



THE CITY OF WINNIPEG

REQUEST FOR PROPOSAL

RFP NO. 422-2012

**THIRD PARTY COMMISSIONING FOR PUBLIC WORKS EAST YARD COMPLEX AT
960 THOMAS AVENUE (FORMER ELMWOOD NAIRN LANDFILL SITE)**

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PART B - BIDDING PROCEDURES

B1. CONTRACT TITLE

- B1.1 THIRD PARTY COMMISSIONING FOR PUBLIC WORKS EAST YARD COMPLEX AT 960 THOMAS AVENUE (FORMER ELMWOOD NAIRN LANDFILL SITE)

B2. SUBMISSION DEADLINE

- B2.1 The Submission Deadline is 4:00 p.m. Winnipeg time, July 5, 2012.
- 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 The Bidder is advised that Further to C3.1, a Site tour will be held on June 29, 2012 at 10:00 A.M. Bidders wishing to view the project Site are to meet at the intersection of Thomas Avenue and Kent Street. The intent of the Site tour is to provide an opportunity to view the size and scope of the Site. Bidders wishing to physically walk the Site will be required to participate in an approximate hour long safety orientation to be provided by the contractor's safety personnel. Bidders wishing to walk the Site are to contact the City's Contract Administrator identified in D4 at least one (1) day in advance of the Site tour to register for a group safety orientation. Access to the Site will only be permitted by guided group tour.
- B3.2 Any Bidders wishing to do a drive by of the Site may do so at their convenience without providing notice.
- B3.3 The Bidder is advised that the Site is under construction and they are required to bring and wear the following personal protective equipment (PPE):
- (a) Safety Glasses;
 - (b) Steel Toe Boots;
 - (c) Hard Hat; and
 - (d) Safety Vest
- B3.4 Bidders are advised that attendance at the Site tour is not mandatory, but is strongly recommended, as access to the Site is restricted.
- B3.5 The Bidder shall not be entitled to rely on any information or interpretation received at the Site tour unless that information or interpretation is the Bidder's direct observation, or is provided by the Contract Administrator in writing.

B4. ENQUIRIES

- B4.1 All enquiries shall be directed to the Contract Administrator identified in D4.1.
- B4.2 If the Bidder finds errors, discrepancies or omissions in the Request for Proposal, or is unsure of the meaning or intent of any provision therein, the Bidder shall promptly notify the Contract Administrator of the error, discrepancy or omission at least five (5) Business Days prior to the Submission Deadline.
- B4.3 If the Bidder is unsure of the meaning or intent of any provision therein, the Bidder should request clarification as to the meaning or intent prior to the Submission Deadline.

- B4.4 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 Bidders by issuing an addendum.
- B4.5 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 Bidder who made the enquiry.
- B4.6 The Bidder shall not be entitled to rely on any response or interpretation received pursuant to B4 unless that response or interpretation is provided by the Contract Administrator in writing.

B5. CONFIDENTIALITY

- B5.1 Information provided to a Bidder by the City or acquired by a Bidder by way of further enquiries or through investigation is confidential. Such information shall not be used or disclosed in any way without the prior written authorization of the Contract Administrator.
- B5.2 The Bidder shall not make any statement of fact or opinion regarding any aspect of the Request for Proposals 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.
- B6.2.1 Addenda will be available on the Bid Opportunities page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/bidopp.asp>
- B6.2.2 The Bidder is responsible for ensuring that he/she has received all addenda and is advised to check the Materials Management Division website for addenda regularly and shortly before the Submission Deadline, as may be amended by addendum.
- B6.3 The Bidder shall acknowledge receipt of each addendum in Paragraph 9 of Form A: Proposal. Failure to acknowledge receipt of an addendum may render a Proposal non-responsive.

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 Bidder shall ensure that any and all requests for approval of a substitute:
- (a) provide sufficient information and details to enable the Contract Administrator to determine the acceptability of the Plant, Material or method as either an approved equal or alternative;
 - (b) identify any and all changes required in the applicable Work, and all changes to any other Work, which would become necessary to accommodate the substitute;
 - (c) identify any anticipated cost or time savings that may be associated with the substitute;

- (d) certify that, in the case of a request for approval as an approved equal, the substitute will fully perform the functions called for by the general design, be of equal or superior substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance;
 - (e) certify that, in the case of a request for approval as an approved alternative, the substitute will adequately perform the functions called for by the general design, be similar in substance to that specified, is suited to the same use and capable of performing the same function as that specified and can be incorporated into the Work, strictly in accordance with the proposed work schedule and the dates specified in the Supplemental Conditions for Substantial Performance and Total Performance.
- B7.5 The Contract Administrator, after assessing the request for approval of a substitute, may in his/her sole discretion grant approval for the use of a substitute as an “approved equal” or as an “approved alternative”, or may refuse to grant approval of the substitute.
- B7.6 The Contract Administrator will provide a response in writing, at least two (2) Business Days prior to the Submission Deadline, only to the Bidder who requested approval of the substitute.
- B7.6.1 The Bidder requesting and obtaining the approval of a substitute shall be entirely responsible for disseminating information regarding the approval to any person or persons he/she wishes to inform.
- B7.7 If the Contract Administrator approves a substitute as an “approved equal”, any Bidder may use the approved equal in place of the specified item.
- B7.8 If the Contract Administrator approves a substitute as an “approved alternative”, any Bidder bidding that approved alternative may base his/her Total Bid Price upon the specified item but may also indicate an alternative price based upon the approved alternative. Such alternatives will be evaluated in accordance with B20.
- 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.
- B7.10 Notwithstanding B7.2 to B7.9 and in accordance with B8.5, deviations inconsistent with the Request for Proposal document shall be evaluated in accordance with B20.1(a).

