5 Plumbing - Ground Floor Plan - Part A
1-0102-MGAD-S506	Secondary Clarifiers 4 and 5 Plumbing - Ground Floor Plan - Part B
1-0102-MGAD-S507	Secondary Clarifiers 4 and 5 Plumbing - Roof Plan
1-0102-MGAD-S601	Secondary Clarifiers 4 and 5 HVAC - Overall Basement Plan
1-0102-MGAD-S602	Secondary Clarifiers 4 and 5 HVAC - Basement Plan - Part A
1-0102-MGAD-S603	Secondary Clarifiers 4 and 5 HVAC - Basement Plan - Part B
1-0102-MGAD-S604	Secondary Clarifiers 4 And 5 HVAC - Basement Plan - Part C
1-0102-MGAD-S605	Secondary Clarifiers 4 And 5 HVAC - Overall Ground Floor Plan
1-0102-MGAD-S606	Secondary Clarifiers 4 and 5 HVAC - Ground Floor Plan - Part A
1-0102-MGAD-S607	Secondary Clarifiers 4 and 5 HVAC - Ground Floor Plan - Part B
1-0102-MGAD-S608	Secondary Clarifiers 4 and 5 HVAC - Ground Floor Plan - Part C
1-0102-MGAD-S610	Secondary Clarifiers 4 and 5 HVAC - Overall Roof Plan
1-0102-MGAD-S611	Secondary Clarifiers 4 and 5 HVAC - Section A
1-0102-MGAD-S612	Secondary Clarifiers 4 and 5 HVAC - Section B
1-0102-MDTL-A002	Plumbing Standard Details (1)
1-0102-MDTL-A003	Plumbing Standard Details (2)
1-0102-MDTL-A008	HVAC Standard Details (4)
1-0102-MDTL-A009	HVAC Standard Details (5)

**Electrical**

1-0102-EGRD-A003	Electrical, Grounding Detail
1-0102-ECBD-R005	MCC/Cabinet Drawing, SGR-R701 & SGR-R702 Layout
1-0102-ECRT-R001	Cable Routing, Bioreactors/Blower Building, Cable Bus System Layout
1-0102-ECRT-R002	Cable Routing, Bioreactors/Blower Building, Cable Bus System Layout Sections & Details
1-0102-ECTR-R001-001	Cable Tray Layout, Bioreactors/Blower Building, Ground Floor Plan
1-0102-ECTR-R001-002	Cable Tray Layout, Bioreactors/Blower Building, Ground Floor Plan
1-0102-ECTR-R001-003	Cable Tray Layout, Bioreactors/Blower Building, Ground Floor Plan
1-0102-ECTR-R001-004	Cable Tray Layout, Bioreactors/Blower Building, Ground Floor Plan
1-0102-ECTR-R002-001	Cable Tray Layout, Bioreactors/Blower Building, Basement Plan
1-0102-ECTR-R002-002	Cable Tray Layout, Bioreactors/Blower Building, Basement Plan
1-0102-ECTR-R002-003	Cable Tray Layout, Bioreactors/Blower Building, Basement Plan
1-0102-ECTR-R002-004	Cable Tray Layout, Bioreactors/Blower Building, Basement Plan
1-0102-ECTR-R003	Cable Tray Layout, Bioreactors/Blower Building, Bioreactor Upper Level Plan
1-0102-ECTR-R004-001	Cable Tray Layout, Bioreactors/Blower Building, Sections and Details
1-0102-ECTR-R004-002	Cable Tray Layout, Bioreactors/Blower Building, Sections and Details
1-0102-EGAD-R001	Power Layout, Bioreactors/Blower Building, Electrical Room Layout
1-0102-EGAD-R003-001	Power Layout, Bioreactors/Blower Building, Bioreactor Upper Level Plan
1-0102-EGAD-R003-002	Power Layout, Bioreactors/Blower Building, Bioreactor Upper Level Plan

