



**THE CITY OF WINNIPEG**

# **TENDER**

**TENDER NO. 36-2024**

**NORTH END SEWAGE TREATMENT PLANT (NEWPCC) DIGESTER TANK 9-14  
SPIRAL HEAT EXCHANGER REPLACEMENTS**

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## **PART B - BIDDING PROCEDURES**

### **B1. CONTRACT TITLE**

B1.1 NORTH END SEWAGE TREATMENT PLANT (NEWPCC) DIGESTER TANK 9-14 SPIRAL HEAT EXCHANGER REPLACEMENTS

### **B2. SUBMISSION DEADLINE**

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, April 5, 2024.

B2.2 The Contract Administrator or the Manager of Purchasing may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

### **B3. SITE INVESTIGATION**

B3.1 Further to C3.1, the Contract Administrator will be available to conduct a site walkthrough of the North End Water Pollution Control Centre (NEWPCC) located at 2230 Main Street to provide Bidders access to the Site at the following times:

(a) March 19, 2024 at 9:00 a.m.

(b) March 21, 2024 at 9:00 a.m.

B3.2 Bidders are requested to register for the Site Investigation by contacting the Contract Administrator with the preferred site visit date they plan to attend. Instructions will be provided for site map, parking sign in and meeting location.

B3.3 The Bidder is advised that they are responsible for providing their own Personal Protective Equipment (PPE) while at the Site including but not limited to CSA approved footwear, hard hat. Bidders attending the site visits without proper PPE equipment will not be allowed to participate in the site visits walkthrough.

B3.4 The Bidder is advised that the dimensions and connection points of the spiral heat exchangers and valves are critical and must match the existing conditions.

B3.5 Attendance at one (1) of the Site Investigations is mandatory. Should a Bidder representative not attend at least one (1) of the site investigations, the Bidders Proposal will be determined to be non-responsive and will not be further evaluated.

B3.6 Access to view the Site shall be only under the supervision of an authorized City representative.

B3.7 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.

B3.8 The Bidder is responsible for inspecting the Site, the nature of the Work to be done and all conditions that might affect their Bid or their performance of the Work, and shall assume all risk for conditions existing or arising in the course of the Work which have been or could have been determined through such inspection.

B3.9 The Bidder is responsible for determining:

(a) the requirements and resources for delivery of the Heat Exchangers to the NEWPCC digester building or as otherwise assigned. The bidder is responsible for transporting the exchangers at the facility and ensure a SWP (safe work plan) for safe transport.

(b) the nature of the surface and subsurface conditions at the Site.

(c) Location equipment will be installed including space requirements, existing pipe isolation points and access for maintenance.

- (d) all other matters which could in any way affect this Bid, installation or the performance of the equipment.

#### **B4. ENQUIRIES**

- B4.1 All enquiries shall be directed to the Contract Administrator identified in D5.1.
- B4.2 If the Bidder finds errors, discrepancies or omissions in the Tender, 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 Tender 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 Tender 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.
- B4.6 Any enquiries concerning submitting through MERX should be addressed to:  
MERX Customer Support  
Phone: 1-800-964-6379  
Email: merx@merx.com

#### **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 Tender 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 Tender, 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.
- B6.3 Addenda will be available on the MERX website at [www.merx.com](http://www.merx.com).
- B6.4 The Bidder is responsible for ensuring that they have received all addenda and is advised to check the MERX website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B6.5 The Bidder shall acknowledge receipt of each addendum in Paragraph 10 of Form A: Bid/Proposal. Failure to acknowledge receipt of an addendum may render a Bid non-responsive.

B6.6 Notwithstanding B4, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D6.1.

## **B7. SUBSTITUTES**

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

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 their 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 they wish 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 their 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/Proposal;
- (b) Form B: Prices;
- (c) Form G1: Bid Bond and Agreement to Bond.

B8.2 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.

B8.3 The Bid shall be submitted electronically through MERX at [www.merx.com](http://www.merx.com).

B8.3.1 Bids will **only** be accepted electronically through MERX.

B8.4 Bidders are advised that inclusion of terms and conditions inconsistent with the Tender document, including the General Conditions, will be evaluated in accordance with B17.1(a) and may be deemed non-compliant.

## **B9. BID**

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

B9.2 Paragraph 2 of Form A: Bid/Proposal shall be completed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in their own name, their 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 their 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/Proposal, the Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Bid.

B9.4 Paragraph 13 of Form A: Bid/Proposal shall be signed in accordance with the following requirements:

- (a) if the Bidder is a sole proprietor carrying on business in their 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 their duly authorized officer or officers;
- (d) if the Bidder is carrying on business under a name other than their 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/Proposal should be entered 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 a price in Canadian funds for each item of the Work identified on Form B: Prices.

B10.1.1 Notwithstanding C12.2.3(c), prices on Form B: Prices shall not include the Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.

B10.1.2 Prices stated on Form B: Prices shall not include any costs which may be incurred by the Contractor with respect to any applicable funding agreement obligations as outlined in D36. Any such costs shall be determined in accordance with D36.

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).

B10.5 The Bidder shall enter the Total Bid Price from Form B: Prices into the Total Bid Price field in MERX.

B10.5.1 Bidders are advised that the calculation indicated in B17.4 will prevail over the Total Bid Price entered in MERX.

## **B11. CONFLICT OF INTEREST AND GOOD FAITH**

B11.1 Further to C3.2, Bidders, by responding to this Tender, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.

B11.2 Conflict of Interest means any situation or circumstance where a Bidder or employee of the Bidder proposed for the Work has:

- (a) other commitments;
- (b) relationships;
- (c) financial interests; or
- (d) involvement in ongoing litigation;

that could or would be seen to:

- (i) exercise an improper influence over the objective, unbiased and impartial exercise of the independent judgment of the City with respect to the evaluation of Bids or award of the Contract; or
- (ii) compromise, impair or be incompatible with the effective performance of a Bidder's obligations under the Contract;
- (e) has contractual or other obligations to the City that could or would be seen to have been compromised or impaired as a result of their participation in the Tender process or the Work; or
- (f) has knowledge of confidential information (other than confidential information disclosed by the City in the normal course of the Tender process) of strategic and/or material relevance to the Tender process or to the Work that is not available to other bidders and that could or would be seen to give that Bidder an unfair competitive advantage.

- B11.3** In connection with their Bid, each entity identified in B11.2 shall:
- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Work;
  - (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the Tender process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Contract Administrator; and
  - (c) provide the City with the proposed means to avoid or mitigate, to the greatest extent practicable, any perceived, potential or actual Conflict of Interest and shall submit any additional information to the City that the City considers necessary to properly assess the perceived, potential or actual Conflict of Interest.
- B11.4** Without limiting B11.3, the City may, in their sole discretion, waive any and all perceived, potential or actual Conflicts of Interest. The City's waiver may be based upon such terms and conditions as the City, in their sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Bidder to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in their sole discretion, to avoid or mitigate the impact of such Conflict of Interest.
- B11.5** Without limiting B11.3, and in addition to all contractual or other rights or rights at law or in equity or legislation that may be available to the City, the City may, in their sole discretion:
- (a) disqualify a Bidder that fails to disclose a perceived, potential or actual Conflict of Interest of the Bidder or any of their employees proposed for the Work;
  - (b) require the removal or replacement of any employees proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in their sole discretion, determines cannot be avoided or mitigated;
  - (c) disqualify a Bidder or employees proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B11.4 to avoid or mitigate a Conflict of Interest; and
  - (d) disqualify a Bidder if the Bidder, or one of their employees proposed for the Work, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.
- B11.6** The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in their sole discretion.

## **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, Purchasing Division website <https://www.winnipeg.ca/matmgt/Templates/files/debar.pdf>
- 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;
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract;
- (c) have a written workplace safety and health program if required pursuant to The Workplace Safety and Health Act (Manitoba);
- (d) have completed the Accessible Customer Service online training required by the Accessibility for Manitobans Act (AMA) (see B12.5 and D8);
- (e) Work shall be performed or supervised by a journeyman pipefitter with minimum 5 years experience and; and
- (f) Appropriate hoisting and rigging certification for personnel transporting Spiral Heat Exchangers.

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) Written confirmation of a safety and health certification meeting SAFE Work Manitoba's SAFE Work Certified Standard (e.g., COR™ and SECOR™) in the form of:
  - (i) 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
  - (ii) 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
- (b) a report or letter to that effect from an independent reviewer acceptable to the City. (A list of acceptable reviewers and the review template are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Purchasing Division website at <http://www.winnipeg.ca/matmgt/>).

B12.5 Further to B12.3(d), the Bidder acknowledges they and all Subcontractors have obtained training required by the Accessibility for Manitobans Act (AMA) available at <http://www.accessibilitymb.ca/training.html> for anyone that may have any interaction with the public on behalf of the City of Winnipeg.

B12.6 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B12.7 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.

B12.8 The Bidder shall:

- (a) Acknowledge the responsibility as the Contractor to ensure the WWSD meets the commitments that are outlined in the Environmental Management Policy.
- (b) Provide detailed information of all steps that will be taken to ensure that the EMS requirements are met upon request.
- (c) Be aware that the following Acts, Regulations, and By-laws may apply to the work:

Federal:

- a) Canadian Environmental Assessment Act;
- b) Canadian Environmental Protection Act;

- c) Fisheries Act and Regulations;
- d) Pest Control Products Act;
- e) Migratory Bird Convention Act; and
- f) Transportation of Dangerous Goods Act and Regulations.

Provincial:

- a) The Dangerous Goods Handling and Transportation Act;
- b) The Endangered Species Act;
- c) The Environment Act;
- d) The Fire Prevention Act;
- e) The Pesticides and Fertilizers Control Act;
- f) The Manitoba Heritage Resources Act;
- g) The Manitoba Noxious Weeds Act;
- h) The Manitoba Nuisance Act;
- i) The Public Health Act;
- j) The Red River Floodway Act;
- k) The Water Rights Act;
- l) The Workplace Safety and Health Act; and
- m) Applicable associated regulations.