B8. PROPOSAL SUBMISSION

- B8.1 The Proposal shall consist of the following components:
- (a) Form A: Proposal;
 - (b) Form B: Prices;
 - (c) Experience of Commissioning Management Team; (B12)
 - (d) Experience of Key Personnel assigned to the Project; (B13)
 - (e) Commissioning Methodology and Plan.(B14)
- B8.2 Further to B8.1, the Bidder should include the written correspondence from the Contract Administrator approving a substitute in accordance with B7.
- B8.3 All components of the Proposal shall be fully completed or provided, and submitted by the Bidder no later than the Submission Deadline, with all required entries made clearly and completely, to constitute a responsive Proposal.
- B8.3.1 Bidders should submit one (1) unbound original (marked “original”) and ^ (^) copies.

- B8.4 Bidders are advised not to include any information/literature except as requested in accordance with B8.1.
- B8.5 Bidders are advised that inclusion of terms and conditions inconsistent with the Request for Proposal, including the General Conditions, will be evaluated in accordance with B20.1(a).
- B8.6 The Proposal should be submitted enclosed and sealed in an envelope clearly marked with the RFP number and the Bidder's name and address.
- B8.6.1 Samples or other components of the Proposal which cannot reasonably be enclosed in the envelope may be packaged separately, but shall be clearly marked with the RFP number, the Bidder's name and address, and an indication that the contents are part of the Bidder's Proposal Submission.
- B8.7 Proposals submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.
- B8.8 Proposals shall be submitted to:
The City of Winnipeg
Corporate Finance Department
Materials Management Division
185 King Street, Main Floor
Winnipeg MB R3B 1J1

B9. PROPOSAL

- B9.1 The Bidder 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 Bidder is a sole proprietor carrying on business in his/her own name, his/her name shall be inserted;
 - (b) if the Bidder is a partnership, the full name of the partnership shall be inserted;
 - (c) if the Bidder is a corporation, the full name of the corporation shall be inserted;
 - (d) if the Bidder is carrying on business under a name other than his/her own, the business name and the name of every partner or corporation who is the owner of such business name shall be inserted.
- B9.2.1 If a 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 Bidder shall identify a contact person who is authorized to represent the Bidder for purposes of the Proposal.
- B9.4 Paragraph 11 of Form A: Proposal shall be signed in accordance with the following requirements:
- (a) if the Bidder is a sole proprietor carrying on business in his/her own name, it shall be signed by the Bidder;
 - (b) if the Bidder is a partnership, it shall be signed by the partner or partners who have authority to sign for the partnership;
 - (c) if the Bidder is a corporation, it shall be signed by its duly authorized officer or officers and the corporate seal, if the corporation has one, should be affixed;
 - (d) if the Bidder is carrying on business under a name other than his/her own, it shall be signed by the registered owner of the business name, or by the registered owner's authorized officials if the owner is a partnership or a corporation.

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

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

B10. PRICES

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

B10.1.1 Prices shall include an allowance for Allowable Disbursements, but shall exclude the costs of any materials testing.

B10.1.2 Notwithstanding C11.1.1, prices on Form B: Prices 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 Payments to Non-Resident Contractors are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

B11. QUALIFICATION

B11.1 The Bidder shall:

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

B11.2 The Bidder and any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) be responsible and not be suspended, debarred or in default of any obligations to the City. A list of suspended or debarred individuals and companies is available on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/debar.stm>

B11.3 The Bidder and/or any proposed Subcontractor (for the portion of the Work proposed to be subcontracted to them) shall:

- (a) have successfully carried out work similar in nature, scope and value to the Work; and
- (b) be fully capable of performing the Work required to be in strict accordance with the terms and provisions of the Contract; and
- (c) have a written workplace safety and health program, if required, pursuant to The Workplace Safety and Health Act (Manitoba);
- (d) have a minimum 5 (five) years' experience on similar projects.

B11.4 The Bidder shall submit, within three (3) Business Days of a request by the Contract Administrator, proof satisfactory to the Contract Administrator of the qualifications of the Bidder and of any proposed Subcontractor.

B11.5 The Bidder shall provide, on the request of the Contract Administrator, full access to any of the Bidder's equipment and facilities to confirm, to the Contract Administrator's satisfaction, that the Bidder's equipment and facilities are adequate to perform the Work.

B12. EXPERIENCE OF COMMISSIONING MANAGEMENT TEAM

B12.1 Proposals shall include:

- (a) details demonstrating the history and experience of the Proponent and Sub-consultants in providing functional commissioning of technical components through the use of a developed commissioning plan which includes the basis of design, design development review, construction documents review, submittals review, construction phase verification, owner training plan and a list of key commissioning process milestones for functional performance test development and implementation and (10) month warranty review.

B12.2 For each project listed in B12.1(a), the proponent shall submit:

- (a) Description of the project:
- (b) Role of the consultant:
- (c) Project's original contracted construction cost and final construction cost:
- (d) Design and construction schedule:
- (e) Project owner:
- (f) Reference information (two current names with telephone numbers per project).

B13. EXPERIENCE OF KEY PERSONNEL ASSIGNED TO THE PROJECT

B13.1 Describe the approach to overall team formation and coordination of team members.

B13.2 Include an organizational chart for the project.

B13.3 Submit the experience and qualifications of the Key Personnel assigned to the Project for projects of comparable size and complexity, including the principals-in-charge, the Consultants 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 B13.2.

B13.4 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 B10, 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).

B14. COMMISSIONING METHODOLOGY AND PLAN

B14.1 Describe your firm's approach and team organization during the performance of Services, so that the evaluation committee has a clear understanding of the methods the Bidder will use in the delivery of these Services.

B14.2 Methodology should be presented in accordance with the Scope of Work identified in D2.

B14.3 Describe the collaborative process/method to be used in the various phases of the commissioning.

B14.4 Proposals should address understanding of the broad functional and technical requirements and any other issues that conveys your understanding of the requirements.

- B14.5 Proposal should include a list and brief description of any additional services the Bidder proposes to be required to perform a thorough commissioning of the Public Works East Yards.
- B14.6 For each person identified in B13.3, list the time, in hours, to be dedicated to the Project in accordance with the Scope of Services identified in D2.

