



**THE CITY OF WINNIPEG**

# **REQUEST FOR PROPOSAL**

**RFP NO. 426-2017**

**REQUEST FOR PROPOSAL FOR PROFESSIONAL CONSULTING SERVICES FOR  
EVALUATION STUDY OF WASTEWATER SCADA COMMUNICATIONS SYSTEM**

**Proposals shall be submitted to:**

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

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## PART B - BIDDING PROCEDURES

### B1. CONTRACT TITLE

B1.1 REQUEST FOR PROPOSAL FOR PROFESSIONAL CONSULTING SERVICES FOR EVALUATION STUDY OF WASTEWATER SCADA COMMUNICATIONS SYSTEM

### B2. SUBMISSION DEADLINE

B2.1 The Submission Deadline is 12:00 noon Winnipeg time, August 24, 2017.

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 Contract Administrator or an authorized representative will conduct a site investigation tour of several facilities on Thursday, August 3<sup>rd</sup>, 2017 at 12:30 p.m.

B3.2 The site investigation tour will include the following facilities:

	Location	Address	Lat	Long	Comment
(a)	Saskatchewan Lift Station	2350 Saskatchewan Avenue	49.90328463	-97.25380888	Approximately 80m West of intersection of Saskatchewan Ave. and Wihuri Road.
(b)	SCADA Control Centre	360 McPhillips Street	49.9000000	-97.16666667	
(c)	Selkirk Diversion Structure/Flood Station	108 Selkirk Avenue	49.9122574	-97.12857357	
(d)	Marion Pumping Station	6 Lyndale Drive	49.88154916	-97.12968664	Intersection of Lyndale Dr. and Poulin Dr.

(i) A map showing the proposed route for the tour of each facility as part of the site investigation can be found in Appendix G.

(ii) The site investigation will proceed with site (a) to begin, and will travel to each subsequent facility, completing the tour with site (d).

(iii) The purpose of the site investigation will be to show each of the typical facility types found within the Wastewater Collections network, and data communication considerations for each.

B3.3 The review of site (a) will be to demonstrate the typical communications issues for a Smith & Loveless Pre-fabricated Lift Station. No below grade access to the station will occur as part of the review of this location.

(a) Drawings showing the typical below grade layout of a Smith & Loveless Station are included in Appendix F.

B3.4 Proponents are responsible to bring own transportation to each site.

B3.5 The following PPE must be provided by Proponents in order to attend the site investigation:

- (a) Hardhat
- (b) Steel-toe boots/shoes

**B3.6 Attendance at the Site Investigations is mandatory.**

**B3.7 Proponents are requested to register for the site investigation by contacting the Contract Administrator identified in D2.**

B3.8 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.

**B4. ENQUIRIES**

B4.1 All enquiries shall be directed to the Contract Administrator identified in D2.

B4.2 If the Proponent finds errors, discrepancies or omissions in the Request for 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 If the Proponent is unsure of the meaning or intent of any provision therein, the Proponent 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 Proponents 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 Proponent who made the enquiry.

B4.6 All correspondence or contact by Proponents with the City in respect of this RFP must be directly and only with the City's Contract Administrator. Failure to restrict correspondence and contact to the Contract Administrator may result in the rejection of the Proponents Proposal Submission.

B4.7 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 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 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.
- B6.3 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.

## **B7. PROPOSAL SUBMISSION**

- B7.1 The Proposal shall consist of the following components:
- (a) Form A: Proposal (Section A) in accordance with B8; and
  - (b) Fees (Section B) in accordance with B9.
- B7.2 The Proposal should also consist of the following components:
- (a) Experience of Proponent and Subconsultants (Section C) in accordance with B10;
  - (b) Experience of Key Personnel Assigned to the Project (Section D), in accordance with B11;
  - (c) Project Understanding and Methodology (Section E) in accordance with B12; and
  - (d) Project Schedule (Section F) in accordance with B13.
- B7.3 Further to B7.1 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.
- B7.4 Further to B7.2, 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.
- B7.5 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 B7.1 and B7.2.
- B7.6 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 separated into 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.
- B7.7 Proponents are advised that inclusion of terms and conditions inconsistent with the Request for Proposal, will be evaluated in accordance with B21.1(a).
- B7.8 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.

B7.9 Proposals submitted by facsimile transmission (fax) or internet electronic mail (e-mail) will not be accepted.

B7.10 Proposals shall be submitted to:

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

B7.11 Any cost or expense incurred by the Proponent that is associated with the preparation of the Proposal shall be borne solely by the Proponent.

## **B8. PROPOSAL (SECTION A)**

B8.1 The Proponent shall complete Form A: Proposal, making all required entries.

B8.2 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.

B8.2.1 If a Proposal is submitted jointly by two or more persons, each and all such persons shall identify themselves in accordance with B8.2.

B8.3 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.

B8.4 Paragraph 11 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 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.

B8.4.1 The name and official capacity of all individuals signing Form A: Proposal should be printed below such signatures.

B8.5 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.

## **B9. FEES (SECTION B)**

B9.1 The Proposal shall include a Fixed Fee for all disciplines and/or phases identified in D5 Scope of Services.