Municipal

- a) Neighbourhood Liveability By-law
- b) Pesticide Management By-law
- c) Sewer By-law
- d) Solid Waste By-law
- e) Water By-law
- f) The City of Winnipeg By-Law

B12.9 Have onsite 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.

**B13. BID SECURITY**

B13.1 The Bidder shall include in their Bid Submission bid security in the form of a digital 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 Form G1: Bid Bond and Agreement to Bond, available on The City of Winnipeg, Corporate Finance, Purchasing Division website at <https://www.winnipeg.ca/MatMgt/templates/files/eBidsecurity.pdf>.

B13.2 Bid security shall be submitted in a digital format meeting the following criteria:

- (a) The version submitted by the Bidder must have valid digital signatures and seals;
- (b) The version submitted by the Bidder must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company.
- (c) The version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf.
- (d) The verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees.
- (e) The results of the verification must provide a clear, immediate and printable indication of pass or fail regarding B13.2(b).

- B13.3 Bonds failing the verification process will not be considered to be valid and the bid shall be determined to be non-responsive in accordance with B17.1(a).
- B13.4 Bonds passing the verification process will be treated as original and authentic.
- B13.4.1 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.
- B13.5 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 formed with the successful Bidder and the contract securities are furnished as provided herein. The bid securities of all other Bidders will be released when a Contract is awarded.
- B13.6 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 Tender.

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

- B14.1 Bids will not be opened publicly.
- 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 MERX website at [www.merx.com](http://www.merx.com).
- B14.3 After award of Contract, the name(s) of the successful Bidder(s) and their Contract amount(s) will be available on the MERX website at [www.merx.com](http://www.merx.com).
- B14.4 The Bidder is advised that any information contained in any Bid may be released if required by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law or by City policy or procedures (which may include access by members of City Council).
- B14.4.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Bid Submission identified by the Bidder as such in accordance with and by reference to Part 2, Section 17 or Section 18 or Section 26 of The Freedom of Information and Protection of Privacy Act (Manitoba), as amended.

#### **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/Proposal.
- 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 formed and the contract securities have been 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/Proposal.

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

- B16.1 A Bidder may withdraw their Bid without penalty at any time prior to the Submission Deadline.

#### **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 Tender, 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 their Bid or in other information required to be submitted, that they are 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.
- B17.4.1 Further to B17.1(a), in the event that a unit price is not provided on Form B: Prices, the City may determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.
- B17.4.2 Bidders are advised that the calculation indicated in B17.4 will prevail over the Total Bid Price entered in MERX.
- B17.5 This Contract will be awarded as a whole.

## **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 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 their 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 If funding for the Work is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, Bidders are advised that the terms of D36 shall immediately take effect upon confirmation of such funding, regardless of when funding is confirmed.
- B18.4 Where an award of Contract is made by the City, the award shall be made to the qualified Bidder submitting the lowest evaluated responsive Bid, in accordance with B17.
- B18.4.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of their Bid upon written request to the Contract Administrator.

## PART C - GENERAL CONDITIONS

### C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Construction* (Revision 2020 01 31) 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, Purchasing 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 Tender 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. FORM OF CONTRACT DOCUMENTS

D2.1 Notwithstanding C4.1(c) and C4.4, the Contract Documents will be provided to the Contractor electronically and there will be no requirement for execution and return to the City by the Contractor. Accordingly, the provisions under C4.4(a) and C4.4(b) are no longer applicable.

#### D3. SCOPE OF WORK

D3.1 The Work to be done under the Contract shall consist of the installation of six (6) spiral heat exchangers, associated valves, and pipe insulation as per PART E - and attached specifications.

D3.2 The major components of the Work are as follows:

- (a) Installation of six (6) spiral heat exchangers as per Section E4;
- (b) Installation of four (4) isolation valves per heat exchanger; a total of twenty four (24) isolation valves as per Section E5;
- (c) Installation of one (1) control valve per heat exchanger; a total of six (6) control valves, as per Section E6;
- (d) Add, replace and repair insulation on piping associated with the Digester spiral exchangers in the proximity of the exchangers;
- (e) Testing of heat exchangers as per Section E4.5;
- (f) Testing of isolation and control valves as per Section E5.8 and E6.8;
- (g) Supply and deliver spare parts as per Section E8;
- (h) Commissioning Section E12;
- (i) Removal and disposal of existing equipment as required;
- (j) Operating and Maintenance Manuals Section E13;
- (k) Training Section E14; and
- (l) Warranty Section E15.

D3.3 The following shall apply to the Services:

- (a) City of Winnipeg Green Building Policy: New City-Owned Buildings and major additions;  
<http://clkapps.winnipeg.ca/DMIS/DocExt/ViewDoc.asp?DocumentTypeId=2&DocId=5989>
- (b) Universal Design Policy  
<http://clkapps.winnipeg.ca/DMIS/DocExt/ViewDoc.asp?DocumentTypeId=2&DocId=3604>

#### D4. SITE INVESTIGATION DUE DILIGENCE AND RISK

D4.1 Notwithstanding C3.1, the Contractor acknowledges that the site investigation reports and other site information included in this Tender have been provided to it and may be relied upon by the Contractor to the extent that the Contractor uses Good Industry Practice in interpreting such report(s) and site information and carries out the Work in accordance with Good Industry

Practice based upon such report(s) and the information contained in them and such other site information. In the event that a site condition related to:

- (a) the location of any utility which can be determined from the records or other information available at the offices of any public authority or person, including a municipal corporation and any board or commission thereof, having jurisdiction or control over the utility;
- (b) the Site conditions, including but not limited to subsurface hazardous materials or other concealed physical conditions;
- (c) the location, nature, quality or quantity of the materials to be removed or to be employed in the performance of the Work;
- (d) the nature, quality or quantity of the Plant needed to perform the Work;
- (e) all matters concerning access to the Site, power supplies, location of existing services, utilities or materials necessary for the completion of the Work; and
- (f) all other matters which could in any way affect the performance of the Work;

that could not have been “properly inferable”, “readily apparent” and readily discoverable” using Good Industry Practice by the Contractor, results in additional Work which is a direct result of this newly discovered site condition, such additional Work will be considered by the City under Changes in Work.

## D5. DEFINITIONS

D5.1 When used in this Tender:

- (a) “**Bidder**” means any Person or Persons submitting a Bid for Goods and Services;
- (b) “**City**” means City of Winnipeg Water and Waste Department;
- (c) “**DCS**” means Digital Control System;
- (d) “**EMS**” means Environmental Management System;
- (e) “**FAT**” means Factor Acceptance Testing;
- (f) “**NEWPCC**” means North End Sewage Treatment Plant;
- (g) “**Supplier**” means the company that undertakes Bid 812-2023 to provide materials;
- (h) “**Supply Chain Disruption**” means an inability by the Contractor to obtain goods or services from third parties necessary to perform the Work of the Contract within the schedule specified therein, despite the Contractor making all reasonable commercial efforts to procure same. Contractors are advised that increased costs do not, in and of themselves, amount to a Supply Chain Disruption; and
- (i) “**WWSD**” means Wastewater Services Division.

D5.2 Notwithstanding C1.1, when used in this Tender:

- (a) “**Aspect Environmental**” means an environmental aspect is an activity, product or service that can interact with the environment while environmental specifications can be implemented to prevent or mitigate these impacts;
- (b) “**Instream**” means Waterway/Waterbody; and
- (c) “**Watercourse**” means a natural or artificial channel through which water flows.

## D6. CONTRACT ADMINISTRATOR

D6.1 The Contract Administrator is AtkinsRealis Inc. represented by:

Nathan Lee, M.Sc., P.Eng.

Project Manager / Mechanical Engineering Specialist

Telephone No. (204) 228-8523

Email: [nathan.lee2@atkinsrealis.com](mailto:nathan.lee2@atkinsrealis.com)

D6.2 At the pre-construction meeting, Nathan Lee will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

#### **D7. CONTRACTOR'S SUPERVISOR**

D7.1 At the pre-construction meeting, the Contractor shall identify their designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

#### **D8. ACCESSIBLE CUSTOMER SERVICE REQUIREMENTS**

D8.1 The Accessibility for Manitobans Act (AMA) imposes obligations on The City of Winnipeg to provide accessible customer service to all persons in accordance with the Customer Service Standard Regulation ("CSSR") to ensure inclusive access and participation for all people who live, work or visit Winnipeg regardless of their abilities.

D8.1.1 The Contractor agrees to comply with the accessible customer service obligations under the CSSR and further agrees that when providing the Goods or Services or otherwise acting on the City of Winnipeg's behalf, shall comply with all obligations under the AMA applicable to public sector bodies.

D8.1.2 The accessible customer service obligations include, but are not limited to:

- (a) providing barrier-free access to goods and services;
- (b) providing reasonable accommodations;
- (c) reasonably accommodating assistive devices, support persons, and support animals;
- (d) providing accessibility features e.g. ramps, wide aisles, accessible washrooms, power doors and elevators;
- (e) inform the public when accessibility features are not available;
- (f) providing a mechanism or process for receiving and responding to public feedback on the accessibility of all goods and services; and
- (g) providing adequate training of staff and documentation of same.

#### **D9. UNFAIR LABOUR PRACTICES**

D9.1 Further to C3.2, the Contractor declares that in bidding for the Work and in entering into this Contract, the Contractor and any proposed Subcontractor(s) conduct their respective business in accordance with established international codes embodied in United Nations Universal Declaration of Human Rights (UDHR) <https://www.un.org/en/about-us/universal-declaration-of-human-rights> International Labour Organization (ILO) [https://www.ilo.org/global/lang--en/index.htm](https://www.ilo.org/global/lang-en/index.htm) conventions as ratified by Canada.

D9.2 The City of Winnipeg is committed and requires its Contractors and their Subcontractors, to be committed to upholding and promoting international human and labour rights, including fundamental principles and rights at work covered by ILO eight (8) fundamental conventions and the United Nations Universal Declaration of Human Rights which includes child and forced labour.

D9.3 Upon request from the Contract Administrator, the Contractor shall provide disclosure of the sources (by company and country) of the raw materials used in the Work and a description of the manufacturing environment or processes (labour unions, minimum wages, safety, etc.).