B15. OPENING OF PROPOSALS AND RELEASE OF INFORMATION

- B15.1 Proposals will not be opened publicly.
- B15.2 After award of Contract, the name(s) of the successful Bidder(s) and the Contract amount(s) will be available on the Closed Bid Opportunities (or Public/Posted Opening & Award Results) page at The City of Winnipeg, Corporate Finance, Materials Management Division website at <http://www.winnipeg.ca/matmgt/>
- B15.3 To the extent permitted, the City shall treat all Proposal Submissions as confidential, however the Bidder is advised that any information contained in any Proposal may be released if required by City policy or procedures, by The Freedom of Information and Protection of Privacy Act (Manitoba), by other authorities having jurisdiction, or by law.
- B15.4 Following the award of Contract, a Bidder will be provided with information related to the evaluation of his/her submission upon written request to the Contract Administrator.

B16. IRREVOCABLE OFFER

- B16.1 The Proposal(s) submitted by the Bidder shall be irrevocable for the time period specified in Paragraph 10 of Form A: Proposal.
- B16.2 The acceptance by the City of any Proposal shall not release the Proposals of the other responsive Bidders and these Bidders 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.

B17. WITHDRAWAL OF OFFERS

- B17.1 A Bidder may withdraw his/her Proposal without penalty by giving written notice to the Manager of Materials at any time prior to the Submission Deadline.
- B17.1.1 Notwithstanding C22.5, 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.
- B17.1.2 The City will assume that any one of the contact persons named in Paragraph 3 of Form A: Proposal or the Bidder's authorized representatives named in Paragraph 11 of Form A: Proposal, and only such person, has authority to give notice of withdrawal.
- B17.1.3 If a Bidder 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 Bidder's authorized representatives named in Paragraph 11 of Form A: Proposal; and
 - (c) if the notice has been given by any one of the persons specified in B17.1.3(b), declare the Proposal withdrawn.
- B17.2 A Bidder who withdraws his/her Proposal after the Submission Deadline but before his/her offer has been released or has lapsed as provided for in B16.2 shall be liable for such damages as are imposed upon the Bidder by law and subject to such sanctions as the Chief Administrative

Officer considers appropriate in the circumstances. The City, in such event, shall be entitled to all rights and remedies available to it at law.

B18. INTERVIEWS

B18.1 The Contract Administrator may, in his/her sole discretion, interview Bidders during the evaluation process.

B19. NEGOTIATIONS

B19.1 The City reserves the right to negotiate details of the Contract with any Bidder. Bidders are advised to present their best offer, not a starting point for negotiations in their Proposal Submission.

B19.2 The City may negotiate with the Bidders submitting, in the City's opinion, the most advantageous Proposals. The City may enter into negotiations with one or more Bidders without being obligated to offer the same opportunity to any other Bidders. Negotiations may be concurrent and will involve each Bidder individually. The City shall incur no liability to any Bidder as a result of such negotiations.

B19.3 If, in the course of negotiations pursuant to B19.2 or otherwise, the Bidder 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 Bidder from the Proposal as originally submitted.

B20. EVALUATION OF PROPOSALS

B20.1 Award of the Contract shall be based on the following evaluation criteria:

- (a) compliance by the Bidder with the requirements of the Request for Proposal or acceptable deviation therefrom:(pass/fail);
- (b) qualifications of the Bidder and the Subcontractors, if any, pursuant to B11: (pass/fail);
- (c) Total Bid Price; 40%
- (d) Experience of Commissioning Management Team 10%
- (e) Experience of Key Personnel assigned to the project; 20%
- (f) Commissioning Methodology and Plan. 30%

B20.2 Further to B20.1(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.

B20.3 Further to B20.1(b), the Award Authority shall reject any Proposal submitted by a Bidder who does not demonstrate, in his/her Proposal or in other information required to be submitted, that he/she is responsible and qualified.

B20.4 Further to B20.1(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.

B20.4.1 If there is any discrepancy between the Total Bid Price written in figures, the Total Bid Price written in words and the sum of the quantities multiplied by the unit prices for each item, the sum of the quantities multiplied by the unit prices for each item shall take precedence.

B20.4.2 Further to B20.1(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.

- B20.5 Further B20.1(d), Experience of Commissioning Management Team will be evaluated considering the experience of the organization on projects of similar size and complexity as well as other information requested.
- B20.6 Further to B20.1(e), Experience of Key Personnel assigned to the Project will be evaluated considering the experience and qualifications of the key Personnel and Sub-consultant personnel on Projects of comparable size and complexity.
- B20.7 Further to B20.1(f), Commissioning Methodology and Plan will be evaluated considering your firm's understanding of the City's Project, project management approach and team organization.
- B20.8 This Contract will be awarded as a whole.
- B20.9 If, in the sole opinion of the City, a Proposal does not achieve a pass rating for B20.1(a) and B20.1(b), the Proposal will be determined to be non-responsive and will not be further evaluated.

B21. AWARD OF CONTRACT

- B21.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.
- B21.2 The City will have no obligation to award a Contract to a Bidder, even though one or all of the Bidders are determined to be responsible and qualified, and the Proposals are determined to be responsive.
- B21.2.1 Without limiting the generality of B21.2, 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.
- B21.3 Where an award of Contract is made by the City, the award shall be made to the responsible and qualified Bidder submitting the most advantageous offer.
- B21.3.1 Following the award of contract, a Bidder will be provided with information related to the evaluation of his/her Proposal upon written request to the Contract Administrator.
- B21.4 Notwithstanding C4 and Paragraph 6 of Form A: Proposal, the City will issue a purchase order to the successful Bidder in lieu of the execution of a Contract.
- B21.5 The Contract Documents, as defined in C1.1(n)(ii), in their entirety shall be deemed to be incorporated in and to form a part of the purchase order notwithstanding that they are not necessarily attached to or accompany said purchase order.

PART C - GENERAL CONDITIONS

C0. GENERAL CONDITIONS

- C0.1 The *General Conditions for Supply of Services* (Revision 2007 04 12) are applicable to the Work of the Contract.
- C0.1.1 The *General Conditions for Supply of 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
- C0.2 A reference in the proposal to a section, clause or subclause with the prefix “**C**” designates a section, clause or subclause in the *General Conditions for Supply of Services*.