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
1-0102-EGAD-R003-003	Power Layout, Bioreactors/Blower Building, Bioreactor Upper Level Plan
1-0102-EGRD-R002-001	Grounding Layout, Bioreactors/Blower Building, Upper Level/Ground Floor Plan
1-0102-EGRD-R002-002	Grounding Layout, Bioreactors/Blower Building, Upper Level/Ground Floor Plan
1-0102-ECRT-S002	Cable Routing, Secondary Clarifiers 4 and 5 Cable Bus System Layout
1-0102-ECRT-S003	Cable Routing, Secondary Clarifiers 4 and 5, Cable Bus System Layout Sections & Details
1-0102-ECTR-S002-001	Cable Tray Layout, Secondary Clarifiers 4 and 5, Basement Plan
1-0102-ECTR-S002-002	Cable Tray Layout, Secondary Clarifiers 4 and 5, Basement Plan
1-0102-ECTR-S003-001	Cable Tray Layout, Secondary Clarifiers 4 and 5, Ground Floor Plan
1-0102-ECTR-S003-002	Cable Tray Layout, Secondary Clarifiers 4 and 5, Ground Floor Plan
1-0102-ECTR-S004	Cable Tray Layout, Secondary Clarifiers 4 and 5, Sections and Details
1-0102-EGAD-S002	Power Layout, Secondary Clarifiers 4 and 5, West Electrical Room & Laboratory
1-0102-EGRD-S002-001	Grounding Layout, Secondary Clarifiers 4 and 5, Ground Floor Plan
1-0102-EGRD-S002-002	Grounding Layout, Secondary Clarifiers 4 and 5, Ground Floor Plan
1-0102-EGRD-S002-003	Grounding Layout, Secondary Clarifiers 4 and 5, Ground Floor Plan
<b>Automation</b>	
1-0102-ADTL-A005	Installation Details, Level Instruments
1-0102-ADTL-R001-001	Installation Details, Analysis Instruments
1-0102-ADTL-R001-002	Installation Details, Analysis Instruments
1-0102-ADTL-R002	Installation Details, Flow Instruments
1-0102-ADTL-R003	Installation Details, Level Instruments
1-0102-AGAD-R004	Instrumentation Location Plan, Sump Pump Room and Gallery 5B Layout
1-0102-AGAD-R007	Instrumentation Location Plan, Bioreactor 1 Layout
1-0102-AGAD-R008	Instrumentation Location Plan, Bioreactor 2 Layout
1-0102-AGAD-R009	Instrumentation Location Plan, Bioreactor 3 Layout

## **E2. SOILS INVESTIGATION REPORT**

- E2.1 Further to C3.1, a geotechnical report is appended to this Bid Opportunity and is titled "SEWPCC Upgrading/Expansion/Civil/Geotech Geotechnical Investigation Report – Final – Rev 3" dated October 2014.

## **E3. HAZARDOUS MATERIALS**

- E3.1 If asbestos or other hazardous materials are encountered during the Work of the Contract, the Contractor shall stop all work and notify the Contract Administrator immediately. Removal of hazardous materials shall be dealt with by the City and the Contractor shall await further instruction by the Contract Administrator.

#### **E4. MOBILIZATION AND DEMOBILIZATION**

E4.1 Notwithstanding the City of Winnipeg Standard Construction Specifications, a separate pay item is included for mobilization and demobilization.

E4.2 Mobilization shall be as defined in specification "Section 01 50 00 – Temporary Facilities and Controls". Demobilization shall mean the removal of all mobilized equipment and materials as defined in Section 01 50 00.

##### Measurement and Payment

E4.3 Mobilization and Demobilization will be measured and paid for at the Contract Lump Sum Price for "Mobilization and Demobilization", which price shall be payment in full for supplying all materials and for performing all operations herein described and all other items incidental to the Work included in this Specification.

E4.4 Mobilization and Demobilization will be paid out at 50% of the unit price will be paid on the first progress payment following commencement of the Work.

E4.5 The remaining 50% of the Mobilization and Demobilization unit price will be paid subsequent to the completion of the Work.

#### **E5. EXTRA WORK ALLOWANCE**

E5.1 The Extra Work Allowance is intended to address general site maintenance and additional upgrade work authorized by the Contract Administrator that may be required due to uncertainties involved in working in an older facility, some areas of which will not be visible until project work is underway.