D9.4 Failure to provide the evidence required under D9.3, may be determined to be an event of default in accordance with C18.

D9.5 In the event that the City, in its sole discretion, determines the Contractor to have violated the requirements of this section, it will be considered a fundamental breach of the Contract and the Contractor shall pay to the City a sum specified by the Contract Administrator in writing ("Unfair

Labour Practice Penalty”). Such a violation shall also be considered an Event of Default, and shall entitle the City to pursue all other remedies it is entitled to in connection with same pursuant to the Contract.

- D9.5.1 The Unfair Labour Practice Penalty shall be such a sum as determined appropriate by the City, having due regard to the gravity of the Contractor's violation of the above requirements, any cost of obtaining replacement goods/ services or rectification of the breach, and the impact upon the City's reputation in the eyes of the public as a result of same.
- D9.5.2 The Contractor shall pay the Unfair Labour Practice Penalty to the City within thirty (30) Calendar Days of receiving a demand for same in accordance with D9.5. The City may also hold back the amount of the Unfair Labour Practice Penalty from payment for any amount it owes the Contractor.
- D9.5.3 The obligations and rights conveyed by this clause survive the expiry or termination of this Contract, and may be exercised by the City following the performance of the Work, should the City determine, that a violation by the Contractor of the above clauses has occurred following same. In no instance shall the Unfair Labour Practice Penalty exceed the total of twice the Contract value.

## **D10. FURNISHING OF DOCUMENTS**

- D10.1 Upon award of the Contract, the Contractor will be provided with 'issued for construction' Contract Documents electronically, including Drawings in PDF format only.

## **SUBMISSIONS**

### **D11. AUTHORITY TO CARRY ON BUSINESS**

- D11.1 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.

### **D12. SAFE WORK PLAN**

- D12.1 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 Documents, if applicable.
- D12.2 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, Purchasing Division website at <http://www.winnipeg.ca/matmgt/Safety/default.stm>
- D12.3 Notwithstanding B12.4 at any time during the term of the Contract, the City may, at their sole discretion and acting reasonably, require an updated COR Certificate or Annual Letter of good Standing. A Contractor, who fails to provide a satisfactory COR Certificate or Annual Letter of good Standing, will not be permitted to continue to perform any Work.
- D12.4 A standalone SWP must be developed and submitted for safe transportation for installations and removal of the Spiral Heat Exchangers. The SWP will be reviewed by the consultant and ensure transportation meets safety requirements. Due to the weight of the exchangers the Digester floor grating is unable to support them. Appropriate measure must be taken to be reviewed and approved to provide adequate support between beams to ensure the digesters are safely transported.

D12.5 NEWPCC contractor orientation shall be completed prior to commencement of work on site.

### **D13. INSURANCE**

D13.1 The Contractor shall provide and maintain the following insurance coverage:

- (a) commercial general liability insurance, in the amount of at least two million dollars (\$2,000,000.00) inclusive, with The City of Winnipeg added as an additional insured, with a cross-liability clause, such liability policy to also contain contractual liability, unlicensed motor vehicle liability, non-owned automobile liability and products and completed operations, to remain in place at all times during the performance of the Work and throughout the warranty period;
- (b) if applicable, 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 \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence.
- (c) all risks course of construction insurance, including testing and commissioning in the amount of one hundred percent (100%) of the total Contract Price, written in the name of the Contractor and The City of Winnipeg, at all times during the performance of the Work and until the date of Total Performance.

D13.2 Deductibles shall be borne by the Contractor.

D13.3 The Contractor shall provide the City Solicitor with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work but in no event later than the date specified in C4.1 for the return of the executed Contract Documents, as applicable.

D13.4 The Contractor shall not cancel, materially alter, or cause each policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.

### **D14. CONTRACT SECURITY**

D14.1 The Contractor shall provide and maintain the performance bond and the labour and material payment bond 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; and
- (b) a labour and material payment bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H2: Labour and Material Payment Bond), in an amount equal to fifty percent (50%) of the Contract Price.

D14.1.1 Where the contract security is a performance bond, it may be submitted in hard copy or digital format. If submitted in digital format the contract security must meet the following criteria:

- (a) the version submitted by the Contractor must have valid digital signatures and seals;
- (b) the version submitted by the Contractor must be verifiable by the City with respect to the totality and wholeness of the bond form, including: the content; all digital signatures and digital seals; with the surety company, or an approved verification service provider of the surety company.
- (c) the version submitted must be viewable, printable and storable in standard electronic file formats compatible with the City, and in a single file. Allowable formats include pdf.

- (d) the verification may be conducted by the City immediately or at any time during the life of the bond and at the discretion of the City with no requirement for passwords or fees.
- (e) the results of the verification must provide a clear, immediate and printable indication of pass or fail regarding D14.1(b).

D14.1.2 Digital bonds failing the verification process will not be considered to be valid and may be determined to be an event of default in accordance with C18.1. If a digital bond fails the verification process, the Contractor may provide a replacement bond (in hard copy or digital format) within seven (7) Calendar Days of the City's request or within such greater period of time as the City in their discretion, exercised reasonably, allows.

D14.1.3 Digital bonds passing the verification process will be treated as original and authentic.

D14.2 The Contractor shall provide the Contract Administrator identified in D5.1 with the required performance and labour and material payment bonds within seven (7) Calendar Days of notification of the award of the Contract by way of an award letter 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 Documents, if applicable.

D14.3 The Contractor shall, as soon as practicable after entering into a contract with a Subcontractor:

- (a) give the Subcontractor written notice of the existence of the labour and material payment bond in D14.1(b); and
- (b) post a notice of the bond and/or a copy of that bond in a conspicuous location at the Site of the Work.

#### **D15. SUBCONTRACTOR LIST**

D15.1 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 Documents, if applicable.

#### **D16. EQUIPMENT LIST**

D16.1 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 Documents, if applicable.

#### **D17. DETAILED WORK SCHEDULE**

D17.1 The Contractor shall provide the Contract Administrator with a detailed work schedule 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 Documents if applicable.

- (a) NEWPCC site orientation will be require prior to working on site.

D17.2 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;
- (c) a daily manpower schedule for the Work.

All shall be acceptable to the Contract Administrator. The Contractor shall make all requested changes to the documents as required by the Contract Administrator, and re-submit as needed prior to executing the Work.

- D17.3 Further to D17.2(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.
- (a) Commencement Date;
  - (b) Mobilization and demobilization;
  - (c) Mechanical work;
  - (d) Instrumentation work;
  - (e) Structural Work;
  - (f) Satisfactory Installation;
  - (g) Commissioning;
  - (h) Training;
  - (i) Substantial performance; and
  - (j) Total Performance.
- D17.4 Further to D17.2(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.
- D17.5 Further to D17.2(c), the daily manpower schedule shall list the daily number of individuals on the Site for each trade.

## **SCHEDULE OF WORK**

### **D18. COMMENCEMENT**

- D18.1 The Contractor shall not commence any Work until they are in receipt of an award letter from the Award Authority authorizing the commencement of the Work.
- D18.2 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 D11;
    - (ii) evidence of the workers compensation coverage specified in C6.15;
    - (iii) the Safe Work Plan specified in D12;
    - (iv) evidence of the insurance specified in D13;
    - (v) the contract security specified in D14;
    - (vi) the Subcontractor list specified in D15;
    - (vii) the equipment list specified in D16;
    - (viii) the detailed work schedule specified in D17 and;
    - (ix) the direct deposit application form specified in D31.
  - (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.
- D18.3 The City intends to award this Contract by May 3, 2024.
- D18.3.1 If the actual date of award is later than the intended date, the dates specified for Commencement, Critical Stages, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

### **D19. WORK BY OTHERS**

- D19.1 Further to C6.25, the Contractor's attention is directed to the fact that other Contractors, the personnel of Utilities and the staff of the City may be working within the project limit, approach

roadway, adjacent roadways or right-of-way. The activities of these agencies may coincide with the Contractors execution of Work and it will be the Contractor's responsibility to cooperate to the fullest extent with other personnel working in the area, and such cooperation is an obligation of the Contractor under the terms of Contract.

- D19.2 Further to D19.1 the Contractor shall cooperate and coordinate all activities with all parties performing required Work by Others identified in D19.1 and accommodate the necessary area on Site required for the Work by Others to complete the Work

## **D20. WORKING DAYS**

- D20.1 Further to C1.1(tt), 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.
- D20.2 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.
- D20.3 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.
- D20.4 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.

## **D21. CRITICAL STAGES**

- D21.1 The Contractor shall achieve critical stages of the Work in accordance with the following requirements:
- (a) Receive Exchangers at site October 2024
  - (b) Substantial Performance
  - (c) Total Performance
  - (d) AS- built markups received no later than one month after Total Performance had been achieved.
  - (e) Operator and Maintenance Manuals.

## **D22. SUBSTANTIAL PERFORMANCE**

- D22.1 The Contractor shall achieve Substantial Performance by November 22, 2024.
- D22.2 Substantial Performance shall be the date at which All spiral Digester Exchangers, control valves, and isolation valves have been successfully installed and commissioned.
- D22.3 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.

D22.4 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.

### **D23. TOTAL PERFORMANCE**

D23.1 The Contractor shall achieve Total Performance by January 3, 2025.

D23.2 Total Performance shall be the date at which all work specified in the tender has been completed.

D23.2.1 Total Performance shall not be considered completed until installation and maintenance instructions, a list of spare parts and tools, as-constructed shop drawings mark-ups have all been received.

D23.3 All equipment must have been operational and in service for a minimum of one (1) week prior to the issuance of a certificate of Total Performance.

D23.4 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.

D23.5 Final deliverables for commissioning reports must be received and approved prior to inspection of work and issuance of a certificate of Total Performance.

D23.6 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.

### **D24. LIQUIDATED DAMAGES**

D24.1 If the Contractor fails to achieve Substantial or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City one hundred dollars (\$100) per Calendar Day for each and every Calendar Day following the day fixed herein for Substantial or Total Performance during which such failure continues.