PART D - SUPPLEMENTAL CONDITIONS

GENERAL

D1. GENERAL CONDITIONS

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

D2. SCOPE OF WORK

D2.1 The Work to be done under the Contract shall consist of the Provision of Third Party Commissioning Services for the Public Works East Yard Complex at 960 Thomas Avenue (Former Elmwood Nairn Landfill Site)

D2.2 This project is a consolidated facility for the City of Winnipeg Public Works Department for operations on the east side of the Red River. It will provide space for components of four Public Works Divisions including: Bridge Operations Division; Centralized Parks Services Division; East Area Parks, Parks and Open Spaces Division; and Streets Maintenance Division –East Area. Furthermore, Winnipeg Fleet Management Agency (WFMA) operations will also be accommodated and will provide vehicle and equipment maintenance and repair at this location. Encompassing over 100,000 square feet of building area on approximately 26 acres of land, the major components of the Work are as follows:

- (a) Main Administrative/Office area
- (b) Heated Garage/Shops Areas
- (c) Unheated Garage/Storage Areas
- (d) Exterior Storage Yards/Compounds
- (e) Parking for Equipment and Vehicles
- (f) Marshalling/Staging Areas
- (g) Employee/Visitor Parking
- (h) Site Servicing, Approaches, Fencing, Lighting, Access Roads

D2.3 The major components of the Work are as follows:

- (a) Major building systems for the Public Works East Yard Complex will be commissioned including, but not limited to the following:

D2.3.1 Mechanical Systems:

- (a) Plumbing systems (e.g. temperature control mixing valves, instant hot water system);
- (b) Heating systems (e.g. liquid heat transfer - heat pump system, boiler system, domestic hot water system, pump and valve operation);
- (c) Ventilation and air-conditioning systems (e.g. VAV and re-heat operation; fan motors, drives, belts and alignment);
- (d) Fire protection systems (e.g. tamper and flow switches, pressure and flow testing, sprinkler coverage verification);
- (e) Building automation and/or control systems (e.g. heating, cooling and shoulder season temperature controls; DDC monitoring, control and alarms; sequence of operations; Testing Adjusting Balancing of liquid flow and air flow; and, duct cleaning complete with video recorded verification); and
- (f) Elevating device systems (e.g. operation, life safety systems).

D2.3.2 Electrical Systems:

- (a) Primary distribution equipment;

- (b) Secondary distribution equipment;
- (c) Wiring devices;
- (d) Lighting systems (e.g. fixtures, equipment and electronic controls);
- (e) Uninterruptible power supply (UPS), Gen-set and central battery systems (e.g. load testing, system verification, transfer switching);
- (f) Motor and control systems (e.g. motor starters, motor control centres); and
- (g) Lightning, ground fault, surge suppression and power factor protection systems.

D2.3.3 Communication Systems (active/passive systems contributing to information flow):

- (a) Security systems (e.g., closed-circuit television, door control, fence disturbance sensors, card access and system integration);
- (b) Computer cabling systems;
- (c) Public address systems (intercom);
- (d) Cable television and satellite systems;
- (e) Wireless staff communication systems;
- (f) Telephone cabling systems;
- (g) Fire alarm systems (e.g. verification, audibility);
- (h) Fire and smoke alarm monitoring systems; and
- (i) Energy management control systems.

D2.3.4 Building Envelope:

- (a) Air/water and vapour penetration systems;
- (b) Water shedding systems;
- (c) Thermal insulation systems; and
- (d) Light transmittance systems (e.g. windows).

D2.3.5 Other:

- (a) Any other systems required to complete a successful full commissioning of the Public Works East Yard Complex.

D3. DEFINITIONS

D3.1 When used in this Request for Proposal:

- (a) "**Allowable Disbursements**" means the cost of out of town travel and related meals and accommodations, specialized software, rental rates for specialized equipment, drilling, sampling, laboratory testing and any other out-of-pocket expenses, excluding normal overhead, directly related to the Work. Overhead shall include any items included in day to day operations and shall include, but not be limited to: computer costs, communication costs, digital photography, administrative fees and items incidental to the Work, except as provided herein, and is expressly excluded.

D4. CONTRACT ADMINISTRATOR

D4.1 The Contract Administrator is:

Andrew Urbanowicz
Project Officer, Municipal Accomodations Division aurbanowicz@winnipeg.ca

Telephone No. 204- 986-2311

Facsimile No. 204- 98-7311

D4.2 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.

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

D5. CONTRACTOR'S SUPERVISOR

D5.1 Further to C6.19, 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.

D5.2 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.

D5.2.1 Further to C5.5 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.

D6. OWNERSHIP OF INFORMATION, CONFIDENTIALITY AND NON DISCLOSURE

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

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

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

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

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

D7. NOTICES

D7.1 Notwithstanding C22.3, all notices of appeal to the Chief Administrative Officer shall be sent to the attention of the Chief Financial Officer at the following facsimile number:

The City of Winnipeg
Chief Financial Officer

Facsimile No.: 204- 949-1174

SUBMISSIONS

D8. AUTHORITY TO CARRY ON BUSINESS

D8.1 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.