E5.2 The City reserves the right to delete any or all of the Extra Work Allowance from the Contract if the Work intended to be covered by the Extra Work Allowance is not required, or if the Works intended are found to be more extensive than the provisional Extra Work Allowance.

##### Road and Parking Area Maintenance

E5.3 For the duration of the contract, the Contractor shall be responsible for maintaining 24-hour access to the site for the City of Winnipeg for their continuous operation of the SEWPCC.

E5.4 Maintaining 24-hour site access shall include, but not necessarily be limited to, clearing snow and sanding all site roadways utilized by the City of Winnipeg in the course of their operation of the plant, as required during the winter months. This primarily refers to uninterrupted access to the site by sludge trucks 24-hours a day, but also includes access by any other means or vehicles required for daily operation of SEWPCC.

E5.5 Provide snow removal (when snowfall exceeds 25mm) on west access road from Seniuk Dr through to the sludge haul truck bay doors 6 and 7 and surrounding truck turnaround area at the haul bay location on the south side of the SEWPCC on a 24/7 basis. Include snow removal by hand at the truck haul bay doors 6 and 7 and the man door between them. Include snow removal by hand at west road access gate location to ensure automatic gates operate effectively.

E5.6 Provide snow removal for vehicle access to the UV building. Include snow removal by hand at the man door located on the south side of the UV building.

E5.7 Provide snow removal for vehicle access to the outfall building. Include snow removal by hand at the two man doors located on the south side of the outfall building.

E5.8 The Contractor shall ensure the West Access road main gate is operational 24/7 for sludge hauling operations.

E5.9 Provide periodic sanding of roads as required, to the satisfaction of the Contract Administrator

- E5.10 Provide maintenance to site roads and parking areas including fencing and gates, and roadside reflectors to the satisfaction of the Contract Administrator
- E5.11 Provide maintenance of road/ditch reflectors as required to maintain reflector visibility
- E5.12 Provide snow removal at gravel parking area located east side of Project Site Trailers and provide hand snow removal at Project Site trailer entrance stairs to man gate and stairs at emergency egresses from each trailer.
- E5.13 Provide snow removal from site ditches between the depressurization pump location and the ditch connection to outfall.
- E5.14 Provide maintenance of site drainage system, ditches and culverts located on the site.
- E5.15 Provide vegetation control as required for safe maintenance and cleanliness of the site to the satisfaction of the Contract Administrator

#### Deep Well Ground Water Monitoring and Depressurization

- E5.16 Supply and Install two temporary generators (one duty and one standby) from March 1, 2017 to July 31, 2017 and March 1, 2018 to July 31, 2018 to power the deep well pumps. Connect generators to existing VFD's mounted in weather proof enclosure.
- E5.17 Supply fuel and generator maintenance including periodic start up (weekly).
- E5.18 Provide well measurements twice daily from March 1, 2017 to July 31, 2017 and from March 1, 2018 to July 31, 2018 at five test well locations, record data on spreadsheet and submit to Contract Administrator daily
- E5.19 Operate depressurization system pumps when directed by Contract Administrator and record volume of water pumped on a daily basis via flow meter (supplied by others) and submit to Contract Administrator

#### Method of Measurement and Basis of Payment for Extra Work Allowance

- E5.20 Payment for Road and Parking Area Maintenance will be based on Time and Materials. The Contractor shall submit labour and equipment hours and rates and total cost for each work activity performed as requested by the Contract Administrator for approval and a Change Order will be prepared by the Contract Administrator. Approved costs will be paid from the Extra Work Allowance defined in Item E in Form B: Prices.
- E5.21 Payment for Deep Well Ground Water Monitoring and Depressurization will be based on Time and Materials. The Contractor shall submit labour and equipment hours and rates and total cost for each work activity performed as requested by the Contract Administrator for approval and a Change Order will be prepared by the Contract Administrator. Approved costs will be paid from the Extra Work Allowance defined in Item E in Form B: Prices.
- E5.22 Cost of all other Extra Work shall be evaluated by the methods outlined in C7.4, and a Change Order prepared by the Contract Administrator. Cost of the Change Order will be paid on the Progress Estimate and deducted from the Extra Work Allowance. If the valuation of the authorized work exceeds the Value of the Extra Work Allowance, the Contract Value will be adjusted by the shortfall.