D24.2 The amount specified for liquidated damages in D24.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial or Total Performance by the day fixed herein for same.

D24.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

- (a) The contractor shall not be liable for liquidated damages as a result of Spiral Heat Exchangers delivery or City of Winnipeg delays. The spiral Heat Exchanger are estimated to arrive October 25, 2024.

### **D25. SUPPLY CHAIN DISRUPTION SCHEDULE DELAYS**

D25.1 The City acknowledges that the schedule for this Contract may be impacted by Supply Chain Disruption. Commencement and progress of the Work shall be performed by the Contractor with due consideration to the delivery requirements and schedule identified in the Contract, in close consultation with the Contract Administrator.

D25.2 If the Contractor is delayed in the performance of the Work by reason of Supply Chain Disruption, the Work schedule may be adjusted by a period of time equal to the time lost due to such delay and costs related to such delay will be determined as identified herein.

- D25.3 A minimum of seven (7) Calendar Days prior to the commencement of Work, the Contractor shall declare whether a Supply Chain Disruption will affect the start date. The Contractor shall provide sufficient evidence that the delay is directly related to a Supply Chain Disruption, including but not limited to evidence related to availability ordering of Material or Goods, production and/or manufacturing schedules or availability of staff as appropriate.
- D25.4 For any delay related to suppl chain disruption and identified after Work has commenced, the Contractor shall within seven (7) Calendar Days of becoming aware of the anticipated delay declare the additional delay and shall provide sufficient evidence as indicated in D25.3. Failure to provide this notice will result in no additional time delays being considered by the City.
- D25.5 The Work schedule, including the durations identified in D21 to D23 where applicable, will be adjusted to reflect delays accepted by the Contract Administrator. No additional payment will be made for adjustment of schedules except where seasonal work, not previously identified in the Contract, is carried over to the following construction season.
- D25.6 Where Work not previously identified is being carried over solely as a result of delays related to Supply Chain Disruption, as confirmed by the Contract Administrator, the cost of temporary works to maintain the Work in a safe manner until Work recommences, will be considered by the Contract Administrator. Where the Work is carried over only partially due to Supply Chain Disruption, a partial consideration of the cost of temporary works will be considered by the Contract Administrator.
- D25.7 Any time or cost implications as a result of Supply Chain Disruption and in accordance with the above, as confirmed by the Contract Administrator, shall be documented in accordance with C7.

## **CONTROL OF WORK**

### **D26. JOB MEETINGS**

- D26.1 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.
- D26.2 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever they deem it necessary.

### **D27. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)**

- D27.1 Further to C6.26, 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).

### **D28. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS**

- D28.1 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 their sole discretion and acting reasonably, require updated proof of compliance, as set out in B12.4.

### **D29. RESPONSIBILITY FOR PLANT AND MATERIALS**

- D29.1 Further to C10, the City shall assume the risk of and responsibility for the following Material from the time that the City delivers the Material to the Site until the Material is incorporated in the Work or is removed from the Site:

- (a) Six (6) spiral heat exchangers
  - (i) Contractor remains responsible for receiving the delivery of the spiral heat exchangers, transporting to storage locations, transporting to installation site and installation as per E4.3.

## MEASUREMENT AND PAYMENT

### D30. INVOICES

D30.1 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

Send Invoices to [CityWpgAP-INVOICES@winnipeg.ca](mailto:CityWpgAP-INVOICES@winnipeg.ca)

Send Invoice Inquiries to [CityWpgAP-INQUIRIES@winnipeg.ca](mailto:CityWpgAP-INQUIRIES@winnipeg.ca)

D30.2 Invoices must clearly indicate, as a minimum:

- (a) the City's purchase order number;
- (b) the City's project number and title: 'S-1287 (36-2024) – NEWPCC) DIGESTER TANK 9-14 SPIRAL HEAT EXCHANGER REPLACEMENTS;
- (c) date of delivery;
- (d) delivery address;
- (e) type and quantity of work performed;
- (f) the amount payable with GST and MRST shown as separate amounts; and
- (g) the Contractor's GST registration number.

D30.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

### D31. PAYMENT

D31.1 Further to C12, the City shall make payments to the Contractor by direct deposit to the Contractor's banking institution, and by no other means. Payments will not be made until the Contractor has made satisfactory direct deposit arrangements with the City. Direct deposit application forms are at [https://winnipeg.ca/finance/files/Direct\\_Deposit\\_Form.pdf](https://winnipeg.ca/finance/files/Direct_Deposit_Form.pdf).

D31.2 Further to E16, no payment will be made for Cash Allowances other than as set out in E16.4.

### D32. PAYMENT SCHEDULE

D32.1 Further to C12, payment shall be in accordance with the following payment schedule:

- (a) Upon full technical submittal of equipment drawings and material 5%
- (b) Equipment delivery to site – 40%
- (c) Approved SWP for floor support, transportation and removal of Spiral Exchangers. – 5%
- (d) Full demolition of existing equipment, completion of site preparation and installation of new equipment. – 30% (progress)
- (e) Substantial Completion – 5%
- (f) Successful commissioning and Total Performance – 10%
- (g) Close out documents (Commissioning report, training, O&M) – 5%

## **WARRANTY**

### **D33. WARRANTY**

D33.1 Warranty is as stated in E15.2

## **DISPUTE RESOLUTION**

### **D34. DISPUTE RESOLUTION**

D34.1 If the Contractor disagrees with any opinion, determination, or decision of the Contract Administrator, the Contractor shall act in accordance with the Contract Administrator's opinion, determination, or decision unless and until same is modified by the process followed by the parties pursuant to D34.

D34.2 The entire text of C21.4 is deleted, and amended to read: "Intentionally Deleted"

D34.1 The entire text of C21.5 is deleted, and amended to read:

- (a) If Legal Services has determined that the Disputed Matter may proceed in the Appeal Process, the Contractor must, within ten (10) Business Days of the date of the Legal Services Response Letter, submit their written Appeal Form, in the manner and format set out on the City's Purchasing Website, to the Chief Administrative Officer, and to the Contract Administrator. The Contractor may not raise any other disputes other than the Disputed Matter in their Appeal Form.

D34.2 Further to C21, prior to the Contract Administrator's issuance of a Final Determination, the following informal dispute resolution process shall be followed where the Contractor disagrees with any opinion, determination, or decision of the Contract Administrator ("Dispute"):

- (a) In the event of a Dispute, attempts shall be made by the Contract Administrator and the Contractor's equivalent representative to resolve Disputes within the normal course of project dealings between the Contract Administrator and the Contractor's equivalent representative.
- (b) Disputes which in the reasonable opinion of the Contract Administrator or the Contractor's equivalent representative cannot be resolved within the normal course of project dealings as described above shall be referred to a without prejudice escalating negotiation process consisting of, at a minimum, the position levels as shown below and the equivalent Contractor representative levels:
  - (i) The Contract Administrator;
  - (ii) Supervisory level between the Contract Administrator and applicable Department Head;
  - (iii) Department Head.

D34.3 Names and positions of Contractor representatives equivalent to the above City position levels shall be determined by the Contractor and communicated to the City at the pre-commencement or kick off meeting.

D34.4 As these negotiations are not an adjudicative hearing, neither party may have legal counsel present during the negotiations.

D34.5 Both the City and the Contractor agree to make all reasonable efforts to conduct the above escalating negotiation process within twenty (20) Business Days, unless both parties agree, in writing, to extend that period of time.

D34.6 If the Dispute is not resolved to the City and Contractor's mutual satisfaction after discussions have occurred at the final escalated level as described above, or the time period set out in D34.5, as extended if applicable, has elapsed, the Contract Administrator will issue a Final

Determination as defined in C1.1(v), at which point the parties will be governed by the Dispute Resolution process set out in C21.

## INDEMNITY

### D35. INDEMNITY

D35.1 Indemnity shall be as stated in C17.

D35.2 Notwithstanding C17.1, the Contractor shall save harmless and indemnify the City in the amount of twice the Contract Price or five million dollars (\$5,000,000), whichever is greater, against all costs, damages or expenses arising from actions, claims, demands and proceedings, by whomsoever brought, made or taken as a result of negligent acts or negligent omissions of the Contractor, their Subcontractors, employees or agents in the performance or purported performance of the Work, and more particularly from:

- (a) accidental injury to or death of any person whether retained by or in the employ of the contractor or not, arising directly or indirectly by reason of the performance of the Work, or by reason of any trespass on or damage to property;
- (b) damage to any property owned in whole or in part by the City, or which the City by duty or custom is obliged, directly or indirectly, in any way or to any degree, to construct, repair or maintain;
- (c) damage to, or trespass or encroachment upon, property owned by persons other than the City;
- (d) any claim for lien or trust claim served upon the City pursuant to The Builders' Liens Act;
- (e) failure to pay a Workers Compensation assessment, or Federal or Provincial taxes;
- (f) unauthorized use of any design, device, material or process covered by letters patent, copyright, trademark or trade name in connection with the Work;
- (g) inaccuracies in any information provided to the City by the Contractor.

D35.3 Further to C17, The City shall save harmless and indemnify the Contractor in the amount of twice the Contract Price or five million dollars (\$5,000,000), whichever is greater, against all costs, damages or expenses arising from actions, claims, demands and proceedings, by whomsoever brought, made or taken as a result of negligent acts or negligent omissions of the City, their employees or agents in the performance of its obligation under the Contract.

## THIRD PARTY AGREEMENTS

### D36. FUNDING AND/OR CONTRIBUTION AGREEMENT OBLIGATIONS

D36.1 In the event that funding for the Work of the Contract is provided to the City of Winnipeg by the Government of Manitoba and/or the Government of Canada, the following terms and conditions shall apply, as required by the applicable funding agreements.

D36.2 Further to D36.1, in the event that the obligations in D36 apply, actual costs legitimately incurred by the Contractor as a direct result of these obligations ("Funding Costs") shall be determined by the actual cost to the Contractor and not by the valuation method(s) outlined in C7.4. In all other respects Funding Costs will be processed in accordance with Changes in Work under C7.