D9. INSURANCE

- D9.1 During the term of this contract the Contractor shall provide and maintain the following insurance coverage:
- (a) commercial general liability insurance on an occurrence basis in the amount of at least \$5,000,000 with a minimum \$5,000,000 general aggregate for bodily injury, property damage, personal injury and products and completed operations with The City of Winnipeg added as an additional insured; such liability policy to also contain a cross-liability clause or severability of interest clause, contractual liability and insurance to remain in force at all times during the performance of the Work;
 - (b) automobile liability insurance for owned and non-owned automobiles used for or in connection with the work in the amount of at least \$2,000,000, to remain in place at all times during the performance of the Work;
 - (c) Professional Errors and Omissions Liability insurance in the amount of at least \$2,000,000 during the term of the contract and for 12 months after Total Performance
- D9.2 The Contractor will ensure that:
- (a) sub contractors are required to carry general liability insurance for the same limits and coverage as outlined above.
 - (b) consultants and sub consultants are required to carry at least \$2,000,000 professional errors and omissions liability insurance during the term of this contract and for 12 months after Total Performance.
- D9.3 Deductibles shall be borne by the Contractor.
- D9.4 The Contractor shall provide the Contract Administrator with a certificate(s) of insurance, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Work on the Site but in no event later than the date specified in C4.1 for the return of the executed Contract.
- D9.5 The Contractor shall not cancel, materially alter, or cause the policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the Contract Administrator.
- D9.6 During the term of this contract the City shall provide and maintain the following insurance coverage:
- (a) wrap up liability insurance with 24 months completed operations on an occurrence basis in the amount of at least \$10,000,000 inclusive covering bodily injury, property damage, personal injury, products and completed operations and including cross liability or severability of interest; broad form completed operations, broad form contractual liability, and limited pollution 120 hours reporting.
 - (b) The Contractor shall be responsible for deductibles up to \$25,000. maximum of any one loss.
- D9.7 The City will carry such insurance to cover all parties engaged in the Work in this Contract. Provision of this insurance by the City of Winnipeg is not intended in any way to relieve the Contractor from his obligations under the terms of the Contract. Specifically, losses relating to deductibles for insurance, as well as losses in excess of limits of coverage and any risk of loss that is not covered under the terms of the insurance provided by the City of Winnipeg remains with the Contractor.

SCHEDULE OF WORK

D10. COMMENCEMENT

- D10.1 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.
- D10.2 The Contractor shall not commence any Work on the Site until:
- (a) the Contract Administrator has confirmed receipt and approval of:
 - (i) evidence of authority to carry on business specified in D8;
 - (ii) evidence of the workers compensation coverage specified in C6.14;
 - (iii) evidence of the insurance specified in D9;
 - (b) the Contractor has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.
- D10.3 The Contractor shall commence the Work on the Site within seven (7) Working Days of receipt of the notice of award.

CONTROL OF WORK

D11. PRIME CONTRACTOR – THE WORKPLACE SAFETY AND HEALTH ACT (MANITOBA)

- D11.1 Further to C6.23, Ernst Hansch Construction Ltd is 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).

MEASUREMENT AND PAYMENT

D12. INVOICES

- D12.1 Further to C11, the Contractor 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
- D12.2 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.
- D12.3 The City will bear no responsibility for delays in approval of invoices which are improperly submitted.
- D12.4 Bids Submissions must be submitted to the address in B8.8

D13. PAYMENT

D13.1 Further to C11, the City may at its option pay the Contractor by direct deposit to the Contractor's banking institution.

WARRANTY

D14. WARRANTY

D14.1 Notwithstanding C12, the warranty does not apply to this Contract.

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS AND DRAWINGS

E1.1 These Specifications shall apply to the Work.

E1.2 The following are applicable to the Work and **are provided for information purposes only**:

<u>Specification No.</u>	<u>Specification Title</u>
Division 00	NMS Procurement and Contracting Requirements
Division 01	NMS General Requirements
Division 03	NMS Concrete
Division 04	NMS Masonry
Division 05	NMS Steel
Division 06	NMS Wood and Plastics
Division 07	NMS Thermal and Moisture Protection
Division 08	NMS Openings
Division 09	NMS Finishes
Division 10	NMS Specialties
Division 12	NMS Furnishings
Division 14	NMS Conveying System
Division 22	NMS Plumbing
Division 23	NMS Heating, Ventilating and Air Conditioning
Division 25	NMS Integrated Automation System
Division 26	NMS Electrical
Division 27	NMS Communications
Division 28	NMS Electronic Safety Security
Division 31	NMS Chemical Vegetation Control
Division 32	NMS Landscaping
Division 41	NMS Lifts
Division 44	NMS Cranes
Division G	NMS Performance Specifications

<u>Drawing No.</u>	<u>Drawing Name/Title</u>
C-00-R1	COVER SHEET AND LOCATION PLAN
C-01-R1	DRAWING INDEX, KEY PLAN & OVERALL SITE PLAN
C-02-R1	SURFACE WORKS – GENERAL SITE PLAN (WEST)
C-03-R1	SURFACE WORKS – GENERAL SITE PLAN (CENTRE)
C-04-R1	SURFACE WORKS – GENERAL SITE PLAN (EAST)
C-05-R1	SURFACE WORKS – PAVING PLAN & SECTIONS
C-06-R1	SURFACE WORKS – LOT GRADING PLAN (WEST)
C-07-R1	SURFACE WORKS – LOT GRADING PLAN (CENTRE)
C-08-R1	SURFACE WORKS – LOT GRADING PLAN (EAST)
C-09-R1	UNDERGROUND WORKS – SITE SERVICING PLAN (WEST)
C-10-R1	UNDERGROUND WORKS – SITE SERVICING PLAN (CENTRE)
C-11-R1	UNDERGROUND WORKS – SITE SERVICING PLAN (EAST)
C-12-R1	UNDERGROUND WORKS – FEATURES LAYOUT TABLES
C-13-R1	LAKE PLAN AND SECTIONS
C-14-R1	LAKE DETAILS
C-15-R1	MISCELLANEOUS DETAILS 1
C-16-R1	MISCELLANEOUS DETAILS 2
C-17-R1	EROSION CONTROL PLAN & DETAILS
C-00	COVER SHEET AND LOCATION PLAN

