



THE CITY OF WINNIPEG

REQUEST FOR PROPOSAL

RFP NO. 757-2018

**REQUEST FOR PROPOSAL FOR NEWPCC BOILER CONTROL DESIGN AND
REPLACEMENT**

Note to Proponents: Please be aware of revisions to B19.3

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

B1.1 REQUEST FOR PROPOSAL FOR NEWPCC BOILER CONTROL DESIGN AND REPLACEMENT

B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, January 14, 2019.

B2.2 Proposals determined by the Manager of Materials to have been received later than the Submission Deadline will not be accepted and will be returned upon request.

B2.3 The Contract Administrator or the Manager of Materials may extend the Submission Deadline by issuing an addendum at any time prior to the time and date specified in B2.1.

B3. SITE INVESTIGATION

B3.1 Further to C3.1, a Site meeting will be held at 9:00 am on January 3, 2019 to provide Proponents access to the Site.

B3.2 The Proponent is advised that attendance at the Site investigation is strongly advised to judge the challenges of the control system replacement, the complexity of the boiler set up and heating distribution, and the challenges in investigating, collecting and otherwise verifying the required data necessary to undertake the Work.

B3.3 The Proponent shall not be entitled to rely on any information or interpretation received at the Site investigation unless that information or interpretation is the Proponent's direct observation, or is provided by the Contract Administrator in writing.

B3.4 Proponents are requested to register for the Site Investigation by contacting the Contract Administrator in D5.1.

B3.5 Registration requests shall identify the Proponent, their contact information, names of intended attendees

B3.6 Proponents are to meet at the reception area of the NEWPCC located at 2230 Main Street, Winnipeg, Manitoba, for the NEWPCC site investigation.

B3.7 Proponents are required to provide their own Personal Protective Equipment (PPE); at a minimum of hard hat, CSA approved safety footwear, safety glasses and flashlights.

B4. ENQUIRIES

B4.1 All enquiries shall be directed to the Contract Administrator identified in D5.1.

B4.2 If the Proponent finds errors, discrepancies or omissions in the proposal, or is unsure of the meaning or intent of any provision therein, the Proponent shall promptly notify the Contract Administrator of the error, discrepancy or omission 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 Request for Proposal will be provided by the Contract Administrator to all Proponents 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 Request for Proposal will be provided by the Contract Administrator only to the Proponent who made the enquiry.

B4.5 The Proponent shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

B5. CONFIDENTIALITY

B5.1 Information provided to a Proponent by the City or acquired by a Proponent 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 Proponent before receipt hereof; or
- (b) becomes publicly known other than through the Proponent; or
- (c) is disclosed pursuant to the requirements of a governmental authority or judicial order.

B5.2 The Proponent shall not make any statement of fact or opinion regarding any aspect of the Request for Proposal 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 Request for Proposal, 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 Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>.

B6.4 The Proponent is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.

B6.5 The Proponent shall acknowledge receipt of each addendum in Paragraph 9 of Form A: Proposal. Failure to acknowledge receipt of an addendum may render a Proposal non-responsive.

B6.6 Notwithstanding B4, enquiries related to an Addendum may be directed to the Contract Administrator indicated in D5

B7. SUBSTITUTES

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

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 Proponent shall ensure that any and all requests for approval of a substitute:

- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
- (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;

- (c) identify any anticipated cost or time savings that may be associated with the substitute;
- (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
- (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.

B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.

B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, to the Proponent 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 Proponents. The Proponent requesting and obtaining the approval of a substitute shall be responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.

B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Proponent 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 Proponent bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B24.

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. PROPOSAL SUBMISSION

B8.1 The Proposal shall consist of the following components:

- (a) Form A: Proposal;
- (b) Form B: Prices;

B8.2 The Proposal should also consist of the following components:

- (a) Experience of Proponent and Subcontractors (Section C) in accordance with B11;
- (b) Experience of Key Personnel Assigned to the Project (Section D), in accordance with B12;
- (c) Project Understanding and Methodology (Section E) in accordance with B13; and
- (d) Project Schedule (Section F) in accordance with B14.

B8.3 Further to B8.1, all components of the Proposal shall be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Proposal.

B8.4 Further to B8.2, all components of the Proposal should be fully completed or provided in the order indicated, and submitted by the Proponent no later than the Submission Deadline, with all required entries made clearly and completely.

- B8.5 Proponents should submit one (1) unbound 8.5" x 11" original (marked "original") including drawings and four (4) copies (copies can be in any size format) for sections identified in B8.1 and B8.2.
- B8.6 Proposal format, including type of binding, number of pages, size of pages and, font, etc., will not be regulated, except that the Proposal should contain a table of contents, page numbering and should be in the Sections identified above. Proponents are encouraged to use their creativity to submit a Proposal which provides the requested information for evaluation and other information which illustrates the strength of their team.
- B8.7 Proponents are advised that inclusion of terms and conditions inconsistent with the Request for Proposal, will be evaluated in accordance with B24.1(a).
- B8.8 The Proposal shall be submitted enclosed and sealed in an envelope/package clearly marked with the RFP number and the Proponent's name and address.
- B8.9 Proposals submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B8.10 Proposals shall be submitted to:
The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1
- B8.11 Any cost or expense incurred by the Proponent that is associated with the preparation of the Proposal shall be borne solely by the Proponent.

B9. PROPOSAL (SECTION A)

- B9.1 The Proponent shall complete Form A: Proposal, making all required entries.
- B9.2 Paragraph 2 of Form A: Proposal shall be completed in accordance with the following requirements:
- (a) if the Proponent is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
 - (b) if the Proponent is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Proponent is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Proponent is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B9.2.1 If a Proposal 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: Proposal, the Proponent shall identify a contact person who is authorized to represent the Proponent for purposes of the Proposal.
- B9.4 Paragraph 12 of Form A: Proposal shall be signed in accordance with the following requirements:
- (a) if the Proponent is a sole proprietor carrying on business in his/her own name, it shall be signed by the Proponent;
 - (b) if the Proponent is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Proponent is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;

- (d) if the Proponent is carrying on business under a name other than its 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: Proposal should be printed below such signatures.

B9.5 If a Proposal is submitted jointly by two or more persons, the word "Proponent" shall mean each and all such persons, and the undertakings, covenants and obligations of such joint Proponents in the Proposal and the Contract, when awarded, shall be both joint and several.

B10. PRICES (SECTION B)

B10.1 The Proponent shall state a Fixed Fee in Canadian funds for each item of the Work identified on Form B: Prices.

B10.1.1 Notwithstanding C12.2.3(c) (*General Conditions for Construction*), 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 Notwithstanding C11.1 (*General Conditions for Consultant Services*), Fees submitted shall not include the Goods and Services Tax (GST) or Manitoba Retail Sales Tax (MRST, also known as PST), which shall be extra where applicable.

B10.2 The Proponent should complete Form P: Person Hours, summarizing time estimates by work activity and in total, including hourly rates, for each person identified in B12 in accordance with the Scope of Services identified in D3. Time estimates should also include all staff associated with the project including drafting, clerical and other support staff. Form P has been included in excel format for convenience. The Proponent may use this form or a design of their own provided it includes the information requested.

B10.3 The quantities listed on Form B: Prices are to be considered approximate only. The City will use said quantities for the purpose of comparing Proposals.

B10.4 Notwithstanding C1.1(b) (*General Conditions for Consultant Services*), Fees shall include costs for out of town travel, related meals and accommodations for the duration of the Project and shall not be considered an Allowable Disbursement.

B10.5 The Fee Proposal shall also include an allowance for Allowable Disbursements as defined in C1.1(b) (*General Conditions for Consultant Services*), but shall exclude the costs of any materials testing, soils and hazardous materials investigation during construction.

B10.6 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.

B10.7 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B11. EXPERIENCE OF PROPONENT AND SUBCONSULTANT / SUBCONTRACTORS (SECTION C)

B11.1 Proposals should include:

- (a) General firm profile information of the Proponent and its Subcontractor or Subconsultant (if any portion of the Services or Work proposed is to be contracted to them) including years in business, average volume of work, number of employees and other pertinent information. Where applicable, information should be separated into Proponent and its Subcontractor or Subconsultant (if any portion of the Services or Work proposed is to be contracted to them);
- (b) Their organization and management structure

- (c) Details demonstrating the history and experience of the Proponent and its Subcontractor or Subconsultant (If any Services or Work is contracted to them) in providing expert design and construction on complex automation and control systems and performing systems integration Work similar to those found in the City's pollution control centres that are similar to the scope of services/work identified in D3.
 - (d) Two reference projects similar to the scope of services/work identified in D3.
- B11.2 For each project listed in B11.1(d), the Proponent should submit within the project reference:
 - (a) Description of the project,
 - (b) Role of the proponent;
 - (c) Project's original contracted construction cost and final construction cost;
 - (d) Design and construction schedule (anticipated Project schedule and actual project delivery schedule with completion date, showing design and construction separately);
 - (e) Reference information (two current names with telephone numbers per project). The references should be from people who are not members of the Proponents organization or have a financial invested interest in the Proponents organization. These references will be used to confirm the information provided by the Proponent.
 - (f) For one project, deemed to be the most similar in complexity, to the NEWPCC boiler control panel design and replacement, provide an example of project drawings and documentation supplied. This includes Process and Instrumentation Diagram (P&ID), wiring diagram, construction plan, commissioning and testing documentation.
- B11.2.1 Where applicable, information should be separated into Proponent and its Subconsultant/Subcontractor for project listings.
- B11.3 The Proponent should also provide the following metrics to aid the City in evaluating their current resources capabilities for the duration of the Work;
 - (a) Number of personnel currently allocated simultaneously for 24 hour support;
 - (b) Current estimated response time to send a service technician to the NEWPCC facility on an emergency basis.
 - (c) Number of employees whose position is at minimum 50% related to boiler controls including design, construction, programming and commissioning ;
 - (d) Experience in upgrading boiler control systems
- B11.4 Other certifications, registrations, and qualifications related to various manufactures automation systems, automation institutions and other applicable global recognitions.
- B12. EXPERIENCE OF KEY PERSONNEL ASSIGNED TO THE PROJECT (SECTION D)**
- B12.1 Describe your approach to overall team formation and coordination of team members.
 - B12.1.1 Include an organizational chart for the Project.
 - B12.2 Submit the experience and qualifications of the Key Personnel assigned to the Project for projects of similar complexity, scope and value, including the principals-in-charge, the Contractors Representative, managers of the key disciplines and lead designers. Include educational background and degrees, professional recognition, job title, years of experience in current position, years of experience in design and construction, and years of experience with existing employer. Roles of each of the Key Personnel in the Project should be identified in the organizational chart referred to in B12.1.1.
 - B12.3 Key personnel team members working on this project the City would expect to see named for the project are as follows:
 - (a) Project manager;
 - (b) Design Lead Electrical/Automation