D36.3 For the purposes of D36:

- (a) "**Government of Canada**" includes the authorized officials, auditors, and representatives of the Government of Canada; and
- (b) "**Government of Manitoba**" includes the authorized officials, auditors, and representatives of the Government of Manitoba.

#### D36.4 Modified Insurance Requirements

- D36.4.1 If not already required under the insurance requirements identified in D13, the Contractor will be required to provide wrap-up liability insurance in an amount of no less than two million dollars (\$2,000,000) inclusive per occurrence. Such policy will be written in the joint names of the City, Contractor, Consultants and all sub-contractors and sub-consultants and include twelve (12) months completed operations. The Government of Manitoba and their Ministers, officers, employees, and agents shall be added as additional insureds.
- D36.4.2 If not already required under the insurance requirements identified in D13, the Contractor will be required to provide builders' risk insurance (including boiler and machinery insurance, as applicable) providing all risks coverage at full replacement cost, or such lower level of insurance that the City may identify on a case-by-case basis, such as an installation floater.
- D36.4.3 The Contractor shall obtain and maintain third party liability insurance with minimum coverage of two million dollars (\$2,000,000.00) per occurrence on all licensed vehicles operated at the Site. In the event that this requirement conflicts with another licensed vehicle insurance requirement in this Contract, then the requirement that provides the higher level of insurance shall apply.
- D36.4.4 Further to D13.3, insurers shall provide satisfactory Certificates of Insurance to the Government of Manitoba prior to commencement of Work as written evidence of the insurance required. The Certificates of Insurance must provide for a minimum of thirty (30) days' prior written notice to the Government of Manitoba in case of insurance cancellation.
- D36.4.5 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.

#### D36.5 Indemnification By Contractor

- D36.5.1 In addition to the indemnity obligations outlined in C17 of the General Conditions for Construction, the Contractor agrees to indemnify and save harmless the Government of Canada and the Government of Manitoba and each of their respective Ministers, officers, servants, employees, and agents from and against all claims and demands, losses, costs, damages, actions, suit or other proceedings brought or pursued in any manner in respect of any matter caused by the Contractor or arising from this Contract or the Work, or from the goods or services provided or required to be provided by the Contractor, except those resulting from the negligence of any of the Government of Canada's or the Government of Manitoba's Ministers, officers, servants, employees, or agents, as the case may be.
- D36.5.2 The Contractor agrees that in no event will Canada or Manitoba, their respective officers, servants, employees or agents be held liable for any damages in contract, tort (including negligence) or otherwise, for:
- (a) any injury to any person, including, but not limited to, death, economic loss or infringement of rights;
  - (b) any damage to or loss or destruction of property of any person; or
  - (c) any obligation of any person, including, but not limited to, any obligation arising from a loan, capital lease or other long term obligation;
- in relation to this Contract or the Work.

#### D36.6 Records Retention and Audits

- D36.6.1 The Contractor shall maintain and preserve accurate and complete records in respect of this Contract and the Work, including all accounting records, financial documents, copies of contracts with other parties and other records relating to this Contract and the Work during the term of the Contract and for at least six (6) years after Total Performance. Those records bearing original signatures or professional seals or stamps must be preserved in paper form; other records may be retained in electronic form.

D36.6.2 In addition to the record keeping and inspection obligations outlined in C6 of the General Conditions for Construction, the Contractor shall keep available for inspection and audit at all reasonable times while this Contract is in effect and until at least six (6) years after Total Performance, all records, documents, and contracts referred to in D36.6.1 for inspection, copying and audit by the City of Winnipeg, the Government of Manitoba and/or the Government of Canada and their respective representatives and auditors, and to produce them on demand; to provide reasonable facilities for such inspections, copying and audits, to provide copies of and extracts from such records, documents, or contracts upon request by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada and their respective representatives and auditors, and to promptly provide such other information and explanations as may be reasonably requested by the City of Winnipeg, the Government of Manitoba, and/or the Government of Canada from time-to-time.

D36.7 Other Obligations

D36.7.1 The Contractor consents to the City providing a copy of the Contract Documents to the Government of Manitoba and/or the Government of Canada upon request from either entity.

D36.7.2 If the Lobbyists Registration Act (Manitoba) applies to the Contractor, the Contractor represents and warrants that it has filed a return and is registered and in full compliance with the obligations of that Act, and covenants that it will continue to comply for the duration of this Contract.

D36.7.3 The Contractor shall comply with all applicable legislation and standards, whether federal, provincial, or municipal, including (without limitation) labour, environmental, and human rights laws, in the course of providing the Work.

D36.7.4 The Contractor shall properly account for the Work provided under this Contract and payment received in this respect, prepared in accordance with generally accepted accounting principles in effect in Canada, including those principles and standards approved or recommended from time-to-time by the Chartered Professional Accountants of Canada or the Public Sector Accounting Board, as applicable, applied on a consistent basis.

D36.7.5 The Contractor represents and warrants that no current or former public servant or public office holder, to whom the Value and Ethics Code for the Public Sector, the Policy on Conflict of Interest and Post Employment, or the Conflict of Interest Act applies, shall derive direct benefit from this Contract, including any employment, payments, or gifts, unless the provision or receipt of such benefits is in compliance with such codes and the legislation.

D36.7.6 The Contractor represents and warrants that no member of the House of Commons or of the Senate of Canada or of the Legislative Assembly of Manitoba is a shareholder, director or officer of the Contractor or of a Subcontractor, and that no such member is entitled to any benefits arising from this Contract or from a contract with the Contractor or a Subcontractor concerning the Work.

**FORM H1: PERFORMANCE BOND**  
(See D14)

KNOW EVERYONE 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

TENDER NO. 36-2004

NORTH END SEWAGE TREATMENT PLANT (NEWPCC) DIGESTER TANK 9-14 SPIRAL HEAT EXCHANGER REPLACEMENTS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

**FORM H2: LABOUR AND MATERIAL PAYMENT BOND**  
(See D14)

KNOW EVERYONE BY THESE PRESENTS THAT

\_\_\_\_\_  
his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Principal"), and

\_\_\_\_\_  
his/its heirs, executors, administrators, successors or assigns (hereinafter called the "Surety"), are held and firmly bound unto **THE CITY OF WINNIPEG** (hereinafter called the "Obligee"), for the use and benefit of claimants as herein below defined, in the amount of

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

of lawful money of Canada, for the payment whereof we, the Principal and the Surety jointly and severally bind ourselves firmly by these presents.

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

TENDER NO. 36-2004

NORTH END SEWAGE TREATMENT PLANT (NEWPCC) DIGESTER TANK 9-14 SPIRAL HEAT EXCHANGER REPLACEMENTS

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 promptly make payment to all claimants as hereinafter defined, for all labour, service and material used or reasonably required for use in the performance of the Contract, then this obligation shall be void, otherwise it shall remain in full force and effect subject, however, to the following conditions:

- (a) A claimant is defined as one having a direct contract with the Principal for labour, service and material, or any of them, used or reasonably required for use in the performance of the contract, labour, service and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental of equipment (but excluding rent of equipment where the rent pursuant to an agreement is to be applied towards the purchase price thereof) directly applicable to the Contract;
- (b) The above-named Principal and Surety hereby jointly and severally agree with the Obligee that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work, labour or service was done or performed, or materials were furnished by such claimant, may sue on this bond, prosecute the suit to final judgment for such sum or sums as may be justly due claimant, and have execution thereon;
- (c) No suit or action shall be commenced hereunder by any claimant
  - (i) unless claimant shall have given written notice to the Principal and the Surety above-named, within one hundred and twenty (120) days after such claimant did or performed the last of the work, labour or service, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work, labour or service was done or performed. Such notice shall be served by mailing the same by registered mail to the Principal, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the Province of Manitoba;

- (ii) after the expiration of one (1) year following the date on which Principal ceased work on said Contract; including work performed under the guarantees provided in the Contract;
  - (iii) other than in a court of competent jurisdiction in the Province of Manitoba.
- (d) The amount of this bond shall be reduced by and to the extent of any payment or payments made in good faith hereunder, inclusive of the payment by Surety of mechanics liens which may be filed of record against said improvement, whether or not claim for the amount of such lien be presented under and against this bond.
- (e) The Surety shall not be liable for a greater sum than the specified penalty of this bond.

The Principal and Surety hereby agree that The Guarantors' Liability Act (Manitoba) shall apply to this Bond.

IN TESTIMONY WHEREOF, the Principal has hereunto set its hand affixed its seal, and the Surety has caused these presents to be sealed and with its corporate seal duly attested by the authorized signature of its signing authority this

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

SIGNED AND SEALED  
in the presence of:

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

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

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

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

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

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



**FORM K: EQUIPMENT**  
(See D16)

**36-2024 NORTH END SEWAGE TREATMENT PLANT (NEWPCC) DIGESTER TANK 9-14 SPIRAL HEAT EXCHANGER REPLACEMENTS**

<p><b>1. 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>2. 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>3. 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>

**FORM K: EQUIPMENT**  
(See D16)

**36-2024 NORTH END SEWAGE TREATMENT PLANT (NEWPCC) DIGESTER TANK 9-14 SPIRAL HEAT EXCHANGER REPLACEMENTS**

<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 their 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, Purchasing 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 Tender shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B7. In every instance where a brand name or design specification is used, the City will also consider approved equals and/or approved alternatives in accordance with B7.
- E1.4 The following are applicable to the Work:

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

#### DIVISION 01

#### General Requirements

011100	Summary of Work
013300	Submittal Procedures
014500	Quality Control
016100	Common Product Requirements
017303	Execution Requirements
017411	Cleaning
017800	Closeout Submittals
017900	Demonstration and Training

#### DIVISION 02

#### EXISTING CONDITIONS

024119	Selective Demolition
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#### DIVISION 09

#### FINISHES

099123	Painting
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#### DIVISION 23

#### HEATING, VENTILATING AND AIR CONDITIONING (HVAC)

23 05 23.02	Valves – Cast Iron
23 05 54	Mechanical Identification
23 07 19	Insulation
23 57 00	Heat Exchangers

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
1-0101-M0001	Partial Level Plan Spiral Heat Exchanger
1-0101D-A0215	PID Sludge Recirculation System 9
1-0101D-A0216	PID Sludge Recirculation System 10
1-0101D-A0217	PID Sludge Recirculation System 11
1-0101D-A0218	PID Sludge Recirculation System 12
1-0101D-A0219	PID Sludge Recirculation System 13
1-0101D-A0220	PID Sludge Recirculation System 14

## GENERAL REQUIREMENTS

### E2. HAZARDOUS MATERIALS

- E2.1 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.