## **E6. GRADING AND MAINTAINING STOCKPILES**

- E6.1 The excavated materials to be stocked at the location of existing stock piles at the west end of the SEWPCC site.
- E6.2 The stockpiles at the west end of the SEWPCC site shall be graded in accordance with the slopes on the design drawings. The contractor shall maintain the stockpiles in a safe manner throughout the duration of construction keeping and protect them from erosion.

- E6.3 Maintenance of the stockpiles shall be performed to the satisfaction of the Contract Administrator.
- E6.4 Material that is acceptable for backfilling according to specifications will be taken from the Northern/or the Southern pile as directed by the Contract Administrator.
- E6.5 A stock pile management plan is to be submitted to the Contract Administrator for approval.
- Measurement and Payment
- E6.6 No additional payment shall be made for grading and maintaining stockpiles and is considered incidental to the Work.

## **E7.      OUTFALL PIPE LOADING**

- E7.1 The Contractor shall exercise caution when crossing the existing outfall pipes running west underneath the site perimeter roadway running along the west side of the site.
- E7.2 The maximum allowable loading over the outfall pipes is HS28 (CL800) live highway loading. The Contractor shall be responsible for ensuring that loading over the outfall pipes does not exceed the aforementioned limit during construction.
- E7.3 If the Contractor needs to transport equipment, materials or any load exceeding the limit specified in E7.2 to a location south of the outfall pipes, the Contractor shall use an alternate route along Ed Spencer Drive along the east side of the site.
- E7.4 If using an alternate route along Ed Spencer Drive is not feasible such that a route over the outfall is the only viable option, the Contractor shall notify the Contract Administrator and be responsible for hiring a professional engineer to design temporary bridging over the outfall pipes, suitable for the required design load, and installing the temporary bridging prior to transport of the required load.
- E7.5 If the Contractor chooses to install temporary bridging over the outfall pipes, the design shall be prepared by a professional engineer and submitted to the Contract Administrator for review and approval prior to construction of the temporary bridging.
- E7.6 Any temporary bridging over the outfall pipes to facilitate excessive loading above the load specified in E7.2 shall be incidental to the Contractor's prices for the work. No additional payment shall be made for temporary bridging over the outfall pipes.
- E7.7 If the Contractor chooses to install temporary bridging over the outfall pipes, the bridging shall be removed upon completion of the contract and the roadway restored to equal or better condition than it was prior to installation of the temporary bridging over the outfall pipes.
- Measurement and Payment
- E7.8 No additional payment shall be made for protection of the outfall pipes or installation of temporary bridging over the outfall pipes. Such work shall be incidental to the Contractor's prices for work on this project.
- E7.9 The excavated materials to be stocked at the location of existing stock piles at the west end of the SEWPCC site.

## **E8.      CONSTRUCTION LAYOUT**

- E8.1 Notwithstanding CW 1130-R2, the Contractor shall be responsible for performing their own layout and staking site construction works based upon control point elevations provided by the Contract Administrator.
- E8.2 Construction layout shall also comply with specification section "01 43 33 Contractor Field Services".

E8.3 Costs for Construction layout shall be incidental to the Work. No additional payment will be made for construction layout performed by the Contractor.

#### **E9. TEMPORARY SHUTDOWNS**

E9.1 Any required temporary shutdowns of services to the SEWPCC or any other activity affecting normal plant operation to accommodate completion of the Work shall be limited in duration and subject to the conditions defined in Section 01 35 13 – Special Project Procedures.

#### **E10. WATER MANAGEMENT PLAN**

E10.1 Further to CW 2030, work areas can receive flow of an undetermined amount from groundwater infiltration, snow melt, rainfall and other unforeseen sources.

E10.2 Dewatering of work areas shall be in accordance with this specification and supplemental specification “31 23 19.01 – Dewatering”.