- (c) If the Proponent has a panel shop, the key individual responsible for supervising and ensuring quality control of the panel shop;
 - (d) Lead site Installation & commissioning technicians;
 - (e) The Professional Engineer(s) responsible for the design, sealing of drawings and systems integration work, and
 - (f) Person who will conduct the training of City operation and maintenance staff.
- B12.4 For each person identified, list at least two comparable projects in which they have played a primary role. If a project selected for a key person is included in B11, provide only the project name and the role of the key person. For other projects provide the following:
- (a) Description of project;
 - (b) Role of the person;
 - (c) Project Owner;
 - (d) Reference information (two current names with telephone numbers per project). The references should be from people who are not members of the Proponents organization or have a financial invested interest in the Proponents organization. These references will be used to confirm the information provided by the Proponent.
- B12.5 If a key individual proposed in B12.3 to work on the project requires substitution at a later date because of an unforeseen reason outside of the control of the Proponent, the Proponent shall propose an alternative individual to the Contract Administrator. Acceptance of the substitute will be the decision of the Contract Administrator.
- B12.6 Should a reference be unattainable or uncontactable during three (3) separate attempts over three (3) consecutive weeks, the City will assign a score of zero (0) for that specific section of the Submission during the evaluation.
- B12.7 Reference checks to confirm information provided by the Proponent may not be restricted to only those submitted by the Proponent, and may include organizations representing Persons known to have done business with the Proponent.
- B13. PROJECT UNDERSTANDING AND METHODOLOGY (SECTION E)**
- B13.1 Describe your firm's project management approach and team organization during the performance of Services, so that the evaluation committee has a clear understanding of the methods the Proponent will use in the delivery of this Project.
- B13.2 Methodology should be presented in accordance with the Scope of Services identified in D3.
- B13.3 Describe the collaborative process/method to be used by the Key Personnel of the team in the various phases of the Project with the City, how requests for information will be handled, and resolution of design reviews and comments are undertaken.
- B13.4 The City may require the Proponent to provide assistance with the boiler control system during normal hours of operation and outside of normal hours of operation as needed should an issue with the replaced system arise. This as per need assistance is required 24 hours a day seven days a week for the duration of the Contract. The Methodology section should include a description of how this would be provided.
- B13.5 Proposals should address:
- (a) the team's understanding of the broad functional and technical requirements of the Work
 - (b) the proposed methodology for quality control/assurance during the development and implementation of the Work, and;
 - (c) any other issue that conveys your team's understanding of the Project requirements.

B13.6 For each person identified in B12.2, list the percent of time to be dedicated to the Project in accordance with the Scope of Services identified in D3.

B14. PROJECT SCHEDULE (SECTION F)

B14.1 Proponents should present a carefully considered Critical Path Method schedule using Microsoft Project or similar project management software, complete with resource assignments (key designers), durations (weekly timescale) and milestone dates or events. The schedule should address each requirement of the Scope of Services.

B14.2 The Proponent's schedule should include critical dates for review and approval processes by the City and other organizations anticipated during the design and construction phases of the Project. Reasonable times should be allowed for completion of these processes.

B14.3 The Proponents should include:

- (a) A minimum of two (2) weeks for reviews by the City unless otherwise agreed. The review should be commensurate to the number of pages and complexity of the document

B15. ELIGIBILITY

B15.1 As a result of their involvement in the Winnipeg Sewage Treatment Program (WSTP) in relation to this project, Veolia Water North America (VWNA) Winnipeg Inc. (Veolia) or their affiliates are not eligible to be a Proponent, participate as a consultant, subconsultant, member of a proponent, contractor, subcontractor etc, for the project.

B16. DISCLOSURE

B16.1 Various Persons provided information or services with respect to this Work. In the City's opinion, this relationship or association does not create a conflict of interest because of this full disclosure. Where applicable, additional material available as a result of contact with these Persons is listed below.

B16.2 The Persons are:

- (a) Arctic Combustion Ltd. (Budget quotation)

B17. CONFLICT OF INTEREST AND GOOD FAITH

B17.1 Proponents, by responding to this RFP, declare that no Conflict of Interest currently exists, or is reasonably expected to exist in the future.

B17.2 Conflict of Interest means any situation or circumstance where a Proponent or Key Personnel 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 Proposals or award of the Contract; or
- (ii) compromise, impair or be incompatible with the effective performance of a Proponent'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 its participation in the RFP process or the Project;
or

- (f) has knowledge of confidential information (other than confidential information disclosed by the City in the normal course of the RFP process) of strategic and/or material relevance to the RFP process or to the Project that is not available to other proponents and that could or would be seen to give that Proponent an unfair competitive advantage.

B17.3 In connection with its Proposal, each entity identified in B17.2 shall:

- (a) avoid any perceived, potential or actual Conflict of Interest in relation to the procurement process and the Project;
- (b) upon discovering any perceived, potential or actual Conflict of Interest at any time during the RFP process, promptly disclose a detailed description of the Conflict of Interest to the City in a written statement to the Project Manager; 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.

B17.4 Without limiting B17.3, the City may, in its 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 its sole discretion, requires to satisfy itself that the Conflict of Interest has been appropriately avoided or mitigated, including requiring the Proponent to put into place such policies, procedures, measures and other safeguards as may be required by and be acceptable to the City, in its sole discretion, to avoid or mitigate the impact of such Conflict of Interest.

B17.5 Without limiting B17.3, 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 its sole discretion:

- (a) disqualify a Proponent that fails to disclose a perceived, potential or actual Conflict of Interest of the Proponent or any of its Key Personnel;
- (b) require the removal or replacement of any Key Personnel proposed for the Work that has a perceived, actual or potential Conflict of Interest that the City, in its sole discretion, determines cannot be avoided or mitigated;
- (c) disqualify a Proponent or Key Personnel proposed for the Work that fails to comply with any requirements prescribed by the City pursuant to B17.4 to avoid or mitigate a Conflict of Interest; and
- (d) disqualify a Proponent if the Proponent, or one of its Key Personnel proposed for the Project, has a perceived, potential or actual Conflict of Interest that, in the City's sole discretion, cannot be avoided or mitigated, or otherwise resolved.

B17.6 The final determination of whether a perceived, potential or actual Conflict of Interest exists shall be made by the City, in its sole discretion.

B18. QUALIFICATION

B18.1 The Proponent shall:

- (a) undertake to be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Proponent does not carry on business in Manitoba, in the jurisdiction where the Proponent does carry on business; and
- (b) be financially capable of carrying out the terms of the Contract; and
- (c) have all the necessary experience, capital, organization, and equipment to perform the Work in strict accordance with the terms and provisions of the Contract;
- (d) shall not previously have been removed from a City site in relation to failed Systems Integration work.

- B18.2 The Proponent and any proposed Subcontractor/Subconsultant (for the portion of the Work proposed to be contracted to them) shall:
- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>.
- B18.3 The Proponent and any proposed Subcontractor/Subconsultant (for the portion of the Work proposed to be contracted to them) shall:
- (a) have successfully carried out work similar in nature, scope and value to the Work; and
 - (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
 - (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba);
 - (d) undertake to meet all licensing and regulatory requirements of the appropriate governing authorities and associations in the Province of Manitoba.
 - (i) (Certificate of Authorization) with Engineers Geoscientists Manitoba (EGM) for undertaking engineering work in the province of Manitoba, or ability to be registered in the province of Manitoba within thirty (30) Calendar Days.
 - (ii) Professional Engineer(s) responsible design work and sealing of drawings to be registered with EGM as a Professional Engineer or ability to be registered in the province of Manitoba within thirty (30) Calendar Days.
 - (e) CSA certification of the Proponent to produce CSA approved industrial control panels
- B18.4 The Proponent 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 Proponent and of any proposed Subcontractor.
- B18.5 The Proponent shall provide, on the request of the Contract Administrator, full access to any of the Proponent's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Proponent's equipment and facilities are adequate to perform the Work.
- B18.6 Further to B18.3(c), the Proponent shall, within five (5) Business Days of a request by the Contract Administrator, provide proof satisfactory to the Contract Administrator that the Proponent /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™) or
 - (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, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>).
- B18.7 The Proponent 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 Proponent and of any proposed Subcontractor/subconsultant.

B18.8 The Proponent shall provide, on the request of the Contract Administrator, full access to any of the Proponent's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Proponent's equipment and facilities are adequate to perform the Work.

B19. OPENING OF PROPOSALS AND RELEASE OF INFORMATION

B19.1 Proposals will not be opened publicly.

B19.2 After award of Contract, the names of the Proponents and the Contract amount of the successful Proponent and their address(es) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>.

B19.3 The Proponent is advised that any information contained in any Proposal Submission 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).

B19.3.1 To the extent permitted, the City shall treat as confidential information, those aspects of a Proposal Submission identified by the Proponent 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.

B19.4 Following the award of Contract, a Proponent will be provided with information related to the evaluation of his/her submission upon written request to the Contract Administrator.