### E3. SERVICES

- E3.1 The Contractor shall receive (purchased on tender 812-2023), transport within NEWPCC facility and install six (6) spiral heat exchangers in accordance with the requirements hereinafter specified. Removal of existing exchangers and disposal as required.
- E3.2 The Contractor shall supply and install four (4) isolation valves per heat exchanger, for a total of twenty four (24) isolation valves.
- E3.3 The Contractor shall supply and install one (1) control valve per heat exchanger, for a total of six (6) control valves.

### E4. SPIRAL HEAT EXCHANGERS

- E4.1 Applicable Codes and Standards
- (a) As supplemented by this specification, the following codes, standards and regulations shall apply:
- (i) ASME Boiler and Pressure Vessel Code, section VIII, Division 1, latest revision, its addenda, and all other documents referenced therein. (Referred herein after as the Code.) Heat exchangers shall be designed and stamped in accordance with this Code.
  - (ii) ASTM A516/A516M pressure vessel plates, carbon steel, for moderate and lower temperature service.
- (b) In addition, the following codes, standards and regulations in force on the date of the Purchase Order shall apply to the extent specified herein:
- (i) National Building Code of Canada
  - (ii) Requirements of the Province of Manitoba in which the heat exchanger will be installed.
- E4.2 Installation
- (a) Six (6) Spiral heat exchangers are to be replaced as per the drawings.
- (b) Verify condition of substrates and equipment pads are acceptable for spiral heat exchanger installation in accordance with manufacturer's instructions:
- (i) Visually inspect substrate presence.
  - (ii) Inform consultant of unacceptable conditions

- (iii) Proceed with installation only after unacceptable conditions have been remedied after receipt of approval from Consultant.
- (c) Repair or replace Housekeeping pad if existing is unsuitable for installation.
- (d) Proper standoffs and mounts to be fabricated and supplied by contractor for installation of heat exchangers as required.
- (e) Contractor to provide two (2) weeks notice for each or series of spiral heat exchanger replacements in order to coordinate the appropriate shutdowns and changeovers of equipment.
  - (i) No more than one spiral heat exchanger to be replaced at a time but, short turnaround time may be permitted.
- (f) Install spiral heat exchangers as per manufacturer's instructions and applicable Codes. Ensure all equipment is level and securely fastened to equipment pads and substrates.
- (g) Appurtenances:
  - (i) Install with relief valves piped to drain. Verify orientations per spiral heat exchanger.
- (h) Replacement of Isolation Valves (see Section E5) and Control Valves (see Section E6) to occur prior to or concurrently at each individual spiral heat exchanger.
- (i) All piping inlet and outlet dimensions of the Digester exchangers will match existing. The new exchangers are slightly larger but are the direct replacement unit. There may be minor modifications to the base mounts to ensure the exchangers are properly secured and in alignment with existing piping dimensions.

#### E4.3 Transportation

- (a) The Contractor shall coordinate with the Supplier for the delivery of the spiral heat exchangers to Site. The Supplier is responsible for transporting of the spiral heat exchangers at site. The contractor is responsible for transporting the spiral heat exchangers from the loading bay to the appropriate storage areas prior to construction:
  - (i) The contractor is responsible for all rigging and assisting with offloading the exchangers from the delivery truck.
  - (ii) The Spiral Heat Exchangers will be offloaded via a supplied crane truck. The contractor shall receive the Spiral heat Exchangers to transport to Digester galleries as storage prior to transporting to installation location as coordinated and approved;
  - (iii) The loading bay has a single fixed crane available with lifting capacity to lift a single spiral heat exchanger at a time. Waste Water Services will be responsible for operation however all connecting, rigging and work other than operation is to be completed by the contractor. This includes railings and floor hatches;
  - (iv) Other than the loading bay gantry crane the contractor is reasonable for providing all equipment required such as portable gantry crane and casters to transport the exchangers within the digester building;
  - (v) All six spiral heat exchangers must be brought to the upper level. Two spiral heat exchangers will be stored at the upper level.
  - (vi) Four of the six spiral heat exchangers must be lowered down a hatch from the upper level down to the lower level then transported to the adjacent storage area.
- (b) The existing steel floor grating leading to Spiral Heat Exchangers # 9, 10, 11, and 12, are not rated to carry the weight of individual spiral heat exchangers. The loads must be spanned across to the structural members beneath the floor grating.
- (c) Before commencement of work, Contractor to provide a separate Safe Work Plan to Consultant for approval for transport of spiral heat exchangers from their storage locations to their respective installation locations.
- (d) Safe Work Plan must use the provided template to be completed and include:
  - (i) Travel Path for each spiral heat exchanger;
  - (ii) Details on how to span across structural members to support load of each spiral heat exchanger along the Travel Path;

- (iii) Number of personnel required for each transport.
- (e) Where supplemental structural supports and equipment are utilized, drawings or equipment specifications must be provided for approval.

#### E4.4 Design Conditions

- (a) The spiral heat exchangers have the following design parameters:
  - (i) Thermal Capacity: 806 kW
  - (ii) Sludge Flow: 180 m<sup>3</sup>/hr
  - (iii) Hot Water Flow: 125 m<sup>3</sup>/hr
  - (iv) Sludge Temperature In: 33°C
  - (v) Sludge Temperature Out: 38°C
  - (vi) Water Temperature In: 68°C
  - (vii) Water Temperature Out: 63°C
  - (viii) Pressure Drop – Sludge Side: 4.9 m
  - (ix) Pressure Drop – Water Side: 3.4 m
  - (x) Max Operating Pressure: 210 kPa

#### E4.5 Testing

#### E4.6 Testing is to be performed during commissioning and in conjunction with section E5.8.

- (a) Check heater for cleanliness on primary and secondary sides.
- (b) Check installation, settings, operation of relief valves and safety valves.
- (c) Check installation, location, settings and operation of operating, limit and safety controls.
- (d) The contractor shall perform Heat exchanger the following testing to be witnessed by the manufacturer during commissioning:
  - (i) The Exchangers shall be subjected to a hydrostatic test pressure which, at every point in the exchanger, is not less than that required by the Code. There shall be no water leakage from nozzle blinds during hydrostatic test.
  - (ii) Prior to final inspection and hydrostatic test, the inside and outside of the vessel shall be cleaned and shall be free from all slag, scale, dirt, grit, weld spatter and pieces of metal, paint, oil, etc.;
  - (iii) The use of shellac, compounds, lead, etc., on gaskets is not permitted;
  - (iv) All gaskets shall be new;
- (e) All hydrostatic tests shall be held for at least one hour and shall be made in the presence of an authorized inspector and with his approval.
- (f) Following the hydrottest, the exchanger shall be completely drained so that no liquid remains.

#### E4.7 System Start-Up in coordination with the supplier:

- (a) Spiral Heat Exchangers shall be subjected to a performance test of at least three (3) hours to ensure operation meets the design conditions as specified in Section E4.4.
  - (i) Typical time to reach thermal equilibrium after maintenance is six (6) hours. Performance test shall begin after thermal equilibrium.
- (b) Verify flow rates, pressure drops, inlet/outlet temperatures.
- (c) Verify operation of control valve without binding, slack in components.
- (d) Verify settings, operation, and safe discharge from safety valves and relief valves and cleanouts.
- (e) Verify settings, operation of operating, limit, and safety controls and alarms.

#### E4.8 Repairs

- (a) Any major repairs resulting from the material defects or installation errors must be reviewed with the Contract Administrator prior to taking any corrective action.
- (b) Welding repairs carried out after heat treatment shall be re heat treated, or after testing shall be re-tested, or after radiography shall be re radiographed, or after examination by magnetic particle or liquid penetrant method, shall be re examined in accordance with the requirements of this specification. The Contract Administrator shall be notified of any such repairs.

## **E5. ISOLATION VALVES**

### **E5.1 Applicable Codes and Standards**

- (a) NSF/ANSI 61
- (b) NSF/ANSI 372
- (c) ASME B16.1

### **E5.2 Supply and install for each Digester Heat Exchanger:**

- (a) Two (2) water isolation valves; total of twelve (12) water isolation valves.
- (b) Two (2) sludge isolation valves; total of twelve (12) sludge isolation valves.

### **E5.3 Isolation valves to be Examined as per manufacturer's instructions.**

- (a) Examine valve interior for cleanliness, freedom from foreign matter, and corrosion. Remove special packing materials, such as blocks, used to prevent disc movement during shipping and handling.
- (b) Operate valves in position from fully open to fully closed. Examine guides and seats made accessible by such operations.
- (c) Examine threads on valve and mating pipe for form and cleanliness.
- (d) Examine mating flange faces for conditions that might cause leakage. Check bolting for proper size, length, and material. Verify that gasket is of proper size, that its material composition is suitable for service, and that it is free from defects and damage.
- (e) Do not attempt to repair defective valves; replace with new valves.

### **E5.4 Isolation valves to be installed as per manufacturer's instructions and applicable Codes.**

- (a) Install valves with unions or flanges at each piece of equipment arranged to allow service, maintenance, and equipment removal without system shutdown.
- (b) Locate valves at existing locations. Provide support where necessary.
- (c) Install valves in position to allow full stem movement.
- (d) Install valves in horizontal piping with stem at or above center or pipe.
- (e) Install valve tags. Tag information as per Section E9.