A0.1	INDEX SHEET, GENERAL NOTES AND CONSTRUCTION TYPES
A1.2-R0	ROOF PLANS
A2.0-R0	FLOOR PLANS
A2.1-R0	MAIN FLOOR PARTIAL PLAN ADMINISTRATIVE BLOCK
A2.2-R0	MAIN FLOOR PARTIAL PLAN GARAGES
A2.3-R0	MAIN FLOOR PARTIAL PLAN FLEET MANAGEMENT
A2.4-R0	MAIN FLOOR PARTIAL PLAN BRIDGE OPERATIONS AND STREETS MAINTENANCE
A2.5-R0	MAIN FLOOR PARTIAL PLANS STREETS MAINTENANCE
A2.6-R0	SECOND FLOOR PARTIAL PLAN ADMINISTRATIVE BLOCK
A2.7-R0	SECOND FLOOR PARTIAL PLAN FLEET MANAGEMENT
A2.8-R0	AUXILIARY BUILDING SM-13 FLOOR PLAN
A2.9-R0	AUXILIARY BUILDING SM 13 ROOF PLAN, SECTION & ELEVATIONS
A2.10-R0	AUX. BUILDINGS CS-13 & CS-14 SHARED FLOOR, ROOF PLAN, SECT. & ELEV.
A2.11-R0	AUXILIARY BUILDING EA-09 FLOOR, ROOF PLAN, SECT. & ELEV.
A2.12-R0	AUXILIARY BUILDING BO-05 FLOOR, ROOF PLAN, SECT. & ELEV.
A3.1-R0	REFLECTED CEILING PLAN MAIN FLOOR ADMINISTRATIVE BLOCK
A3.2-R0	REFLECTED CEILING PLANS FLEET BLOCK
A3.3-R0	REFLECTED CEILING PLAN SECOND FLOOR ADMINISTRATIVE BLOCK
A4.1-R0	EXTERIOR BUILDING ELEVATIONS
A4.2-R0	EXTERIOR BUILDING ELEVATIONS
A4.3-R0	EXTERIOR BUILDING ELEVATIONS
A4.4-R0	EXTERIOR BUILDING ELEVATIONS
A4.5-R0	EXTERIOR BUILDING ELEVATIONS
A4.6-R0	EXTERIOR BUILDING ELEVATIONS
A4.7-R0	EXTERIOR BUILDING ELEVATIONS
A4.8-R0	EXTERIOR BUILDING ELEVATIONS
A4.9-R0	BUILDING SECTIONS
A4.10-R0	BUILDING SECTIONS
A4.11-R0	BUILDING SECTIONS
A4.12-R0	FINISH SCHEDULE
A4.13-R0	DOOR SCHEDULE
A4.14-R0	DOOR AND FRAME ELEVATIONS
A4.15-R0	WINDOW ELEVATIONS
A5.1-R0	WALL SECTIONS
A5.2-R0	WALL SECTIONS
A5.3-R0	WALL SECTIONS AND SECTION DETAILS
A5.4-R0	SECTION DETAILS
A5.6-R0	PLAN DETAILS
A5.7-R0	PLAN DETAILS
A5.8-R0	PLAN DETAILS
A6.0-R0	STAIR PLANS
A6.1-R0	STAIR SECTIONS
A7.0-R0	LARGE SCALE PLANS
A7.1-R0	LARGE SCALE PLANS
A8.1-R0	INTERIOR ELEVATIONS
A8.2-R0	INTERIOR ELEVATIONS
L-1-R0	LANDSCAPE PLAN & DETAILS
L-2-R0	LANDSCAPE DETAILS
L-3-R0	LANDSCAPE DETAILS
L-4-R0	LANDSCAPE DETAILS
S1.0-R5	FOUNDATION PLAN - GRID A-F, 1-14
S1.2-R5	FOUNDATION PLAN – GRID F-M, 1-5
S1.3-R5	FOUNDATION PLAN – GRID M-Y, 1-5
S1.4-R5	FOUNDATION PLAN – DETAILS – SHEET 1

S1.5-R6	FOUNDATION PLAN – DETAILS – SHEET 2
S1.6-R5	FOUNDATION PLAN – DETAILS – SHEET 3
S2.0-R6	2 ND FLOOR PLAN
S2.1-R5	2 ND FLOOR DETAILS
S3.0-R5	ROOF PLAN – GRID A-F, 1-14
S3.1-R5	ROOF PLAN – GRID A-E, 14-26
S3.2-R5	ROOF PLAN – GRID F-M, 1-5
S3.3-R5	ROOF PLAN – GRID M-Y, 1-5
S3.4-R5	ROOF DETAILS
S4.0-R5	AUXILLIARY BUILDINGS SM-13 FLOOR PLAN, ROOF PLAN, SECTIONS, DETAILS
S4.1-R5	AUXILLIARY BUILDINGS CS-13 & CS-14 SHARED FLOOR PLAN, ROOF PLAN, SECTIONS, DETAILS
S4.2-R5	AUXILLIARY BUILDINGS EA-09 FLOOR PLAN, ROOF PLAN, SECTIONS, DETAILS
S4.3-R5	AUXILLIARY BUILDINGS BO-05 FLOOR PLAN, ROOF PLAN &SECTIONS
S5.0-R5	TUPICAL SITE DETAILS
S5.1-R5	BUNKER PLAN VIEW, SECTIONS, DETAILS
M1.0-R0	MAIN FLOOR- PLUMBING
M1.1-R0	SECOND FLOOR PLAN - PLUMBING
M1.2-R0	MAIN FLOOR PLAN – PLUMBING
M1.3-R0	SECOND FLOOR PLAN – PLUMBING
M1.4-R0	MAIN FLOOR PLAN – PLUMBING
M1.5-R0	MAIN FLOOR PLAN – PLUMBING
M1.6-R0	MAIN FLOOR PLAN – PLUMBING
M2.0-R0	MAIN FLOOR PLAN – HEATING
M2.1-R0	SECOND FLOOR PLAN – HEATING
M2.2-R0	MAIN FLOOR PLAN – HEATING
M2.3-R0	MAIN FLOOR PLAN – HEATING
M2.4-R0	MAIN FLOOR PLAN – HEATING
M2.5-R0	MAIN FLOOR PLAN – HEATING
M2.6-R0	MAIN FLOOR PLAN – HEATING
M3.0-R0	MAIN FLOOR PLAN – H.V.A.C.
M3.1-R0	SECOND FLOOR PLAN – H.V.A.C.
M3.2-R0	MAIN FLOOR PLAN - H.V.A.C.
M3.3-R0	MAIN FLOOR PLAN - H.V.A.C.
M3.4-R0	MAIN FLOOR PLAN - H.V.A.C.
M3.5-R0	MAIN FLOOR PLAN - H.V.A.C.
M3.6-R0	H.V.A.C.
M3.7-R0	MAIN FLOOR PLAN - H.V.A.C.
M3.8-R0	SECOND FLOOR PLAN - H.V.A.C.
M3.9-R0	MAIN FLOOR PLAN - H.V.A.C.
M4.0-R0	MAIN FLOOR PLAN – METHANE EXTRACTION
M4.1-R0	MAIN FLOOR PLAN – METHANE EXTRACTION
M4.2-R0	MAIN FLOOR PLAN – METHANE EXTRACTION
M4.3-R0	MAIN FLOOR PLAN – METHANE EXTRACTION
M4.4-R0	MAIN FLOOR PLAN – METHANE EXTRACTION
M4.5-R0	MAIN FLOOR PLAN – METHANE EXTRACTION
M5.0-R0	MECHANICAL EQUIPMENT SCHEDULE
M5.1-R0	MECHANICAL EQUIPMENT SCHEDULE
M5.2-R0	MECHANICAL EQUIPMENT SCHEDULE
E1.0-R0	SCHEDULE
E1.1-R0	ELECTRICAL SITE PLAN
E2.0-R0	MAIN FLOOR LIGHTING LAYOUT
E2.1-R0	MAIN FLOOR LIGHTING LAYOUT
E2.2-R0	MAIN FLOOR LIGHTING LAYOUT
E2.3-R0	MAIN FLOOR LIGHTING LAYOUT
E2.4-R0	SECOND FLOOR LIGHTING LAYOUT