B20. IRREVOCABLE OFFER

B20.1 The Proposal(s) submitted by the Proponent shall be irrevocable for the time period specified in Paragraph 10 of Form A: Proposal.

B20.2 The acceptance by the City of any Proposal shall not release the Proposals of the other responsive Proponents and these Proponents shall be bound by their offers on such Work until a Contract for the Work has been duly executed and the performance security furnished as herein provided, but any offer shall be deemed to have lapsed unless accepted within the time period specified in Paragraph 10 of Form A: Proposal.

B21. WITHDRAWAL OF OFFERS

B21.1 A Proponent may withdraw his/her Proposal without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.

B21.1.1 Notwithstanding C23.3 (*General Conditions for Construction*), the time and date of receipt of any notice withdrawing a Proposal shall be the time and date of receipt as determined by the Manager of Materials.

B21.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Proposal or the Proponent's authorized representatives named in Paragraph 12 of Form A: Proposal, and only such person, has authority to give notice of withdrawal.

B21.1.3 If a Proponent gives notice of withdrawal prior to the Submission Deadline, the Manager of Materials will:

- (a) retain the Proposal until after the Submission Deadline has elapsed;
- (b) open the Proposal to identify the contact person named in Paragraph 3 of Form A: Proposal and the Proponent's authorized representatives named in Paragraph 12 of Form A: Proposal; and
- (c) if the notice has been given by any one of the persons specified in B21.1.3(b), declare the Proposal withdrawn.

B21.2 A Proponent who withdraws his/her Proposal after the Submission Deadline but before his/her offer has been released or has lapsed as provided for in B20.2 shall be liable for such damages as are imposed upon the Proponent by law and subject to such sanctions as the Chief Administrative Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

B22. INTERVIEWS

B22.1 The Contract Administrator may, in his/her sole discretion, interview Proponents during the evaluation process.

B23. NEGOTIATIONS

B23.1 The City reserves the right to negotiate details of the Contract with any Proponent. Proponents are advised to present their best offer, not a starting point for negotiations in their Proposal Submission.

B23.2 The City may negotiate with the Proponents submitting, in the City's opinion, the most advantageous Proposals. The City may enter into negotiations with one or more Proponents without being obligated to offer the same opportunity to any other Proponents. Negotiations may be concurrent and will involve each Proponent individually. The City shall incur no liability to any Proponent as a result of such negotiations.

B23.3 If, in the course of negotiations pursuant to B23.2, the Proponent amends or modifies a Proposal after the Submission Deadline, the City may consider the amended Proposal as an alternative to the Proposal already submitted without releasing the Proponent from the Proposal as originally submitted.

B24. EVALUATION OF PROPOSALS

B24.1 Award of the Contract shall be based on the following evaluation criteria:

- (a) compliance by the Proponent with the requirements of the Request for Proposal or acceptable deviation therefrom: (pass/fail)
- (b) qualifications of the Proponent and the Subcontractors, if any, pursuant to B18: (pass/fail)
- (c) Total Bid Price; 40%
- (d) Experience of Proponent and any proposed Contractor/Consultant; (Section C) 20%
- (e) Experience of Key Personnel Assigned to the Project; (Section D) 10%
- (f) Project Understanding and Methodology (Section E) 20%
- (g) Project Schedule. (Section F) 10%

B24.2 Further to B24.1(a), the Award Authority may reject a Proposal as being non-responsive if the Proposal Submission is incomplete, obscure or conditional, or contains additions, deletions, alterations or other irregularities. The Award Authority may reject all or any part of any Proposal, or waive technical requirements or minor informalities or irregularities if the interests of the City so require.

B24.3 Further to B24.1(b), the Award Authority shall reject any Proposal submitted by a Proponent who does not demonstrate, in its Proposal or in other information required to be submitted, that it is responsible and qualified.

B24.4 Further to B24.1(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.

- B24.4.1 Further to B24.1(a), in the event that a unit price is not provided on Form B: Prices, the City will determine the unit price by dividing the Amount (extended price) by the approximate quantity, for the purposes of evaluation and payment.
- B24.5 If, in the sole opinion of the City, a Proposal does not achieve a pass rating for B24.1(a) and B24.1(b), the Proposal will be determined to be non-responsive and will not be further evaluated.
- B24.6 Further to B24.1(d), Experience of Proponent and Subcontractors will be evaluated considering the experience of the organization on projects of similar size and complexity as well as other information requested, in accordance with B11.
- B24.7 Further to B24.1(e), Experience of Key Personnel Assigned to the Project will be evaluated considering the experience and qualifications of the Key Personnel and Subcontractor personnel on Projects of comparable size and complexity, in accordance with B12.
- B24.8 Further to B24.1(f), Project Understanding and Methodology will be evaluated considering your firm's understanding of the City's Project, project management approach and team organization, in accordance with B13.
- B24.9 Further to B24.1(g), Project Schedule will be evaluated considering the Proponent's ability to comply with the requirements of the Project, in accordance with B14.
- B24.10 Notwithstanding B24.1(d) to B24.1(g), where Proponents fail to provide a response to B8.2(a) to B8.2(d), the score of zero may be assigned to the incomplete part of the response.
- B24.11 Proposals will be evaluated considering the information in the Proposal Submission and any interviews held in accordance with B22.

B25. AWARD OF CONTRACT

- B25.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.
- B25.2 The City will have no obligation to award a Contract to a Proponent, even though one or all of the Proponents are determined to be responsible and qualified, and the Proposals are determined to be responsive.
- B25.2.1 Without limiting the generality of B25.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Work;
 - (b) the prices are materially in excess of the prices received for similar work in the past;
 - (c) the prices are materially in excess of the City's cost to perform the Work, or a significant portion thereof, with its own forces;
 - (d) only one Proposal 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.
- B25.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Proponent submitting the most advantageous offer.
- B25.3.1 Following the award of contract, a Proponent will be provided with information related to the evaluation of his/her Proposal upon written request to the Contract Administrator.
- B25.4 The City may, at its discretion, award the Contract in phases.
- B25.5 Notwithstanding Paragraph 6 of Form A: Proposal and C4 (*General Conditions for Consultant Services, General Conditions for Construction*), the City will issue a Letter of Intent to the successful Proponent in lieu of execution of a Contract.

- B25.5.1 The Contract documents as defined in C1.1(o)(ii) (*General Conditions for Consultant Services*) and C1.1(n) (*General Conditions for Construction*) in their entirety shall be deemed to be incorporated in and to form a part of the Letter of Intent notwithstanding that they are not necessarily attached to or accompany said Letter of Intent.
- B25.6 The form of Contract with the City of Winnipeg will be based on the Contract as defined in C1.1(n) (*General Conditions for Construction*) and C1.1(o) (*General Conditions for Consultant Services*).
- B25.7 Following the award of Contract, a Proponent will be provided with information related to the evaluation of its Proposal upon written request to the Contract Administrator.
- B25.8 If, after the award of Contract, the Project is cancelled, the City reserves the right to terminate the Contract. The Proponent will be paid for all Services rendered up to time of termination.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Consultant Services* (Revision 2017-03-24) are applicable to the Services of the Contract.
- C0.1.1 The *General Conditions for Consultant Services* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm.
- C0.1.2 The *General Conditions for Consultant Services* (Revision 2017-03-24) shall apply to the following unit items of Form B: Prices:
- (a) Item No 1. Project plan and schedule
 - (b) Item No. 2: Preliminary design and report
 - (c) Item No. 3: Detailed design
 - (d) Item No. 4: Transition, installation and commissioning plan from existing to new system
- C0.2 The *General Conditions for Construction* (Revision 2006 12 15) are applicable to the Construction of the Contract.
- C0.2.1 The *General Conditions for Construction* are available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at http://www.winnipeg.ca/matmgt/gen_cond.stm
- C0.2.2 The *General Conditions for Construction* (Revision 2006 12 15) shall apply to the following unit items of Form B: Prices
- (a) Item No. 5 Supply and delivery of boiler operating control panels and required materials
 - (b) Item No. 6: Installation, testing, and commissioning
 - (c) Item No. 7: Operation and maintenance manuals
 - (d) Item No. 8: On-site training of city staff
 - (e) Item No. 9: Hourly rate for on-site technical support during first 12 months after substantial performance
- C0.3 A reference in the Request for Proposal to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Construction* or *General Conditions for Consultant Services*. Each reference in the Request for Proposal to a section, clause or subclause with the prefix “**C**” shall be immediately followed in parentheses with which version of the General Conditions apply to that instance.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. BACKGROUND

D2.1 The City of Winnipeg's North End Water Pollution Control Centre, alternatively called the North End Sewage Treatment Plant (NEWPCC) is an existing sewage treatment plant located in north Winnipeg at the address 2230 Main Street, Winnipeg, Manitoba, R2V 4T8.

D2.2 The City wishes to engage, via a fixed fee, a Contractor with boiler control system design, fabrication, installation, commissioning and servicing expertise to replace and enhance the existing boiler operating control panels on boilers 1,2,3 and 4 with a modern reliable equivalent. The existing jackshaft combustion control on each boiler shall be converted to a parallel positioning linkageless system. The Contractor will connect each new boiler operating control panel to the NEWPCC's DCS by installing a new Ethernet communication cable from each new control panel to the boiler area control room.

D2.3 As the NEWPCC is anticipated to undergo major upgrades over the next ten years, it is anticipated that any system installed under this contract complies with City standards so that the replaced boiler system can be easily integrated into the future redeveloped NEWPCC at a later date.

D3. SCOPE OF SERVICES/WORK

D3.1 The Work to be done under the Contract shall include all labour, materials, engineering services, and project management services required for the design, fabrication, delivery, installation, testing, commissioning, training and documentation of four (4) sets of new boiler operating control panels and parallel positioning combustion controls (one set per each of four (4) boilers) for boilers 1, 2, 3, & 4 at the NEWPCC. The Work will replace each of the current boiler operating control panels with new, convert each boiler's current jackshaft combustion control to a parallel positioning linkageless system, and install new Ethernet communication cables from each new panel to the boiler area control room to communicate with the DCS.