### **E5.5 Water Isolation Valves Design Requirements:**

- (a) Rating: 150 psi
- (b) Size: 6 inch
- (c) Type: PFA Fused Cast Iron Ball Valve
- (d) End Connection: F1- Flanged Drilling; ASME Class 125/150
- (e) Body material: Cast Iron/ASTM A126 Class B
- (f) Seats: PTFE
- (g) Stem: Stainless Steel
- (h) Port: Full, double drilled and tapped for venting or drain
- (i) O-ring Seal: Buna-N

- (j) Actuator at working height: Manual lever or wheel (minimum 8" diameter). Actuator above working height: Chainwheel (minimum 8" diameter) complete with chainwheel operator, chains to working height, and all required accessories.
- (i) See Valves Summary Table in E5.7.
- (k) Min/Max valve temperatures: -20°F / 180°F
- (l) Acceptable Material: American Valve Series 4000; or approved alternate in accordance with B7.

E5.6 Sludge Isolation Valves Design requirements:

- (a) Rating: 150 psi
- (b) Size: 6 inch
- (c) Type: PFA Fused Cast Iron Ball Valve
- (d) End Connection: F1- Flanged Drilling; ASME Class 125/150
- (e) Body material: Cast Iron/ASTM A126 Class B
- (f) Seats: PTFE
- (g) Stem: Stainless Steel
- (h) Port: Full, double drilled and tapped for venting or drain
- (i) O-ring Seal: Buna-N
- (j) Actuator at working height: Manual lever or wheel (minimum 8" diameter). Actuator above working height: Chainwheel (minimum 8" diameter) complete with chainwheel operator, chains to working height, and all required accessories.
- (i) See Valves Summary Table in E5.7.
- (k) Min/Max valve temperatures: -20°F / 180°F
- (l) Acceptable Material: American Valve Series 4000; or approved alternate in accordance with B7.

E5.7 Isolation Valves Summary Table and Tags

(a)

Heat Exchanger	Tag	Fluid	Port	Face-to-Face	Type	Actuator	Height
9	D112-HV3	Water	Inlet	10.5"	Ball	Lever	normal
9	D112-HV4	Water	Outlet	10.5" <sup>1</sup>	Gate	Wheel	normal
9	D812-HV1	Sludge	Inlet	10.5"	Ball	Lever	normal
9	D812-HV2	Sludge	Outlet	10.5"	Ball	Lever	normal
10	D114-HV3	Water	Inlet	10.5"	Ball	Lever	normal
10	D114-HV4	Water	Outlet	10.5" <sup>1</sup>	Gate	Wheel	normal
10	D814-HV1	Sludge	Inlet	10.5"	Ball	Lever	normal
10	D814-HV2	Sludge	Outlet	10.5"	Ball	Lever	normal
11	D111-HV3	Water	Inlet	10.5"	Ball	Lever	normal
11	D111-HV4	Water	Outlet	10.5"	Gate	Wheel	normal
11	D811-HV1	Sludge	Inlet	10.5"	Ball	Lever	normal
11	D811-HV2	Sludge	Outlet	10.5"	Ball	Lever	normal
12	D113-HV3	Water	Inlet	10.5"	Ball	Lever	normal
12	D113-HV4	Water	Outlet	10.5" <sup>1</sup>	Gate	Wheel	normal
12	D813-HV1	Sludge	Inlet	10.5"	Ball	Lever	normal
12	D813-HV2	Sludge	Outlet	10.5"	Ball	Lever	normal
13	D115-HV3	Water	Inlet	10.5"	Gate	Wheel	normal

13	D115-HV4	Water	Outlet	10.5"	Gate	Wheel	normal
13	D815-HV3	Sludge	Inlet	10.5"	Ball	Chainwheel	8'
13	D815-HV4	Sludge	Outlet	10.5"	Ball	Chainwheel	9'
14	D116-HV3	Water	Inlet	10.5"	Gate	Wheel	normal
14	D116-HV4	Water	Outlet	10.5"	Gate	Wheel	normal
14	D816-HV3	Sludge	Inlet	15.5"	Ball	Chainwheel	8'
14	D816-HV4	Sludge	Outlet	15.5"	Ball	Chainwheel	8'

<sup>1</sup> Measurement unknown; valve covered by insulation

#### E5.8 Testing

- (a) Valve may be either tested while testing pipelines, or as a separate step.
- (b) Test that all valves open and close smoothly under operating pressure conditions.
- (c) Inspect air and vacuum valves as pipe is being filled to verify venting and seating is fully functional.
- (d) Count and record number of turns to open and close valves; account for any discrepancies with manufacturer's data.
- (e) Testing shall be documented and recorded in the commissioning report.

### E6. CONTROL VALVES

E6.1 Supply and install one (1) control valve per heat exchanger, for a total of six (6) control valves.

E6.2 Control valves and components to be assembled as per manufacturer's instructions.

E6.3 Control valves and components to be examined as per manufacturer's instructions.

- (a) Examine valve interior for cleanliness, freedom from foreign matter, and corrosion. Remove special packing materials, such as blocks, used to prevent disc movement during shipping and handling.
- (b) Operate valves in position from fully open to fully closed. Examine guides and seats made accessible by such operations.
- (c) Examine threads on valve and mating pipe for form and cleanliness.
- (d) Examine mating flange faces for conditions that might cause leakage. Check bolting for proper size, length, and material. Verify that gasket is of proper size, that its material composition is suitable for service, and that it is free from defects and damage.
- (e) Do not attempt to repair defective valves; replace with new valves.

E6.4 Control valves and components to be installed as per manufacturer's instructions and applicable Codes.

E6.5 Control Valve Design Requirements

- (a) Type: Sliding Stem
- (b) Rating: 125 psi
- (c) Size: NPS 4
- (d) Body material: cast iron
- (e) Connection: Flanged
- (f) Flow: Linear
- (g) Packing: single PTFE V-ring
- (h) Shutoff: ANSI CL IV
- (i) Body Style: three-way

- (j) Guiding: cage
- (k) Balance: balanced
- (l) Seat type: metal
- (m) Port diameter: 4 3/8 inch
- (n) Travel: 2 inch
- (o) Trim style: linear
- (p) Trim capacity: full capacity
- (q) Acceptable material: Fisher 4" CL125FF Cast Iron YD Converging Valve; or approved equal in accordance with B7

E6.6 Actuator Design Requirements

- (a) Actuator size: 45i
- (b) Operating range: 0 to 18 psig
- (c) Acceptable material: Fisher 667sz 45i actuator; or approved equal in accordance with B7

E6.7 Position Indicator Design Requirements

- (a) Action: direct
- (b) Positioner: no
- (c) Actuator type: 667
- (d) Actuator size: 45i
- (e) Approval: explosion proof and dust ignition
- (f) Max travel: 4 1/8 inch
- (g) Actuator max travel: 2 inch
- (h) Output signal: 4 20 20 mA DC
- (i) Acceptable material: Fisher 4200 electronic position transmitter; or approved equal in accordance with B7

E6.8 Testing of control valves as per manufacturer's instructions

- (a) Valve must be tested as a complete assembly.
- (b) Test that all valves open and close smoothly under operating pressure conditions.
- (c) Testing shall document 5 point up and down and recorded in the commissioning report.
- (d) Inspect air and vacuum valves as pipe is being filled to verify venting and seating is fully functional.
- (e) Count and record number of turns to open and close valves; account for any discrepancies with manufacturer's data.

E6.9 Control Valve Tags

- (a)

Heat Exchanger	Tag
9	D112 TV
10	D114 TV
11	D111 TV
12	D113 TV
13	D115 TV
14	D116 TV

## **E7. INSULATION**

- E7.1 Applicable codes and standards:
- (a) All insulation constructed as per attached Specification 23 07 19.
- E7.2 Provide new insulation where missing, or repair existing insulation on all hot water lines:
- (a) Supply and return lines to heat exchanger.
  - (b) Supply and return lines to control valve.
- E7.3 Paint new or repaired insulation to match existing piping colour schemes.
- (a) Acceptable alternate: Insulation jackets premade in matching colours.

## **E8. SPARE PARTS**

- E8.1 Provide one (1) control valve packing repair kits.
- (a) Acceptable Material: RPACKX00022 or approved equal in accordance with B7.
- E8.2 Provide one (1) control valve gasket kits.
- (a) Acceptable Material: RGASKETXB92 or approved equal in accordance with B7.
- E8.3 Provide one (1) control valve O-ring kits.
- (a) Acceptable Material: 10A3482X022 or approved equal in accordance with B7.
- E8.4 Provide one (1) control valve seal ring kits.
- (a) Acceptable Material: 10A3484X012 or approved equal in accordance with B7.
- E8.5 Provide one (1) control valve back-up ring kits.
- (a) Acceptable Material: 10A3485X042 or approved equal in accordance with B7.
- E8.6 Provide one (1) control valve Diaphragm,667 Sz45,50 kits.
- (a) Acceptable Material: 2E859602202 or approved equal in accordance with B7.
- E8.7 Provide one (1) Control Valve 512 repair kits.
- (a) Acceptable Material: R667X000512 or approved equal in accordance with B7.
- E8.8 Provide one (1) Control Valve 502 repair kits.
- (a) Acceptable Material: R667X000502 or approved equal in accordance with B7.

## **E9. IDENTIFICATION**

- E9.1 Provide stainless steel tags and for all equipment installed in this scope of work.
- (a) Lettering and numbers are to be engraved in the tag;
  - (b) Tag identification Lettering height: minimum 12 mm;
  - (c) Tags are to come with removable bands for attaching tags to valves.
- E9.2 Tags to show equipment numbers. Numbers to match PID drawings.
- (a) The back of the tags are to identify Make, Model and Serial number.
- E9.3 Spiral Heat Exchangers
- (a) Manufacturer's Equipment Nameplate, metal or plastic laminate nameplate mechanically fastened to each piece of equipment.
  - (b) Nameplate to include: manufacturer name, model, size, serial #, capacity.
  - (c) Spiral Exchangers are to be clearly identified in large lettering in addition to tags.

**E9.4 Isolation Valves**

- (a) Tags to identify equipment numbers, fluid, inlet/outlet.
- (b) Nameplate to include: manufacturer, model, size, rating.

**E9.5 Control Valves**

- (a) Tags to identify equipment number.
- (b) Nameplate to include: manufacturer, model, size, rating.