E10.3 The Contractor shall provide water management measures to prevent water ponding in work areas and excavations. Water management measures shall include but not be limited to diversions, flumes and by-pass pumping. Pumping of runoff water from excavations shall be discharged to a grass field area outside the excavation before running off into ditches. The Contractor shall not discharge any water off-site without prior written approval from the Contract Administrator.

E10.4 Discharge hoses for pumping from excavations shall not be laid across vehicle access roads without adequate protection over them and the hoses must be protected from freezing during winter months. Pumping equipment, if used, shall be set-up in a location and in such a way as approved by the Contract Administrator.

E10.5 The Contractor shall not discharge water containing residual chlorine into water courses without first providing testing and dechlorination.

E10.6 The Contractor shall provide a water management plan to the Contract Administrator for review before beginning any excavation work.

E10.7 Costs for water management to maintain dry working conditions shall be considered incidental to the work. No separate payment will be made for water control.

E10.8 Costs for deep well ground water depressurization shall be paid from the Extra Work Allowance as per E.5.21.

#### **E11. ENVIRONMENTAL PROTECTION PLAN**

E11.1 The Contractor shall plan and implement the Work of this Contract strictly in accordance with the requirements of the Environmental Protection Plan as herein specified, Fisheries Authorization & CEAA Screening report.

E11.2 The Contractor is advised that at least the following Acts, Regulations, and By-laws apply to the Work and are available for viewing at the office of the Contract Administrator.

(a) Federal

- (i) Canadian Environmental Protection Act (CEPA)
- (ii) Transportation of Dangerous Goods Act and Regulations c.34
- (iii) The Fisheries Act
- (iv) Navigable Waters Protection Act

(b) Provincial

- (i) The Dangerous Goods Handling and Transportation Act D12
- (ii) The Endangered Species Act E111

- (iii) The Environment Act c.E125
  - (iv) The Fire Prevention Act F80
  - (v) The Manitoba Heritage Resources Act H39.1
  - (vi) The Manitoba Noxious Weeds Act N110
  - (vii) The Manitoba Nuisance Act N120
  - (viii) The Public Health Act c.P210
  - (ix) The Workplace Safety and Health Act W210
  - (x) And current applicable associated regulations.  
(Note: Provincial regulations updated as of September 1999)
- (c) Municipal
- (i) The City of Winnipeg By-law No. 1/2008
  - (ii) The City of Winnipeg Environmental Management Policy (Appendix D)
  - (iii) And any other applicable Acts, Regulations, and By-Laws.

E11.3 The Environmental Protection Plan shall address the following:

- (a) Name[s] of person[s] responsible for ensuring adherence to Environmental Protection Plan.
- (b) Name[s] and qualifications of person[s] responsible for manifesting hazardous waste to be removed from Site.
- (c) Name[s] and qualifications of person[s] responsible for training Site personnel.
- (d) Erosion and sediment control plan which identifies type and location of erosion and sediment controls to be provided including monitoring and reporting requirements to assure that control measures are in compliance with erosion and sediment control plan, Federal, Provincial, and Municipal laws and regulations.
- (e) Work area plan showing proposed activity in each portion of area and identifying areas of limited use or non-use. Plan to include measures for marking limits of use areas including methods for protection of features including vegetation to be preserved within authorized Work areas.
- (f) Environmental Emergency Response: including procedures, instructions, and reporting in the event of unforeseen spill of regulated substance.
- (g) Non-Hazardous solid waste disposal plan identifying methods and locations for solid waste disposal including clearing debris.
- (h) Hazardous materials and waste management plan outlining storage, transportation and disposal.
- (i) Air pollution control plan detailing provisions to assure that dust, debris, materials, and trash, do not become air borne and travel off project Site.
- (j) Contaminant prevention plan that: identifies potentially hazardous substances to be used on job site; identifies intended actions to prevent introduction of such materials into air, water, or ground; and details provisions for compliance with Federal, Provincial, and Municipal laws and regulations for storage and handling of these materials.
- (k) Waste water management plan that identifies methods and procedures for management and/or discharge of waste waters which are directly derived from construction activities, such as concrete wash or curing water, clean-up water, dewatering of ground water, hydrostatic test water, and water used in flushing of lines.
- (l) Monitor and report to ensure implementation of environmental protection measures.