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

- (a) Preparation of a project plan and schedule outlining a plan of the Work to be done.
- (b) Site investigation/information gathering to confirm and collect any and all required data to complete the Work inclusive of coordinating with the Authority Having Jurisdiction (AHJ) on requirements related to the Work and obtaining any required permits.
- (c) Generation of a preliminary design report inclusive of a preliminary design for the Work based on City standards.
- (d) Generation of a detailed design as a continuation of the preliminary design inclusive of City comments and based upon City standards.
- (e) Generation of a transition plan from the existing system to new system inclusive of determining an effective construction sequence for installation and commissioning
- (f) Fabrication, supply and delivery of four (4) sets of new boiler operating panels, parallel positioning linkageless systems and all other materials required to complete the Work.
- (g) Installation, testing, and commissioning of the four (4) sets of new boiler operating control panels, parallel positioning systems and communication cables at the NEWPCC per the transition plan to the satisfaction of the City and in compliance with the AHJ.

- (h) Generation of operational and maintenance manuals to document the system, inclusive of as-built drawings, manufacturer's literature, programming software (if applicable) and other supporting documentation required to operate and maintain the system.
 - (i) Provide hands on training on the operation and maintenance of the new system to City staff at the NEWPCC site.
 - (j) Technical support services.
- D3.3 Further to D3.2(b), while the City will endeavor to provide documentation of the existing system to be replaced, the current system is original that has been modified/upgraded over time. As such, some information and documentation may be missing, incomplete or out of date and shall remain the responsibility of the Contractor to verify and gather all information as applicable to complete the Work.
- D3.4 Further to D3.2(g), while the Contractor will ultimately be responsible for the installation and provision of resources to complete the Work, upon request to the Contract Administrator, City forces may be made available to assist the Contractor with the modification and installation of field wiring outside of the Contractors scope of work.
- D3.5 The Contractor and any of its Subcontractors and/or Subconsultants shall be made aware of the Environmental Preservation and Compliance obligations as per the Wastewater Services Environmental Preservation and Compliance Statement—Appendix A.
- D3.6 The Contractor shall not be dependent upon the City to provide any programming hardware, software or licences to complete the work.

D4. DEFINITIONS

- D4.1 When used in this Request for Proposal:
- (a) **“ABB”** means ASEA Brown Boveri;
 - (b) **“AHJ”** means Authority Having Jurisdiction
 - (c) **“ANSI”** means American National Standards Institute;
 - (d) **“BMS”** means Burner Management System
 - (e) **“CEA”** means Canadian Electricity Association;
 - (f) **“CEC”** means Canadian Electrical Code;
 - (g) **“Contractor” or “Consultant”** are used interchangeably and mean the person undertaking the performance of the Work under the terms of the Contract.
 - (h) **“CSA”** means Canadian standards association international, formerly the Canadian standards association;;
 - (i) **“DCS”** means distributed control system,
 - (j) **“EGM”** means Engineers Geoscientists of Manitoba;
 - (k) **“FDR” or “Functional Design Requirement”** means a document that will provide the basis of the software and hardware configuration and will be validated during Performance Verification to ensure that all required functions are present and that they operate correctly;
 - (l) **“I/O”** means input/output;
 - (m) **“IEEE”** means Institute of Electrical and Electronics Engineers;
 - (n) **“NEC”** means National Electrical Code;
 - (o) **“NEWPCC”** means the City of Winnipeg North End Water Pollution Control Centre (North End Sewage Treatment Plant) located at address 2230 Main Street, Winnipeg, Manitoba, R2V 4T8;
 - (p) **“NFPA”** means National Fire Protection Association;
 - (q) **“OSHA”** means Occupational Safety and Health Association;

- (r) “**PPE**” means Personal Protective Equipment;
- (s) “**Professional Engineer**” means an engineer registered in the Province of Manitoba;
- (t) “**Proponent**” means any Person or Persons submitting a Proposal for Services;
- (u) “**Work**” or “**Works**” or “**Services**” are used interchangeably and mean the carrying out and doing of all things, whether of a temporary or permanent nature, that are to be done pursuant to the Contract and, without limiting the generality of the foregoing, includes the furnishing of all Plant, Material, labour, services testing, analysis, equipment, matters and things necessary for or incidental to the fulfilment of the requirements of the Contract, including all Changes in Work which may be ordered as herein provided;
- (v) “**WWD**” means the City of Winnipeg Water and Waste Department;
- (w) “**WSTP**” means the Winnipeg Sewage Treatment Program being a partnership between the City of Winnipeg and Veolia Water North America

D5. CONTRACT ADMINISTRATOR

D5.1 The Contract Administrator is:

Matt Gillies, P.Eng.
Project Engineer
City of Winnipeg - Water & Waste Department
1199 Pacific Avenue
Winnipeg, MB, R3E 3S8

Telephone No. 204-986-4610 Email Address MattGillies@winnipeg.ca

D5.2 At the pre-commencement meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Work.

D5.3 Bids Submissions must be submitted to the address in B8.10.

D6. CONTRACTOR'S SUPERVISOR

D6.1 Further to C6, the Contractor shall employ and keep on the Work, at all times during the performance of the Work, a competent supervisor and assistants, if necessary, acceptable to the Contract Administrator. The supervisor shall represent the Contractor on the Site. The supervisor shall not be replaced without the prior consent of the Contract Administrator unless the supervisor proves to be unsatisfactory to the Contractor and ceases to be in his/her employ.

D6.2 Before commencement of Work, the Contractor shall identify his/her designated supervisor and any additional personnel representing the Contractor and their respective roles and responsibilities for the Work.

D6.2.1 Further to C5, Contract Administrator may give instructions or orders to the Contractor's supervisor and such instructions or orders shall be deemed to have been given to the Contractor.

D7. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

D7.1 The Contract, all deliverables produced or developed, and information provided to or acquired by the Contractor or it's Subcontractor and/or Subconsultant are the property of the City and shall not be appropriated for the Proponent's or it's Subcontractor/Subconsultant's own use, or for the use of any third party.

D7.2 The Contractor shall not make any public announcements or press releases regarding the Contract, without the prior written authorization of the Contract Administrator.

- D7.3 The following shall be confidential and shall not be disclosed by the Proponent or its Contractor/Consultant to the media or any member of the public without the prior written authorization of the Contract Administrator;
- (a) information provided to the Contractor by the City or acquired by the Contractor during the course of the Work;
 - (b) the Contract, all deliverables produced or developed; and
 - (c) any statement of fact or opinion regarding any aspect of the Contract.
- D7.4 A Proponent or its Subcontractor/Subconsultant who violates any provision of D7 may be determined to be in breach of Contract.

D8. NOTICES

- D8.1 Notwithstanding C23.2.2 (*General Conditions for Construction*), all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following:

The City of Winnipeg
Attn: Chief Financial Officer
Office of the Chief Administrative Officer
Susan A. Thompson Building
2nd Floor, 510 Main Street
Winnipeg MB R3B 1B9

- D8.2 Bids Submissions must not be submitted to this address. Bids must be submitted in accordance with B8.**

SUBMISSIONS

D9. AUTHORITY TO CARRY ON BUSINESS

- D9.1 The Contractor shall be in good standing under The Corporations Act (Manitoba), or properly registered under The Business Names Registration Act (Manitoba), or otherwise properly registered, licensed or permitted by law to carry on business in Manitoba, or if the Contractor does not carry on business in Manitoba, in the jurisdiction where the Contractor does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

D10. SAFE WORK PLAN

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

D11. INSURANCE

- D11.1 The Contractor shall procure and maintain, and cause its Subcontractor and or Subconsultant to procure and maintain, at their own expense and cost, insurance policies with limits no less than those shown below.
- (a) commercial general liability insurance, in the amount of at least five million dollars (\$5,000,000.00) inclusive, with the City added as an additional insured; such liability policy to also contain a cross-liability clause, contractual liability, employer's contingent liability,

- non-owned automobile liability and products and completed operations cover, 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, Subcontractor or Subconsultant 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;
- D11.2 The Contractor or the Subcontractor performing the fabrication, supply, delivery, installation, testing and commissioning of new boiler operating panels, shall procure and maintain and provide the following insurance coverage:
- (a) all risks, course of construction insurance, including testing and commissioning, in the amount of 100% of the total Contract Price, written in the name of the Contractor and Subcontractors and the City at all times during the performance of the Work and until the date of Substantial Performance .
- D11.3 The Consultant and any Subconsultant generating the preliminary and detailed design, transition plan from the existing system to the new system shall procure and maintain and provide the following insurance coverage:
- (a) Professional errors and omissions liability Insurance
in an amount not less than \$1,000,000 per claim and \$2,000,000 in the aggregate.
Such professional errors and omissions liability insurance shall remain in force for the duration of the Project including 24 months after total performance or provide for an extended reporting period for twenty-four (24) months after total performance.
- D11.4 Deductibles shall be borne by the Contractor, as determined by the applicable insurance coverage.
- D11.5 The Contractor shall require each of its Subconsultants and Subcontractors (If any Services or Work is contracted to them) to provide comparable insurance to that set forth under D11.1
- D11.6 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance for itself and for its Subconsultants and Subcontractors, dependent on the Work or Services they are performing, in a form satisfactory to the City Solicitor, 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 (*General Conditions for Consultant Services, General Conditions for Construction*) for the return of the executed Contract.
- D11.7 The Contractor, Subcontractor or Subconsultant, shall not cancel, materially alter, or cause their policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.
- D11.8 The City shall have the right to alter the limits and/or coverages as reasonably required from time to time during the continuance of this agreement.
- D11.9 All policies must be taken out with insurers licensed to carry on business in the Province of Manitoba.
- D12. PERFORMANCE SECURITY**
- D12.1 The Contractor shall provide and maintain performance security until the expiration of the warranty period in the form of:
- (a) a performance bond of a company registered to conduct the business of a surety in Manitoba, in the form attached to these Supplemental Conditions (Form H1: Performance Bond), in the amount of fifty percent (50%) of the Contract Price; or
- (b) an irrevocable standby letter of credit issued by a bank or other financial institution registered to conduct business in Manitoba and drawn on a branch located in Winnipeg, in

the form attached to these Supplemental Conditions (Form H2: Irrevocable Standby Letter of Credit), in the amount of fifty percent (50%) of the Contract Price; or

- (c) a certified cheque or draft payable to "The City of Winnipeg", drawn on a bank or other financial institution registered to conduct business in Manitoba, in the amount of fifty percent (50%) of the Contract Price.