E2.5-R0	SECOND FLOOR LIGHTING LAYOUT
E2.6-R0	AUXILIARY BUILDING ELECTRICAL LAYOUT
E3.0-R0	MAIN FLOOR POWER LAYOUT
E3.0.1	MAIN FLOOR FIRE LAYOUT
E3.0.2	MAIN FLOOR SECURITY LAYOUT
E3.1-R0	MAIN FLOOR POWER AND SYSTEMS LAYOUT
E3.1.1-R0	MAIN FLOOR FIRE LAYOUT
E3.1.2-R0	MAIN FLOOR SECURITY LAYOUT
E3.2-R0	MAIN FLOOR POWER AND SYSTEMS LAYOUT
E3.2.1-R0	MAIN FLOOR FIRE LAYOUT
E3.2.2-R0	MAIN FLOOR SECURITY LAYOUT
E3.3-R0	SECOND FLOOR POWER & SYSTEMS LAYOUT
E3.3.1-R0	SECOND FLOOR FIRE LAYOUT
E3.3.2-R0	SECOND FLOOR SECURITY LAYOUT
E3.4-R0	MAIN FLOOR POWER & SYSTEMS LAYOUT
E3.4.1-R0	MAIN FLOOR FIRE LAYOUT
E3.4.2-R0	MAIN FLOOR SECURITY LAYOUT
E3.5-R0	SECOND FLOOR POWER & SYSTEMS LAYOUT
E3.5.1-R0	SECOND FLOOR FIRE LAYOUT
E3.5.2-R0	SECOND FLOOR SECURITY LAYOUT
E3.6-R0	CABLE TRAY LAYOUTS
E4.0-R0	ELECTRICAL DISTRIBUTION
E4.1-R0	ELECTRICAL PANEL SCHEDULES
E4.2-R0	ELECTRICAL PANEL SCHEDULES
E4.3-R0	ELECTRICAL PANEL SCHEDULES
E4.4-R0	ELECTRICAL PANEL SCHEDULES

E1.3 Bidders are reminded that requests for approval of substitutes as an approved equal or an approved alternative shall be made in accordance with B7.

E2. SERVICES

E2.1 The Project must meet the requirements of LEED Canada-NC 1.0 - Silver certification. To that end, the commissioning agent team shall not include individuals directly responsible for project design or construction. Further, the commissioning agent team shall perform the tasks and services required to ensure that the technical components of the design are in place and are verified before the Project is occupied. These tasks include, but are not limited to, the following:

E2.1.1 Commissioning Services

(a) Pre-Design Phase:

- (i) Review MRCC MSU Phase 1 design and contract documents and visit existing facility;
- (ii) Review the Basis of Design document containing the written owner objectives for the mechanical, electrical, communication and building envelope components of the Project as prepared by the prime consultant;
- (iii) Assemble commissioning agent team, hold a scope meeting and identify responsibilities for each team member;
- (iv) Develop preliminary commissioning plan. The commissioning plan shall include the following sections:
 - (a) Overview of commissioning process;
 - (b) List of all systems and assemblies in scope of work;
 - (c) Identification of commissioning team and responsibilities;
 - (d) Description of management, communication and reporting;
 - (e) Overview of commissioning process at pre-design, design, construction, occupancy and operations phases, review of Basis of Design, design development review, construction documents review, submittals review,

construction phase verification, owner training plan, functional performance test development and implementation and 10-month warranty review;

- (f) List of expected deliverables, and;
- (g) List of key commissioning process milestones.

E2.1.2 Design Phase:

- (a) Assist, review and advise on the development and updating of the Basis of Design document and Design Narrative provided by the Prime Consultant to confirm conformance with the Owner Requirements and review design prior to the construction document phase.
- (b) Update Commissioning Plan.
- (c) Develop full commissioning specifications for inclusion in the construction documents. The commissioning specifications shall include the following sections, but not be limited to:
 - (i) Commissioning Team involvement;
 - (ii) Submittal review procedures;
 - (iii) Operations and maintenance documental requirements;
 - (iv) Training plan development;
 - (v) Construction verification procedures;
 - (vi) Start-up plan development and implementation;
 - (vii) Functional performance testing;
 - (viii) Milestones;
 - (ix) Training, and;
 - (x) Warranty review site visit.
- (d) Review the design at the 95% construction document completion phase to verify that each commissioned feature or system meets the owner's requirements as set out in the Basis of Design relative to functionality, energy performance, water performance, maintainability, sustainability, system cost, indoor environmental quality, and local environmental impacts. Document review in a written report.