E11.4 The Contractor is advised that the following environmental protection measures apply to the Work.

- (a) Materials Handling and Storage
  - (i) Construction materials shall not be deposited or stored on riverbanks or river shorelines unless written acceptance from the Contract Administrator is received in advance.
  - (ii) Construction materials and debris shall be prevented from entering the Red River and Assiniboine River. In the event that materials and/or debris inadvertently enter the watercourse, the Contract shall be required to remove the material and restore the watercourse to its original condition.
- (b) Fuel Handling and Storage
  - (i) The Contractor shall obtain all necessary permits from Manitoba Conservation for the handling and storage of fuel products and shall provide copies to the Contract Administrator.
  - (ii) All fuel handling and storage facilities shall comply with The Dangerous Goods and Transportation Act Storage and Handling of Petroleum Products Regulation and any local land use permits.
  - (iii) Fuels, lubricants, and other potentially hazardous materials as defined in The Dangerous Goods and Transportation Act shall be stored and handled within the approved storage areas.
  - (iv) In accordance with Section 2.5 (Construction: General Guidelines) of the Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat, (DFO and DNR, 1996), the Contractor shall ensure that any temporary fuel storage areas established for construction of the project are contained by an impermeable dike and are located a minimum distance of 100 metres away from the high water line of the nearest river. Dikes shall be designed, constructed, and maintained to retain not less than 100% of the capacity of the total number of containers or 110% of the largest container, whichever is greatest. The dikes shall be constructed of clay or similar impervious material. If this type of material is not available, the dike shall be constructed of locally available material and lined with high density polyethylene (HDPE). Furthermore, the fuel storage area(s) shall be secured by a barrier such as a high fence and gate to prevent vandalism.
  - (v) The Contractor shall ensure that all fuel storage containers are inspected daily for leaks and spillage.
  - (vi) Products transferred from the fuel storage area(s) to specific Work Sites shall not exceed the daily usage requirement.
  - (vii) When servicing requires the drainage or pumping of fuels, lubricating oils or other fluids from equipment, a groundsheet of suitable material (such as HDPE) and size shall be spread on the ground to catch the fluid in the event of a leak or spill.
  - (viii) Refuelling of mobile equipment and vehicles shall take place at least 100 metres from a watercourse.
  - (ix) The area around storage Sites and fuel lines shall be distinctly marked and kept clear of snow and debris to allow for routine inspection and leak detection.
  - (x) A sufficient supply of materials, such as absorbent material and plastic oil booms, to clean up minor spills shall be stored nearby on-site. The Contractor shall ensure that additional material can be made available on short notice.
- (c) Waste Handling and Disposal
  - (i) The construction area shall be kept clean and orderly at all times during and at completion of construction.
  - (ii) At no time during construction shall personal or construction waste be permitted to accumulate for more than one day at any location on the construction Site, other than at a dedicated storage area as may be approved by the Contract Administrator.
  - (iii) All resulting debris shall be deposited at a Waste Disposal Ground operating under the authority of Manitoba Regulation #150/91. Exceptions are liquid industrial and hazardous wastes which may require special disposal methods (see SC:21.4 D).
  - (iv) Indiscriminate dumping, littering, or abandonment shall not take place.