D12.1.1 Where the performance security is in the form of a certified cheque or draft, it will be deposited by the City. The City will not pay any interest on certified cheques or drafts furnished as performance security.

D12.2 The Contractor shall provide the City Solicitor with the required performance security within seven (7) Calendar Days of notification of the award and prior to the commencement of any Work on the Site.

D13. SUBCONTRACTOR AND SUBCONSULTANT LIST

D13.1 The Contractor shall provide the Contract Administrator with a complete list of the Subcontractors and Subconsultants 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.

D14. DETAILED WORK SCHEDULE

D14.1 The Contractor shall provide the Contract Administrator with a detailed work schedule at least two (2) Business Days prior to the commencement of any Work on the Site.

D14.2 The detailed work schedule shall consist of the following:

- (a) a critical path method (C.P.M.) schedule for the Work; and
 - (b) a Gantt chart for the Work based on the C.P.M. schedule;
- all acceptable to the Contract Administrator.

D14.3 Further to D14.2(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) Phase 1: Design
 - (i) Project plan and schedule
 - (ii) Site investigation/information gathering.
 - (iii) Preliminary design report.
 - (iv) Detailed design.
 - (v) Transition plan from the existing system to new system
- (b) Phase 2: Construction
 - (i) Fabrication, supply and delivery of four (4) sets of new boiler operating panels, parallel positioning linkageless systems and all other materials required to complete the Work.
 - (ii) Installation, testing, and commissioning of the new boiler operating control panels, parallel positioning systems and communication cable. Installation to be phased as one (1) boiler can only be out of service at a time.
 - (i) Installation, testing, commissioning of equipment for boiler 4 which is anticipated to be the first boiler to be taken out of service.
 - (ii) Upon successful completion and proven operation of D14.3.b.ii.i, Installation, testing, commissioning of equipment for boiler 1, 2, or 3 as mutually agreed upon can begin.

- (iii) Upon successful completion and proven operation of D14.3.b.ii.ii, Installation, testing, commissioning of equipment for boiler 1, 2, or 3 as mutually agreed upon can begin.
 - (iv) Upon successful completion and proven operation of D14.3.b.ii.iii, Installation, testing, commissioning of equipment for boiler 1, 2, or 3 as mutually agreed upon can begin.
 - (iii) Generation of operational and maintenance manuals to document the system, inclusive of as-built drawings, manufacturer's literature, programming software (if applicable) and other supporting documentation required to operate and maintain the system.
 - (iv) Provide hands on training on the operation and maintenance of the new system to City staff at the NEWPCC site.
- D14.4 Further to D14.2(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.
- D14.5 The detailed work schedule shall be based on the following time constraints pertaining to work at NEWPCC.
- (a) Standard working hours at NEWPCC are from 7:30 am to 3:30 pm Monday to Friday.
 - (b) The Contractor may request extended working hours where necessary to accommodate system shutdowns and tie-ins. The Contractor shall obtain approval for all extended working hours and shall submit a request to the Contract Administrator at least 2 weeks in advance of the proposed extended working hours.
 - (c) Please be advised that all employees will observe statutory holidays as listed on the dates indicated below:
 - (i) New Year's Day
 - (ii) Louis Riel Day
 - (iii) Good Friday
 - (iv) Easter Monday
 - (v) Victoria Day
 - (vi) Canada Day
 - (vii) Terry Fox Day
 - (viii) Labour Day
 - (ix) Thanksgiving Day
 - (x) Remembrance Day
 - (xi) Christmas Day
 - (xii) Boxing Day

SCHEDULE OF WORK

D15. COMMENCEMENT

- D15.1 The Contractor shall not commence any Work until he/she is in receipt of a notice of award from the City authorizing the commencement of the Work.
- D15.2 The Contractor shall not commence any Services until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D9;
 - (ii) evidence of the insurance specified in D11;
 - (iii) evidence of Performance Security as specified in D12;
 - (iv) evidence of Subcontractor List as specified in D13;

- (v) evidence of the workers compensation coverage specified in C6.15;
 - (b) the Proponent has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.
- D15.3 Further to requirements listed in D15.2, the Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) the Safe Work Plan specified in D10;
 - (ii) the detailed work schedule specified in D14.
 - (b) the Proponent has attended a pre-construction meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a pre-construction meeting.
- D15.4 The Contractor shall commence the Consultant aspect of the Work for Form B Item No. 1 through Item No. 4 within seven (7) Working Days of receipt of the letter of intent.
- D15.5 The Contractor shall commence the Construction aspect of the Work for Form B Item No. 5 to Form B Item No. 8 on the Site within seven (7) Working Days of receipt of the letter to proceed with construction. The date of the receipt of the letter to proceed with construction will constitute the date
- D15.6 The City intends to award this Contract by February 22, 2018.
- D15.6.1 If the actual date of award is later than the intended date, the dates specified for Commencement, Construction Sequencing, Substantial Performance, and Total Performance will be adjusted by the difference between the aforementioned intended and actual dates.

D16. CONSTRUCTION SEQUENCING

- D16.1 Boiler Controls and the services boilers perform are essential to Plant operations and thus critical during the replacement of the boiler controls. As such, only one (1) boiler may be out of service at any given time during construction. All reasonable measures should be taken to minimize the time out of service.
- D16.2 Contractor to provide the City two (2) week notice to coordinate and approve the shut-down of one (1) Boiler.
- D16.3 Boilers may only be taken out of service between May and October.
- D16.4 Construction sequencing and phases (D14.3) are preliminary and subject to change if mutually agreed upon between the Contractor and the City. It is anticipated that Boiler #4 will be the first boiler to have the controls upgraded but is subject to change.
- D16.5 Upon successful delivery of equipment to Site and approval by The City that one (1) Boiler may be shut-down for replacement, the following sequence may occur:
- (a) Boiler Controls on the first boiler may be removed.
 - (b) Install new control panel and parallel positioning linkageless system on the first boiler. Install Ethernet communication cable from new control panel to boiler area control room.
 - (c) Test and commission system in coordination with the City and AHJ
 - (d) Following successful commissioning and approval from the City and AHJ, perform an operational proving period of fourteen (14) consecutive days to confirm functional operation of the newly installed system prior to commencing Work on the subsequent boiler. Deficiencies during this prove out period as a result of the newly installed equipment may result in an extension of extending the proving period as required.

D16.6 Further to D15.5(C), if the first boiler has been fully functional and operational for fourteen (14) consecutive days, the remaining boilers may only be fully functional and operational for five (5) consecutive days before beginning work on the next boiler.

D17. SUBSTANTIAL PERFORMANCE

D17.1 The Contractor shall achieve Substantial Performance by September 20, 2019.

D17.2 The Work will be substantially performed upon successful installation, testing and commissioning of all four (4) boiler controls and associated works.

D17.3 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.

D17.4 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.

D18. TOTAL PERFORMANCE

D18.1 The Contractor shall achieve Total Performance by October 18, 2019.

D18.2 When the Contractor or the Contract Administrator considers the Work to be totally performed, the Contractor shall arrange, attend and assist in the inspection of the Work with the Contract Administrator for purposes of verifying Total Performance. Any defects or deficiencies in the Work noted during that inspection shall be remedied by the Contractor at the earliest possible instance and the Contract Administrator notified so that the Work can be reinspected.

D18.3 The date on which the Work has been certified by the Contract Administrator as being totally performed to the requirements of the Contract through the issue of a certificate of Total Performance is the date on which Total Performance has been achieved.

D19. LIQUIDATED DAMAGES

D19.1 If the Contractor fails to achieve Substantial Performance or Total Performance in accordance with the Contract by the days fixed herein for same, the Contractor shall pay the City the following amounts per Working Day for each and every Working Day following the day fixed herein for same during which such failure continues:

- (a) Substantial Performance – one thousand and two hundred dollars (\$1200);
- (b) Total Performance – four hundred dollars (\$400).
- (c) Substantial and Total Performance – one thousand and three hundred dollars (\$1300)

D19.2 The amount specified for liquidated damages in D19.1 is based on a genuine pre-estimate of the City's damages in the event that the Contractor does not achieve Substantial Performance by the day fixed herein for same.

D19.3 The City may reduce any payment to the Contractor by the amount of any liquidated damages assessed.

D20. MILESTONES

D20.1 Milestones of the work is as follows:

Milestone	Completion Date
Detailed Design	May 1, 2019
Completed installation, testing, commissioning of all four (4) boiler controls and associated works	September 20, 2019
Operation manuals and site training	October 18, 2019

CONTROL OF WORK

D21. JOB MEETINGS

- D21.1 Regular weekly job meetings will be held at the Site during the construction portion of the Work. 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.
- D21.2 Bi-weekly update meetings shall be held during the design portion of the Work. These meetings may be conducted via conference call. 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.
- D21.3 The Contract Administrator reserves the right to cancel any job meeting or call additional job meetings whenever he/she deems it necessary.

D22. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D22.1 Further to C6.24, the Contractor shall be the Prime Contractor and shall serve as, and have the duties of the Prime Contractor in accordance with The Workplace Safety and Health Act (Manitoba).