E2.1.3 Bid Opportunity Phase:

- (a) Attend pre-Bid meeting to answer commissioning related questions.

E2.1.4 Construction Phase:

- (a) Distribute construction installation, start-up and performance checklists for equipment being commissioned;
- (b) Review approved shop drawings relative to systems being commissioned.
- (c) Review the work in progress during the construction phase to ensure that the installation is in conformance with contract documents and accepted practices;
- (d) Witness equipment and system testing (e.g., pressure testing of piping and duct systems), issue deficiency list and re-inspect and test upon correction;
- (e) Plan and conduct commissioning meetings.

E2.1.5 Facility Start-Up Phase:

- (a) Coordinate the development of an appropriate operations manual and appropriate maintenance and data manuals, programs, and training courses, and ensure that in-service education programs are carried out at building turn-over (Stage 1 Training).
- (b) Document all start-up activities by reviewing start-up reports and checklists and by selected site observation;
- (c) Assemble reports and checklists for inclusion in the Systems Manual and Commissioning Report.

E2.1.6 Verification Phase:

- (a) Undertake periodic site visits to verify and document that equipment and systems have been installed and activated in accordance with the applicable contract documents and manufacturer's written instructions;
- (b) Review and assemble Contractor's completed and signed verification checklists for commissioned equipment for inclusion in Systems Manual and Commissioning Report;
- (c) Verification shall be complete and accepted before systems or equipment are handed over and before the interim acceptance phase begins.

E2.1.7 Performance Testing Phase:

- (a) Co-ordinate, witness and document performance tests of each system after verifying that all installations are consistent with the contract documents. Before performance tests are conducted, the Commissioning Agent shall determine that all required tests and activities have been completed;
- (b) The performance testing process shall apply to all systems, equipment, and components falling within the scope of the Commissioning contract. Performance testing should proceed in sequence, starting with components and progressing toward the complete system.
- (c) Documentation shall be completed for each component and system.

E2.1.8 Acceptance Phase:

- (a) Confirm that inspection, registration, and verification certificates have been provided;
- (b) Verify completion of the as-built records;
- (c) Complete all commissioning documentation, including the Commissioning Report. The Commissioning Report shall include, but not be limited to:
 - (ii) a description of the project specifications;
 - (iii) verification of installation (construction checklist disposition);
 - (iv) functional performance testing results and forms;
 - (v) Operations and Maintenance documentation evaluation;
 - (vi) training program evaluation;
 - (vii) summary of commissioning process; and
 - (viii) outstanding issues.
- (d) Verify completion the owner training program;
- (e) Provide a videotape record of all commissioned systems to address design intent, sequence of operation and maintenance and repair procedures. Videotape record to be of commercial quality complete with minimal background noise, adequate lighting, remote microphones and editing/voice-over techniques;
- (f) Provide a Systems Manual. The systems Manual shall include:
 - (i) final version of the owner's project requirements;
 - (ii) as-built sequence of operations as provided by designers, time of day schedules, points lists with ranges and initial set points;
 - (iii) ongoing operating instructions for energy and water saving features or strategies;
 - (iv) functional performance test results, blank test forms, recommended schedule for ongoing benchmarking;
 - (v) seasonal operational guidelines;
 - (vi) recommendations of recalibration frequency for sensors and actuators;
 - (vii) single line diagrams of each commissioned systems;
 - (viii) troubleshooting table for ongoing achievement of owner's requirements; and
 - (ix) guidelines for maintenance of owner's requirements.

- (g) Ensure that in-service education programs are carried out mid-way through warranty period (Stage 2 Training).

E2.1.9 Post-occupancy Acceptance Phase:

- (a) Coordinate and supervise required opposite season or deferred testing and deficiency corrections and provide the final testing documentation for the Commissioning Report and Systems Manual;
- (b) Revisit site 10 months into the 1 year warranty period and review the current building operation and the condition of outstanding issues related to the original and seasonal commissioning with facility staff. Interview facility staff and identify problems or concerns around operating the building as originally intended. Make suggestions for improvements and for recording these changes in the O&M manuals. Identify areas that may come under warranty or under the original construction contract. Assist facility staff in developing reports and documents and requests for services to remedy outstanding problems. Ensure that in-service education programs are carried out just prior to end of warranty period (Stage 3 Training).
- (c) Provide a written report of this process.

E3. MAJOR BUILDING SYSTEMS

E3.1 Major building systems for the Public Works East Yard Complex will be commissioned including, but not limited to the following:

E3.1.1 Mechanical Systems:

- (a) Plumbing systems
- (b) Heating systems ;
- (c) Ventilation and air-conditioning systems;
- (d) Fire protection system ;
- (e) Building automation and/or control systems; and
- (f) Elevating device systems.

E3.1.2 Electrical Systems:

- (a) Primary distribution equipment;
- (b) Secondary distribution equipment;
- (c) Wiring devices;
- (d) Lighting systems;
- (e) Uninterruptible power supply (UPS), Genset and central battery systems;
- (f) Motor and control systems; and
- (g) Lightning, ground fault, surge suppression and power factor protection systems.

E3.1.3 Communication Systems:

- (a) Security systems (e.g., closed-circuit television, door control, card access and system integration);
- (b) Computer cabling systems;
- (c) Public address systems (intercom);
- (d) Wireless staff communication systems;
- (e) Telephone cabling systems;
- (f) Fire alarm systems;
- (g) Fire and smoke alarm monitoring systems; and
- (h) Energy management control systems.

E3.1.4

Building Envelope:

- (a) Air/water and vapour penetration systems;
- (b) Water shedding systems;
- (c) Thermal insulation systems; and
- (d) Light transmittance systems (e.g. windows).

E3.1.5

Other:

- (a) Any other systems required to complete a successful full commissioning of the Public Works East Yard Complex.