**E10. CLEANING**

E10.1 Progress cleaning: leave work area clean at end of day. Tools and equipment must be secured for safety.

E10.2 Final cleaning: Upon completion, remove surplus materials, rubbish, tools and equipment.

**E11. PROTECTION**

E11.1 Protect installed products and components from damage during construction.

E11.2 Repair damage to adjacent materials caused by heat exchanger or valve installations.

E11.3 Owner is not liable for damages to other equipment or materials caused during construction.

**E12. COMMISSIONING**

E12.1 On-site start-up inspections and on-site commissioning activities are planned to occur over one (1) full business day (8 hours) for each heat exchanger. The Contract Administrator will provide a minimum of five (5) Business Days notice of on-site initial start-up inspection and on-site field commissioning activities. Only one (1) Heat Exchanger and associated equipment will be installed and commissioned at a time, therefore a total of six (6) separate on-site start-up inspections and commission activities will be required by the installation Contractor.

- (a) The heat exchanger supplier will be required to provide documentation, installation assistance and troubleshooting support as required by the installing Contractor.
- (b) In order to ensure reliable operation of a new installed Heat Exchangers, the Heat Exchanger supplier will be required to witness the initial commissioning.
- (c) The supplier authorized representative will note any warranty or installation deficiencies.
- (d) The installing contractor will be required to provide inspection checklists and for each on-site heat exchanger and associated equipment. The installing contractor will be responsible to create and fill out checklists and commission forms. Forms are to document progress and require sign off to validate each commissioning activity.

**E13. OPERATING AND MAINTENANCE (O&M) MANUALS**

E13.1 Provide the Contract Administrator with manufacturer's technical literature for each component supplied detailing correct installation procedure and recommended operating and maintenance schedule, grades of lubricants required and assembly/disassembly instructions.

E13.2 After the Contractor has reached Total Performance, provide the Contract Administrator with one (1) electronic copy for each review submission for the complete Operating and Maintenance Manuals.

E13.3 Provide the Contract Administrator with five (5) hard copies and one (1) electronic copy of the Contract Administrator reviewed an approved Operating and Maintenance Manuals. Bind hard copies in a three (3) "D-Ring", hard-covered, plastic jacketed binder with full cover and spine

inserts. Organize contents into applicable sections of work, parallel to Specifications breakdown and provide tab dividers for separating sections along with cover sheets for each section. Provide each binder with USB for a complete electronic copy of Operating and Maintenance Manuals.

E13.4 Each Tab requires a section index page to list the separate items in each tab along with the page number and number of pages. All pages shall be numbered.

E13.5 Digital copies are to be word searchable and all tabs, indexes and references cross-reference linked (hyperlink).

E13.6 In addition to the information called in the Specifications, the following shall be included as part of the Operating and Maintenance Manuals:

- (a) Title Sheet, labelled "Operation and Maintenance Instructions", containing Project Number & Name (S-1287 – NORTH END SEWAGE TREATMENT PLANT (NEWPCC) DIGESTER TANK 9-14 SPIRAL HEAT EXCHANGER REPLACEMENTS), Date.
- (b) Bid opportunity number and description of supplied goods and work performed;
- (c) Table of Contents indicating all sections contained in the Operation and Maintenance manual.
- (d) Tab A – Contractor Information
  - (i) Contractor name and address.
  - (ii) Contractor contact representative with phone number and email.
  - (iii) All Sub-Contractors names, addresses and contact information.
- (e) Tab B – Warranty
  - (i) Letter of Warranty, signed and dated to include warranty start date (from the date as stated in E15), warranty end date, Contractor warranty information.
  - (ii) Description of work/parts that are covered under warranty and warranty durations.
- (f) Tab C – equipment Models, serial and highlight specifications
  - (i) Quick reference equipment model and serial number and highlight specifications including pictures of supplied equipment.
  - (ii) Auxiliary equipment model, serial and specifications including pictures;
- (g) Tab D – Products and Shop Drawings
  - (i) Detailed Specifications;
  - (ii) PID drawings (To be provided by consultant)
- (h) Tab E – Spare Parts & Tools
  - (i) Provide instructions for handling and storage of spare parts.
  - (ii) Provide a listing of any special tools required to operate and/or maintain the products.
  - (iii) Provide a listing of all spare parts included with pictures of each part, part numbers, quantities and practical life spans.
- (i) Tab F – Installation and Removal Instructions
  - (i) Provide instructions for handling and storage of equipment.
  - (ii) Provide instructions for installation and removal of equipment (including instruments).
- (j) Tab G – Maintenance Activities
  - (i) Provide part books that illustrate and list all assemblies, sub-assemblies, and components for easy reference.
  - (ii) Provide instructions on preventative and corrective maintenance, with service procedures and recommended schedules.
  - (iii) Schedule for when preventative maintenance should be performed on all products.
  - (iv) Recommended frequency for each maintenance task, exercising and scheduled overhauls and/or reconditioning.

- (v) Cleaning: Instructions and schedules for all routine cleaning and inspection recommended, including recommended cleaners and lubricants.
- (k) Tab H – Inspection & Commissioning Reports
  - (i) Include field observation reports submitted for each commissioning activity.
  - (ii) Confirmation letter identifying that all commissioning site visit activities were witnessed and verified to meet the requirements of the Specifications and the requirements of the project.
- (l) Tab I – Commissioning report
- (m) Tab J - Spare
- (n) Tab K - Spare

#### **E14. TRAINING**

- E14.1 The Contractor shall provide on-site training to City staff by a qualified representative on the operation and maintenance of the installed equipment as required.
- E14.2 The Contractor will be required to allot four (4) hours of informal on-site training to City personnel. This informal training shall include inspections, service, troubleshooting and maintenance activities.
- E14.3 Training shall be completed after Total Performance has been achieved. The Contract shall not be considered complete until the training has been provided or waived.

#### **E15. WARRANTY WALKTHROUGH AND DEFICIENCY CORRECTIONS**

- E15.1 Notwithstanding the terms of C13.2, the manufacturer warranty period shall commence from the following:
  - (a) Twelve (12) months starting from the date of Total Performance achieved. Spiral Heat Exchangers excluded.
- E15.2 On-Site Warranty Walkthrough:
  - (a) Prior to the Warranty expiring, the Contractor will be required to attend an on-site warranty walkthrough approximately two (2) months prior to the end of the warranty period. The Contract Administrator will provide a minimum of ten (10) Business Days notice. It is planned for the warranty inspection site visit to occur over two (2) hours.
  - (b) The Contractor shall provide the services of a qualified technical representative to be present at the warranty walkthrough under this Contract to perform the following:
    - (i) Inspect the valves to ensure there are no visible deficiencies;
    - (ii) Witness operation;
    - (iii) Check for unusual vibration and/or noises.
    - (iv) Promptly correct any deficiencies with the equipment at the Contractor's expense to the satisfaction of the Contract Administrator.
- E15.3 The Contractor will prepare and submit a warranty walkthrough report after the on-site warranty walkthrough site visit has been completed. The warranty walkthrough report will include a summary of the items investigated, a pass/fail parts checklist, along with a list of deficiencies and corrective measures to be performed. The warranty walkthrough report will be submitted no later than five (5) business days after completion of the warranty walkthrough site visit.
- E15.4 Deficiency Corrections:
  - (a) The Contractor shall provide the services of a qualified technical representative to correct all manufacturer deficiencies found during the warranty site visit along with any additional deficiencies found prior to the warranty period lapsing.

E15.5 The Contractor shall electronically submit a signed and dated Deficiency Corrective Letter listing all deficiencies found and that each deficiency has been corrected to the best of the Contractor's knowledge. The Deficiency Correction Letter shall be received prior to project close-out.

E15.6 The price for "On-site Warranty Walkthrough" and "Deficiency Corrections" shall cover all costs associated with these items of work, including travel expenses, accommodations, meals and wages.

#### **E16. CASH ALLOWANCE FOR ADDITIONAL WORK**

E16.1 Additional Work may be necessitated due to unforeseen circumstances that may arise during the course of the project due to:

(a) Additions to the scope of Work by the Contract Administrator, beyond that defined herein.

E16.2 A cash allowance has been included on Form B: Prices.

E16.3 The City reserves the right to delete any or all of the Cash Allowance from the Contract if the Work intended to be covered by the Cash Allowance is not required, or if the Works intended are found to be more extensive than the provisional Cash Allowance.

E16.4 Cost of additional 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 Cash Allowance. If the valuation of the authorized work exceeds the Value of the Cash Allowance, the Contract Value will be adjusted by the shortfall.

E16.5 Additional services and/or Work will not be initiated for:

(a) Reasons of lack of performance or errors in execution.

(b) Scheduling changes initiated by the City, where at least 24 hours' notice is given prior to the Contractors schedule time to be on Site.

E16.6 Should it be determined that additional material or services are required, the Contract Administrator shall approve the Work, prior to commencement of the additional Work.

E16.7 Material Mark-Up Factors in accordance with C7:

(a) The base cost is to be the wholesale cost of the material, regardless of the Contractor or Subcontractor supplying the material.

(b) In general, the party (Contractor or Subcontractor) supplying the material from a supplier who does not perform any work on Site, unless otherwise determined by the Contract Administrator.

(c) Where the Contractor is supplying the material, the mark-up on the material is limited to fifteen percent (15%).

(d) Where the Contractor's immediate Subcontractor is supplying the material the total mark-up on the material including all Subcontractors and the Contractor is limited to twenty-five (25%).

(i) The Subcontractor's mark-up on the material is limited to fifteen percent (15%);

(ii) The Contractor's mark-up on the material is limited to ten percent (10%).

(e) A Third-Level Subcontractor is a Subcontractor of a Subcontractor of the Contractor.

(i) No Third-Level Subcontractors on this project are approved for additional mark-up.

E16.8 In the event that a Third-Level Subcontractor is utilized, that is not approved for additional mark-up, the Contractor is responsible for coordinating the split of the maximum approved mark-up between the Contractor and Subcontractors.

## **APPENDIX A – SAFE WORK PLAN**

## **APPENDIX B – SITE INFORMATION**