D23. THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA) – QUALIFICATIONS

- D23.1 Further to B18.6, the Contractor/Subcontractor must, throughout the term of the Contract, have a Workplace Safety and Health Program meeting the requirements of The Workplace Safety and Health Act (Manitoba). At any time during the term of the Contract, the City may, at its sole discretion and acting reasonably, require updated proof of compliance, as set out in B18.6.

D24. SAFETY

- D24.1 Further to C6, the Contractor shall be solely responsible for safety at the Site and for compliance with all laws, rules, regulations and practices required by the applicable safety legislation.
- D24.2 The Contractor shall be solely responsible for securing the Site, and any existing facility thereon, and for the proper care and protection of the Work already performed.
- D24.3 The Contractor shall do whatever is necessary to ensure that:
 - (a) no person, property, right, easement or privilege is injured, damaged or infringed by reason of the Contractor's activities in performing the Work;

- (b) the health and safety of all persons employed in the performance of the Work or otherwise is not endangered by the method or means of its performance;
- (c) adequate medical services are available to all persons employed on the Work and at all times during the performance of the Work;
- (d) adequate sanitation measures are taken and facilities provided with respect to the Work.
- (e) fire hazards in or about the Work are eliminated;

D25. SITE CLEANING

- D25.1 The Contractor shall maintain the Site and the Work in a tidy condition and free from the accumulation of waste and debris, other than that caused by the City or by other contractors.
- D25.1.1 As the Work progresses, the Contractor shall remove any Plant and Material not required for the performance of the remaining Work. He shall also remove waste and debris other than that caused by the City or other contractors, and leave the Site and the Work clean and suitable for occupancy by the City unless otherwise specified.
- D25.1.2 Total Performance shall not be considered to have been achieved until the Contractor has cleaned up the Site and has removed all Plant, surplus Material, waste and debris, other than that left by the City or other contractors.

D26. DEFICIENCIES

- D26.1 Further to C11 (*General Conditions for Construction*), the Contract Administrator may order the Contractor to alter or improve his methods, to increase or improve his Plant, to furnish additional or more suitable Material, or to employ additional or more qualified labour if, at any time, the Contract Administrator determines that:
- (a) the Work is not being, or will likely not be, performed satisfactorily; or
 - (b) progress is not being, or will likely not be, maintained in accordance with the work schedule.

MEASUREMENT AND PAYMENT

D27. INVOICES

- D27.1 Further to C12 (*General Conditions for Construction*), the Proponent shall submit an invoice for each portion of Work performed. to:
- The City of Winnipeg
Corporate Finance - Accounts Payable
4th Floor, Administration Building, 510 Main Street
Winnipeg MB R3B 1B9
- Facsimile No.: 204-949-0864
Email: CityWpgAP@winnipeg.ca
- D27.2 Invoices must clearly indicate, as a minimum:
- (a) the City's purchase order number;
 - (b) date of delivery;
 - (c) delivery address;
 - (d) type and quantity of work performed;;
 - (e) the amount payable with GST and MRST shown as separate amounts; and
 - (f) the Contractor's GST registration number.
- D27.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.

D27.4 Bid Submissions must not be submitted to the above facsimile number. Bids must be submitted in accordance with B8.

D28. PAYMENT

D28.1 Further to C12 (*General Conditions for Construction*), the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

D29. PAYMENT SCHEDULE

D29.1 Further to C12 (*General Conditions for Construction*), payment shall be in Canadian funds net thirty (30) Calendar Days after receipt and approval of the Contractor's invoice.

WARRANTY

D30. WARRANTY

D30.1 Warranty is as stated in C13 (*General Conditions for Construction*).

FORM H1: PERFORMANCE BOND
(See D12)

KNOW ALL MEN BY THESE PRESENTS THAT

_____ ,
(hereinafter called the "Principal"), and

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

_____ dollars (\$_____)

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

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

RFP NO. 757-2018

REQUEST FOR PROPOSAL FOR NEWPCC BOILER CONTROL DESIGN AND REPLACEMENT

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: IRREVOCABLE STANDBY LETTER OF CREDIT
(PERFORMANCE SECURITY)**
(See D12)

(Date)

The City of Winnipeg
Legal Services Department
185 King Street, 3rd Floor
Winnipeg MB R3B 1J1

RE: PERFORMANCE SECURITY – RFP NO. 757-2018

REQUEST FOR PROPOSAL FOR NEWPCC BOILER CONTROL DESIGN AND REPLACEMENT

Pursuant to the request of and for the account of our customer,

(Name of Contractor)

(Address of Contractor)

WE HEREBY ESTABLISH in your favour our irrevocable Standby Letter of Credit for a sum not exceeding in the aggregate

Canadian dollars.

This Standby Letter of Credit may be drawn on by you at any time and from time to time upon written demand for payment made upon us by you. It is understood that we are obligated under this Standby Letter of Credit for the payment of monies only and we hereby agree that we shall honour your demand for payment without inquiring whether you have a right as between yourself and our customer to make such demand and without recognizing any claim of our customer or objection by the customer to payment by us.

The amount of this Standby Letter of Credit may be reduced from time to time only by amounts drawn upon it by you or by formal notice in writing given to us by you if you desire such reduction or are willing that it be made.

Partial drawings are permitted.

We engage with you that all demands for payment made within the terms and currency of this Standby Letter of Credit will be duly honoured if presented to us at:

(Address)

and we confirm and hereby undertake to ensure that all demands for payment will be duly honoured by us.

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

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

(Date)

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

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

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

(Name of bank or financial institution)

Per: _____
(Authorized Signing Officer)

Per: _____
(Authorized Signing Officer)

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

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

E2. BACKGROUND

- E2.1 The City of Winnipeg's North End Water Pollution Control Centre, alternatively called the North End Sewage Treatment Plant (NEWPCC) is an existing sewage treatment plant located in north Winnipeg at the address 2230 Main Street, Winnipeg, Manitoba, R2V 4T8.
- E2.2 Boilers 1, 2, 3 and 4 at the NEWPCC have original local control panels and combustion control that have been partially upgraded over time. These components have passed their useful life, are unreliable and difficult to maintain.
- E2.3 The City wishes to engage, via a fixed fee, a firm with boiler control system design, installation and servicing expertise to replace the existing boiler operating control panels with a modern reliable equivalent using a linkageless combustion control system. The new controls will remain integrated into NEWPCC's DCS via a new Ethernet communication cable installed by the Contractor.
- E2.4 As the NEWPCC is anticipated to undergo major upgrades over the next ten years, it is anticipated that any system installed under this contract complies with City standards so that the replaced boiler system can be easily integrated into the future redeveloped NEWPCC at a later date.

E3. EXISTING NEWPCC BOILER CONTROL SYSTEM

- E3.1 The current boiler control system at the NEWPCC consists of local boiler operating panels and the DCS. The local boiler operating panels located at each boiler contain the burner management and combustion control systems including the boiler controller and burner safety controller. The local operation control panels provide safe start up and operation of the boilers and can be operated in manual, automatic and remote modes.
- E3.2 Supervision and control of the boiler system is performed via the DCS which acts as a plant master controller. Firing rate/jackshaft positioning can be controlled automatically or manually from the DCS when the local operation control panels are in remote mode. As well the DCS indicates alarm status.
- E3.3 Fuel/air ratio is currently controlled by a jackshaft linkage which modulates the fuel valves and air damper according to boiler demand and DCS input. Jackshaft linkage requires frequent calibration and shall be converted to a parallel positioning linkageless system.
- E3.4 The DCS termination cabinet for existing I/O is located in the Boiler Area Control Room

- E3.5 The local boiler operating panels are original from the installation of the boilers. They have received partial upgrades over the years but many of the internal components are original, and as such, are unreliable and difficult to maintain. Upgrades to the panels include replacement of the original Provox controllers to the currently installed Foxboro controllers.
- E3.6 The boilers can be fired on either utility natural gas or digester gas. The selection of fuel supply is made at the control panel for each boiler. Boilers 1, 2, and 3 (water tube boilers) operate primarily on digester gas while boiler 4 (fire tube boiler) operates primarily on natural gas.
- E3.7 Refer to Appendix B for wiring diagrams and for Process and Instrumentation Diagrams (P&IDs) representing the existing boiler control system.
- E3.8 Refer to Appendix C for Operating Manual Volume VIII-Boiler Room for information on the boilers and control system when it was first installed in 1986.
- (a) Note that this manual has not been updated since 1986. Please note, the boiler operation controls & status info located in the Boiler Area field device Panel BFPD-1 has been removed.
- E3.9 The following table list the drawings associated with this system which are found in Appendix B

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
1-0101A-A-0001-001-R07	P&ID Legend and Details
1-0101A-A-0001-002-R07	P&ID Legend and Details
1-0101A-A-0001-003-R07	P&ID Legend and Details
1-0101B-A-0005-001-R02	Boilers P&ID Boiler 1
1-0101B-A-0006-001-R02	Boilers P&ID Boiler 2
1-0101B-A-0007-001-R03	Boilers P&ID Boiler 3
1-0101B-A-0008-001-R03	Boilers P&ID Boiler 4
1-0101B-A-0020-001-R01	Boilers P&ID Boiler Controller Digital I/O Wiring
1-0101B-A-0020-002-R01	Boilers P&ID Boiler Controller Analog I/O Wiring
1-0101B-E0005-001-R06 (NEP1922A)	Boiler Control Panel Component Layout
1-0101B-E0002-001-R08 (NEP-1922B)	Boiler Control Electrical Schematic CB700X-500 HP, 125# Hot Water
1-0101B-E0002-002-R07 (NEP-1922C)	Boiler Control Electrical Schematic CB700X-500HP, 125# Hot Water
NEP-1922D1	Boiler 1 Controller
1-0101B-E0004-001-R01	Boilers Single Line Diagram- Electrical Distribution
NEP-1314	Boiler Building Electrical Modifications
NEP-2270	Loop Wiring Diagram Temperature Monitoring Boiler #1
NEP-2271	Loop Wiring Diagram Temperature Monitoring Boiler #2
NEP-2272	Loop Wiring Diagram Temperature Monitoring Boiler #3
NEP-2273	Loop Wiring Diagram Temperature Monitoring Boiler #4
NEP-1934	Loop Wiring Diagram Digester Gas to Boilers B901-FIT

- E3.10 Below an Equipment Reference List of equipment IDs and descriptions is provided for reference.