- (v) No on-site burning of waste is permitted.
  - (vi) Waste storage areas shall not be located so as to block natural drainage.
  - (vii) Run-off from a waste storage area shall not be allowed to cause siltation of a watercourse.
  - (viii) Waste storage areas shall be left in a neat and finished appearance and/or restored to their original condition to the satisfaction of the Contract Administrator.
  - (ix) Equipment shall not be cleaned near watercourses; contaminated water from onshore cleaning operations shall not be permitted to enter watercourses.
- (d) Dangerous Goods/Hazardous Waste Handling and Disposal
- (i) Dangerous goods/hazardous wastes are identified by, and shall be handled according to, The Dangerous Goods Handling and Transportation Act and Regulations.
  - (ii) The Contractor shall be familiar with The Dangerous Goods Handling and Transportation Act and Regulations.
  - (iii) The Contractor shall have on-site staff that is trained and certified in the handling of the dangerous/hazardous goods, when said dangerous/hazardous goods are being utilized on-site for the performance of the Work.
  - (iv) Different waste streams shall not be mixed.
  - (v) Disposal of dangerous goods/hazardous wastes shall be at approved hazardous waste facilities.
  - (vi) Liquid hydrocarbons shall not be stored or disposed of in earthen pits on-site.
  - (vii) Used oils shall be stored in appropriate drums, or tankage until shipment to waste oil recycling centres, incinerators, or secure disposal facilities approved for such wastes.
  - (viii) Used oil filters shall be drained, placed in suitable storage containers, and buried or incinerated at approved hazardous waste treatment and disposal facilities.
  - (ix) Dangerous goods/hazardous waste storage areas shall be located at least 100 metres away from the high water line and be dyked.
  - (x) Dangerous goods/hazardous waste storage areas shall not be located so as to block natural drainage.
  - (xi) Run-off from a dangerous goods/hazardous waste storage area shall not be allowed to cause siltation of a watercourse.
  - (xii) Dangerous goods/hazardous waste storage areas shall be left in a neat and finished appearance and/or restored to their original condition to the satisfaction of the Contract Administrator.
- (e) Emergency Response
- (i) The Contractor shall ensure that due care and caution is taken to prevent spills.
  - (ii) The Contractor shall report all major spills of petroleum products or other hazardous substances with significant impact on the environment and threat to human health and safety (as defined in Table 1 below) to Manitoba Conservation, immediately after occurrence of the environmental accident, by calling the 24-hour emergency phone number (204) 945-4888. The Contract Administrator shall also be notified.
  - (iii) The Contractor shall designate a qualified supervisor as the on-site emergency response co-ordinator for the project. The emergency response co-ordinator shall have the authority to redirect manpower in order to respond in the event of a spill.
  - (iv) The following actions shall be taken by the person in charge of the spilled material or the first person(s) arriving at the scene of a hazardous material accident or the on-site emergency response co-ordinator:
    - (i) Notify emergency-response co-ordinator of the accident:
      - ◆ identify exact location and time of accident
      - ◆ indicate injuries, if any

- ◆ request assistance as required by magnitude of accident (Manitoba Conservation 24-hour Spill Response Line (204) 945-4888, Police, Fire Department, Ambulance, company backup)
- (ii) Attend to public safety:
  - ◆ stop traffic, roadblock/cordon off the immediate danger area
  - ◆ eliminate ignition sources
  - ◆ initiate evacuation procedures if necessary
- (iii) Assess situation and gather information on the status of the situation, noting:
  - ◆ personnel on-site
  - ◆ cause and effect of spill
  - ◆ estimated extent of damage
  - ◆ amount and type of material involved
  - ◆ proximity to waterways, sewers, and manholes
- (iv) If safe to do so, try to stop the dispersion or flow of spill material:
  - ◆ approach from upwind
  - ◆ stop or reduce leak if safe to do so
  - ◆ dike spill material with dry, inert sorbet material or dry clay soil or sand
  - ◆ prevent spill material from entering waterways and utilities by diking
  - ◆ prevent spill material from entering manholes and other openings by covering with rubber spill mats or diking Resume any effective action to contain, clean up, or stop the flow of the spilled product.
- (v) The emergency response co-ordinator shall ensure that all environmental accidents involving contaminants shall be documented and reported to Manitoba Conservation according to The Dangerous Goods Handling and Transportation Act Environmental Accident Report Regulation 439/87.
- (vi) When dangerous goods are used on-site, materials for containment and cleanup of spill material (e.g. absorbent materials, plastic oil booms, and oversized recovery drums) shall be available on-site.
- (vii) Minor spills of such substances that may be contained on land with no significant impact on the environment may be responded to with in-house resources without formal notification to Manitoba Environment.
- (viii) City emergency response, 9-1-1, shall be used if other means are not available.
- (ix) The on-site emergency response coordinator shall contact The Canadian Coast Guard, Selkirk (204) 785-6030, if the spill material reaches and is on or in the Red or Assiniboine Rivers.

**Table 1 Spills that must be reported to the Manitoba Conservation as Environmental Accidents**

Classification	Hazard	Reportable Quantity/Level
1	Explosives	All
2.1	Compressed Gas (flammable)	100 L*
2.2	Compressed Gas	100 L*
2.3	Compressed Gas (toxic)	All
2.4	Compressed Gas (corrosive)	All
3	Flammable Liquids	100 L
4	Flammable Solids	1 kg
5.1	PG** I & II	1 kg or 1 L
	PG III	50 kg or 50 L
5.2	Organic Peroxide	1 kg or 1 L
6.1	PG I	1 kg or 1 L

6.2	PG II & III	Acute Toxic	5 kg or 5 L
7		Infectious	All
		Radioactive	Any discharge or radiation level exceeding 10 mSv/h at the package surface and 200 uSv/h at 1 m from the package surface
8		Corrosive	5 kg or 5 L
9.1		Miscellaneous	50 kg (except PCB mixtures)
9.1		PCB Mixtures	500 g
9.2		Aquatic Toxic	1 kg or 1 L
9.3		Wastes (Chronic Toxic)	5 kg or 5 L

\* Container capacity (refers to container water capacity)

\*\* PG = Packing Group(s)

## E12. APPLICABLE MRST/PST FOR ELECTRICAL AND MECHANICAL WORKS

E12.1 Electrical work and mechanical work are subject to MRST/PST. Line items in the "Form B: Prices" have been added for accounting for respective MRST/PST for electrical and mechanical works.

### Measurement and Payment

E12.2 The Lump Sum Price for each line item titled "Applicable MRST/PST for All Mechanical and Electrical Work" Item F.1 shall be based upon the applicable percentage of MRST/PST required for the respective items of Work in the MRST/PST line item.

## E13. COLD WEATHER REQUIREMENTS

E13.1 Should any concrete Work to be carried out when the daily mean temperature is below 5°C or anticipated to be below 5°C within the next 24 hours, cold weather requirements will be specified herein.

E13.2 All freshly placed concrete shall be protected from the elements and from defacements due to construction operations.

E13.3 The following are minimum requirements for protecting concrete during and after placement during freezing weather, but mere adherence to these requirements will not relieve the Contractor of the necessity for producing concrete which has not been weakened or injured by frost or freezing, or replacing such damaged Work at no additional cost to the City;

- (a) Before any concrete is placed, all ice, snow, and frost shall be completely removed from all formwork. Where concrete Work is to come in contact with the earth, the surface of the earth shall be completely free of frost when concrete is placed thereon.
- (b) Heating enclosures shall be strong and wind-proof, well ventilated with heating units so located as to prevent local overheating or drying of the concrete or damage from combustion gases. Only indirect fired heaters will be accepted. Units must be vented outside the enclosure. No direct fired units will be accepted.
- (c) The Contractor shall inform the Contract Administrator well in advance as to the methods of enclosure and frost protection he proposes to employ.
- (d) Cold weather requirements shall be considered incidental to the Works of this Contract and no measurement or payment will be made for this item.

#### **E14. DOCUMENT MANAGEMENT SYSTEM**

- E14.1 The City will implement an on-line Document Management System (DMS) for Bid Op 899-2015 for the distribution and management of submittals and documents, as well as project correspondence. The Aconex platform will be utilized to provide the DMS service. See the Aconex website at [www.aconex.com](http://www.aconex.com) to become familiar with the functions and requirements of the Aconex. Online training material is available at [www.aconex.com/support](http://www.aconex.com/support).
- E14.2 The Contractor will be required to employ the Aconex system for all submittals and Contract communications. One training session for will be provided at no cost to the Contractor. The costs of providing Aconex Document Management System for up to five (5) users allocated by the Contractor (including Subcontractors) will be paid for by the City. The Contractor will be responsible for any labour or other internal costs incurred by the Contractor for use of the system.