Equipment ID	Description
1-BH1	Boiler 1

2-BH2	Boiler 2
3-BH3	Boiler 3
4-BH4	Boiler 4

E4. NEW NEWPCC BOILER CONTROL SYSTEM

- E4.1 The following will detail requirements of the new boiler control system shall meet. It is not an exhaustive or prescriptive list of how or what the Proponent should design and construct, but rather requirements, the Proponent's design and implementation shall meet.
- E4.2 The major components of the new boiler control system are:
- (a) Four (4) boiler operating control panels, one for each boiler
 - (b) Four (4) parallel positioning linkageless systems, one for each boiler
 - (c) New Ethernet communication cables installed from each new boiler operating control panel to the boiler area control room to facilitate communication to and from the DCS
- E4.3 New boiler control operating panels for each boiler shall:
- (a) Provide reliable and safe start up, operation and shut down of the boilers acceptable to the AHJ and the City. Refer to Appendix C for control narrative. New boilers shall operate within the same verified parameters as existing with the new control system.
 - (b) Include all burner management controls, burner safety control and combustion controls required to provide all safety checks, sequences, and monitoring throughout the start up, operation and shut down of the boilers as required by and acceptable to the AHJ.
 - (c) Provide ability to operate boiler in manual and automatic modes via the control panel, as well as be able to operate the boiler in remote mode from the DCS acceptable to the AHJ.
 - (d) Remain connected to and communicate with the DCS via Ethernet communication cable installed by the Contractor.
 - (e) Be supplied in new enclosures that are adequately sized to house all controls, components and wiring as well be suitably rated for the environment and acceptable to the AHJ. One enclosure shall be supplied for each boiler and shall contain all the components, including the parallel positioning controllers and components.
 - (f) Be mounted on new support stands, in the same location as existing where possible and be firmly anchored and fixed to the floor.
 - (g) Include all required components for a functional system including but not limited to:
 - (i) Burner management system including all burner safety and burner control functions as required by, and acceptable to the AHJ.
 - (ii) New UV flame scanner as matched to the new burner management system
 - (iii) All combustion control, components and wiring necessary to integrate the parallel positioning linkageless system into the new boiler operating control panel.
 - (iv) All ancillary components as necessary or required such as power supplies, controllers, network adapters, terminal rails, relays, isolators, transformers, input/output modules, wiring etc including those required by, and acceptable to the AHJ.
 - (h) Dual fuel operation and the ability to alternate between both gases as specified in E3.6;
 - (i) Include a 7" minimum touchscreen panel for user friendly interface for the boiler operating panel. It shall contain all necessary screens to properly and safely operate and tune the boiler. At a minimum it shall have screens for:
 - (i) Boiler start up and shut down, fuel source selection, boiler status indicators and alarms
 - (ii) Pictorially represent the boiler and display all real time process variables.

- (iii) Alarm screen to show all alarms. Alarms should be specific and descriptive to allow for easy troubleshooting. Alarms should be able to be acknowledged and alarm history stored.
 - (iv) Any screens required for tuning and calibration of the boiler and control system. Any screens used for tuning or calibrations shall be password protected.
 - (v) Any other screens required to properly operate and maintain the boiler
 - (j) Components used in the control panels shall have readily available spare and replacement parts or components. As the boilers are critical pieces of equipment to the NEWPCC, the panels shall be quickly and easily repaired in the event of equipment/component failure.
 - (k) Individual boiler operating control panels shall be able to be taken out of service for maintenance/repair without affecting the functionality or operation of the other boilers or boiler operating panels.
 - (l) Boiler operating control panels shall include all approvals, certifications and safety features as required by Canadian and Manitoba codes and regulations including those required by, and acceptable to the AHJ.
- E4.4 A parallel positioning linkageless system to replace the current jackshaft system on each boiler as specified, and acceptable to the AHJ, including:
- (i) Electronic actuators with quick disconnects to control the boiler's air dampers and gas valves over the boiler's firing range. All required mounting brackets/hardware and modifications to install shall be and wiring shall be included.
 - (ii) Actuators shall have precise positioning accurate to 0.1 degree.
 - (iii) Modulation control via PID control loop to provide precise control
 - (iv) Actuator positions programmable to each boiler's combustion curve as well as separate set points as required for boiler operation
 - (v) Parallel positioning controller and other required control components shall be installed and integrated within the boiler operating control panel.
 - (vi) Factory calibrated to eliminate on site calibrations
- E4.5 Provide and install new ethernet communication cables from each new boiler operating panels to the boiler area control room to facilitate communication to and from the DCS. The City will be providing access to the plant's process network in the boiler operating control room by installing a new fiber optic line from the boiler operating control room to the nearest process network connection located in the digester area control room. The City will provide termination points in the boiler operating control room for the Ethernet cables from each boiler operating control panel to connect to. It will be the responsibility of the Contractor to install the Ethernet cables from each boiler operating control panel to the termination points in the boiler operating control room.
- (i) I/O address list for the new Ethernet communication line to be provided by the Proponent in order to facility communication with the DCS.
- E4.6 The boiler operation control panels shall be able to be commissioned and programmed from the boiler operating control panels without the need for specialized software or external devices.
- E4.7 Approved Manufacturers are:
- (a) Fire-eye;
 - (b) Honeywell;
 - (c) Siemens;
 - (d) Cleaver Brooks
 - (e) An approved equal.
- E4.8 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B7.

E5. STANDARDS

- E5.1 The Contractor shall ensure that the Work meets all applicable Canadian and Manitoba codes and regulations and requirements of the latest following industry standards where applicable of;
- (a) CSA – Canadian Standards Association
 - (b) CEC – Canadian Electrical Code
 - (c) OSHA – Occupational Safety and Health Administration.
 - (d) UL – Underwriter Laboratories
 - (e) NFPA 85– National Fire Protection Association
- E5.2 The Contractor shall ensure that all Work meets the requirements of the latest following City standards and guides. The following standards and guides are included in Appendices F-L
- (a) Water & Waste Department Electrical Design Guide;
 - (b) Water & Waste Department Automation Design Guide;
 - (c) Water & Waste Department HMI Layout and Animation Plan.
 - (d) Water & Waste Department Tag Naming Identification Standard,
 - (e) Water & Waste Project Document Numbering Standard
 - (f) Water & Waste Department Historical Data Retention Standard;
 - (g) Water & Waste Identification Standard

E6. GENERAL

- E6.1 The Contractor shall at minimum, investigate, design, schedule and plan transition work, install, program, test, commission and document four (4) sets of new boiler control systems to replace the existing four (4) sets of systems.
- E6.2 The Contractors scope of Work only relates to the boiler control system, parallel positioning linkageless system, and communication cables/wiring. Existing instruments and field devices installed on the boiler that input/output signals are to remain as part of the new control system. Any additional instrument or field devices required for the operation of the new system that is currently not installed on the boiler, including, but not limited to those required by the AHJ, or as mentioned in this RFP will be the responsibility of the Contractor. Should an existing input or output device which is found to be defective and presents an obstacle to the successful running of the new boiler control system, the Contractor must notify the Contract Administrator immediately so that City forces can be allocated to correct the field device.
- E6.3 The Contractor shall be responsible for producing the detailed shop drawings and any other drawings pertaining to the Work, installed by the Contractor as required by the City. This includes all electrical drawings of the system (P&ID's, wiring/instrument loop diagrams, network diagrams, power distribution, panel layout, equipment)
- E6.4 The Contractor shall update all existing effected drawings, P&IDs and literature affected by the Work. It is expected that where existing drawings, P&IDs and literature exists, that the existing document number remains unchanged and the revision number is updated. The city will endeavor to provide the proponent with electronic copies of the drawings for modification where available. Electronic copies of the drawings are not guaranteed however.
- E6.5 The Contractor shall be responsible for authentication (sealing) of all drawings produced pertaining to the Work and implemented by the Contractor by a Professional Engineer registered with Engineers Geoscientists Manitoba.
- E6.6 The Contractor shall conduct the Work under the supervision and approval of a Professional Engineer with a minimum of five (5) years' experience in similar systems.

E6.7 The City may require the Contractor to be available to assist the City's maintenance staff on-site inside and outside of normal business hours within the first twelve (12) months of operation of the system. The Contractor shall indicate in his Bid how this would be achieved.

E6.8 The Contractor shall make and install appropriate labelling on the new system as per the requirements of E5.2.

E7. DESIGN

E7.1 The Contractor shall create a project plan and schedule to complete the Work and submit the project plan to the City within two (2) weeks of award of the Contract.

E7.2 Upon approval by the City of the project plan, the Consultant shall produce a preliminary design of the new boiler control system for submittal and comment by the City.

E7.3 As part of the preliminary design, the Consultant shall conduct a detailed site investigation to gather and confirm all required information required to complete the Work. This includes but not limited to:

- (a) Review and verify drawings, documentation and information related to the boiler control system. Confirm field wiring, instruments and controls and overall operation of the system. Acquire the necessary data and verification required to complete the Work.
 - (i) City personnel can be made available to assist in the site investigation where information regarding the current operation of the boiler controls is required. This includes demonstrating the operation of the DCS and boiler control panels so the Proponent can gather a thorough understanding how the system is operated.
- (b) Coordinate with the AHJ to confirm any requirements, permits, approvals, special field inspections that will be required throughout the design, construction, and commissioning phases to ensure the boiler will have the necessary certifications prior to completion of the Work.

E7.4 Upon comment by the City of the preliminary design, the Consultant shall produce a detailed design of the new boiler control systems including all drawings as referenced in E6.3 and E6.4

E7.5 The Consultant shall produce a detailed transition plan from the existing systems to new systems. This plan will detail the phases and methods of the installation as well as testing and commissioning requirements in order to ensure a successful installation.

E7.6 The Consultant shall allow minimum of two (2) weeks in the schedule for any City reviews, comments or approvals as applicable that are required. Actual review periods may be substantially shorter and is dependent upon the size and complexity of the submittal being reviewed.

E7.7 All design work shall be sealed by the Professional Engineer(s) responsible design work

E8. INSTALLATION

E8.1 The Contractor shall be responsible for the installation of the new boiler control system. The Contractor may have assistance by City forces as per D3.4

E8.2 The installation method should provide the least amount of impact on the existing process and should be phased in its installation in such a way that the existing process can remain continually operational throughout the replacement. This will result in the installation occurring in phases, with only a one boiler being taken out of service at any one time.

E8.3 As the work will require shutdown of plant processes, Work on site must not commence until approved and coordinated with plant staff. Contractor must give one (1) week notice to the Contract Administrator ahead of all work that requires shutdown of plant processes.

- E8.4 Installation shall be performed by qualified personnel with necessary certifications as required by and to the satisfaction of the AHJ.
- E8.5 Any and all permits, inspections, and approvals are responsibility of the Contractor to arrange and obtain. All coordination with the authority having jurisdiction required for recertification of the boiler is responsibility of the Contractor. Any and all costs associated with any required permits, inspections, approvals and recertification shall be the responsibility of the Proponent.
- E8.6 Scope of installation
- (a) Complete removal of current boiler controls, panel, wiring, hardware, components associated with the Work.
 - (b) Complete installation of new boiler controls in every respect, which when installed and commissioned will provide complete operation of the boilers acceptable to the AHJ.
 - (c) Proper disposal of removed material.
 - (d) All electrical work as per applicable electrical codes and City of Winnipeg standards.
- E8.7 All equipment, material and labour needed for Work shall be new and supplied by the Contractor.
- E8.8 Installation and anchoring shall be in accordance with manufacturer instructions. Anchors, bolts, installation hardware, and fasteners required shall be supplied by contractor as specified by the manufacturer.
- E8.9 Any and all modifications required to install the equipment associated with the Work on the boilers is the responsibility of the Contractor.
- E8.10 Orientation of new boiler controls shall match current installation.
- E8.11 Accuracy of dimensions for all equipment items is the Contractor's responsibility. Any fit issues between Site conditions and new materials to be installed remain with the Contractor.
- E8.12 Where dimensional details are required, collect Site dimensions and coordinate with applicable drawings. However, dimensional accuracy remains with the Contractor as drawings are provided for reference only.
- E8.13 The Contractor shall make and install appropriate labelling on the new system as per the requirements of E5.2.
- E9. PROGRAMMING**
- E9.1 Further to E4.5, the Contractor shall program the new control system so as to properly expose the registries for use by the existing site DCS. If changes to the DCS are required due to the installation of the Ethernet cable from the control panels, the Contractor will be required to support City forces that will make the necessary changes to the DCS. As the existing DCS is an separate independent control system to the boiler control panels, any changes to the DCS will be performed by City forces.
- E9.2 Further to E9.1 it is the responsibility of the Contractor to provide a minimum of two (2) weeks notice to the Contract Administrator of when City forces will be required to make necessary changes to the DCS to ensure correct coordination and scheduling of City teams.
- E10. TESTING AND COMMISSIONING**
- E10.1 The Contractor shall develop a testing and commissioning plan of the new boiler system to the satisfaction of the Contract Administrator.
- E10.2 The Contractor shall undertake a comprehensive Factory Acceptance Test of the new boiler control system prior to the installation at the NEWPCC. The test should look to simulate the

system with real-time external inputs and outputs of the developed control system under both normal and abnormal operating conditions.

- E10.3 The results of the factory acceptance test shall be made available to the City following completion of the test.
- E10.4 The Contractor shall ensure all site testing and commissioning is completed in coordination with and as required by the AHJ.
- E10.5 The Contractor shall be responsible for all commissioning requirements at the NEWPCC of the new boiler control system to ensure a fully functional, safe and reliable system to the satisfaction of the City and the AHJ.

E11. OPERATION AND MAINTENANCE MANUALS

- E11.1 The Contractor shall produce detailed Operation and Maintenance (O&M) manuals covering the operation and maintenance relevant to the new boiler control system. The O&M manuals shall also include a comprehensive and up to date process control narrative of the system installed. All final O&M manuals shall be to the satisfaction and acceptance of the Contract Administrator. The Contractor shall provide these manuals ten (10) Calendar Days in advance before the commencement of equipment start-up. Final versions of the O&Ms should be submitted within sixty (60) days of successful commissioning of the system.
- E11.2 All instructions in these manuals shall be in the English language to guide the City in the proper operation and maintenance of the equipment.
- E11.3 Bind contents in a three (3) – “D-Ring”, hard-covered, plastic-jacketed binder with full cover and spine insert. Organize contents into applicable sections of work, parallel to Specifications breakdown.
- E11.4 Provide all required data in electronic format. Text documents shall be Microsoft Word or Adobe format. Drawings, scanned documents, parts lists, and test forms shall be in Adobe format. Documents that require scanning shall be high quality scans, and fully legible. Documents shall be submitted on a high quality compact disk or USB data stick. Compact disk and case shall be labelled in type, with the following;
 - (a) Bid Opportunity Number;
 - (b) Job Title, and
 - (c) Description of Equipment.
- E11.5 The following shall be included:
 - (a) Title sheet, labelled “Operation and Maintenance Instructions”, containing project name and date;
 - (b) List of contents;
 - (c) Approved shop drawings of equipment as per E4;
 - (d) As Built drawings, marked “AS BUILT”, and signed and sealed by the Contractor;
 - (i) Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
 - (ii) Adjustments made on shop drawings by Contract Administrator are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Contract Administrator prior to proceeding with Work.

- (iii) Make changes in shop drawings as Contract Administrator may require, consistent with Contract Documents. When resubmitting, notify Contract Administrator in writing of revisions other than those requested.
 - (e) Certified shop test results;
 - (f) Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - (g) Names, addresses, and telephone numbers of all major sub-contractors and suppliers;
 - (h) Detailed specification and operation and maintenance instructions for all items of equipment provided including a preventative maintenance program;
 - (i) An itemized list of spare parts recommended for five years of services, particularly those components where failure of which will render the equipment supplied inoperable. Any special tools or other ancillary items necessary for commissioning and/or proper operation and maintenance shall also be listed.
 - (j) Part books that illustrate and list all assemblies, sub-assemblies, and components;
 - (k) Routine test procedures;
 - (l) Troubleshooting chart showing description of common issues, probable cause, and suggested remedy.
- E11.6 The Contractor shall modify and supplement the manual as required by the Contract Administrator. When accepted, six (6) additional copies, including electronic versions, shall be provided to the Contract Administrator.
- E11.7 The City is currently developing a City standard guidance document on how O&M manuals should be structured for content and standard section dividers and identifiers. At the time the Contractor is in a position to begin creation of the O&M manuals, the City will provide these standard guidance documents as available upon request to the Contract Administrator. The expectation of the City is that the Contractor will align the structure of the O&Ms in line with these City standard guidance documents where available and meeting the requirements of E12.
- E11.8 If upon review by Contract Administrator, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed
- E12. CITY STAFF TRAINING**
- E12.1 The Contractor shall allow for a minimum of four (4) lots of two (2) hour training sessions for site operations staff and two (2) lots of three (3) hour training sessions for maintenance staff. The training should be performed over a number of different days to ensure maximum coverage of operations and maintenance staff that work on a day and night shift rotation.
- E12.2 Further to E12.1, training for City maintenance staff should primarily be based around electrical and instrumentation staff skill sets. The training should be sufficiently detailed to allow City electrical and instrumentation maintenance staff to be able to replace components within the system, uploading and downloading back-up versions of the runtime program and forcing I/O states within the software to aid in maintenance fault finding, as well as any other pertinent areas of the system not normally found within similar control systems at the NEWPCC.
- E12.3 Further to E12.1, training for City operation staff should primarily be based around operation of the system, navigation of the system, alarm management, retrieval of historical data, adjustable operating parameters, associated interlocks and inhibits with external systems.
- E12.4 Training shall be site based at the NEWPCC and should be hands on training with the actual system installed.

E12.5 Training sessions shall be video recorded and saved to DVD in triplicate and provided to the Contract Administrator at the completion of the training. The video recorded sessions are aimed at training additional City staff at later dates and as such should be sufficiently detailed and possess good picture and sound quality.

E13. TRANSPORTATION OF GOODS

E13.1 The Contractor shall pay costs of transportation of products required in performance of Work.

E13.2 The Contractor is required to provide all equipment necessary for the transportation of goods at the Site.

E13.3 Contractor is responsible for all off-loading and handling of equipment at the Site.

E14. SHOP TESTING

E14.1 Each boiler control system shall be factory assembled and tested for mechanical and electrical operation prior to delivery and ready for installation. The results of these tests shall be submitted to the Contract Administrator prior to shipping.

E15. QUALITY CONTROL

E15.1 Contract Administrator may order any part of the Work to be reviewed or inspected if Work is suspected to be not in accordance with Contract Documents.

- (a) If, upon review such Work is found not in accordance with Contract Documents, correct such Work and pay cost of additional review and correction.
- (b) If such work is found in accordance with Contract Documents, Contractor will be compensated for review and replacement at a cost negotiated by the Contract Administrator.

E15.2 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Contract Administrator as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.

E15.3 Make good other work damaged by removals or replacements promptly.

E15.4 If in opinion of the Contract Administrator it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, a deduction from the Contract Price of the difference in value between Work performed and that called for by Contract Documents, amount of which shall be determined by Contract Administrator.