B9.2 Adjustments to Fees will only be considered based on increases to the Scope of Services.

B9.2.1 The City will not consider an adjustment to the Fees based on changes in the Project budget or the Final Total Construction Cost.

B9.3 Notwithstanding C1.1(b), 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.

B9.4 The Fee Proposal shall also include an allowance for Allowable Disbursements as defined in C1.1(b), but shall exclude the costs of any materials testing, soils and hazardous materials investigation during construction.

B9.5 Notwithstanding C11.1, 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.

B9.6 Payments to Non-Resident Proponents are subject to Non-Resident Withholding Tax pursuant to the Income Tax Act (Canada).

## **B10. EXPERIENCE OF PROPONENT AND SUBCONSULTANTS (SECTION C)**

B10.1 Proposals should include:

- (a) details demonstrating the history and experience of the Proponent and Subconsultants in providing programming; design, management of the project and contract administration services on **three (3)** projects of similar complexity, scope and value.

B10.2 For each project listed in B10.1(a), the Proponent should submit:

- (a) description of the project;
- (b) role of the Proponent;
- (c) project's original contracted cost and final cost;
- (d) design and schedule (anticipated Project schedule and actual project delivery schedule, showing design separately);
- (e) project owner;
- (f) reference information (consisting of two (2) current contact names, email and addresses and telephone numbers associated with each reference project).

B10.2.1 Where applicable, information should be separated into Proponent and Subconsultant project listings.

B10.3 The Proposal should include general firm profile information, including years in business, average volume of work, number of employees and other pertinent information for the Proponent and all Subconsultants demonstrating their ability to undertake the work.

## **B11. EXPERIENCE OF KEY PERSONNEL ASSIGNED TO THE PROJECT (SECTION D)**

B11.1 The Proponent should describe their approach to overall team formation and coordination of team members.

B11.1.1 Include an organizational chart for the Project.

B11.2 The Proponent shall identify the key personnel for the Services detailed in D5. The Proponent should have adequate staff for the successful delivery of the Project.

B11.3 Submit the experience and qualifications of the Key Personnel assigned to the Project for projects of similar complexity, scope and value, including at a minimum:

- (a) Proposed role and responsibilities;
- (b) Core capabilities and/or technical skills

- (c) educational background and degrees,
- (d) professional recognition,
- (e) job title,
- (f) years of experience in current position,
- (g) years of experience related to the Scope of Services identified in D5, and
- (h) years of experience with existing employer.

B11.4 Roles of each of the Key Personnel in the Project should be identified in the organizational chart referred to in B11.1.1.

B11.5 For each person identified, list at least **two (2)** comparable projects in which they have played a primary role similar to that proposed for this Project. 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).

## **B12. PROJECT UNDERSTANDING AND METHODOLOGY (SECTION E)**

B12.1 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.

B12.2 Methodology should be presented in accordance with the Scope of Services identified in D5.

B12.3 Describe the collaborative process/method to be used by the Key Personnel of the team in the various phases of the Project.

B12.4 Proposals should address the team's understanding of the broad functional and technical requirements by:

- (a) Clearly identifying and explaining work activities;
- (b) Stating assumptions and interpretations of the Scope of Services;
- (c) Stating the Proponents' understanding of the constraints that will affect the work;
- (d) Indicating activities and services to provided by the City; and
- (e) Stating other information that conveys the Proponent's understanding of the Project requirements.

B12.5 The Proposal should include Form P: Person hours for all disciplines and or phases identified in D5 Scope of Services.

B12.5.1 The total Fees on Form P: Person Hour should match Fees submitted in response to B9.

B12.6 The Proponents may use Form P: Person Hours or a table of their own design provided it includes all information requested in accordance with B12.5.

## **B13. PROJECT SCHEDULE (SECTION F)**

B13.1 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.



B13.2 The Proponent's schedule should include critical dates for review and approval processes by the City and other organizations anticipated during the design and tendering phases of the Project. Reasonable times should be allowed for completion of these processes.

#### **B14. DISCLOSURE**

B14.1 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.

B14.2 The Persons are:

- (a) SNC-Lavalin Inc.;

B14.3 The following reports were prepared by the organizations identified in B14.2(a):

- (a) City Of Winnipeg Waste Water System SCADA Study, SNC-Lavalin Inc., 2012

#### **B15. QUALIFICATION**

B15.1 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 Services in strict accordance with the terms and provisions of the Contract;

B15.2 The Proponent and any proposed Subconsultant (for the portion of the Services 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>

B15.3 The Proponent and/or any proposed Subconsultant (for the portion of the Services proposed to be subcontracted to them) shall:

- (a) have successfully carried out services for the programming; design, management of construction and contract administration for architectural and/or engineering projects of similar complexity, scope and value; and to those required for this Project; and
- (b) be fully capable of performing the Services 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 the knowledge and resources to administer the requirements of The Workplace Safety and Health Act (Manitoba) during the construction works associated with this Contract; and
- (e) undertake to meet all licensing and regulatory requirements of the appropriate governing authorities and associations in the Province of Manitoba.

B15.4 The Proponent shall submit, within three (3) Business Days of a request by the Contract Administrator, further proof satisfactory to the Contract Administrator of the qualifications of the Proponent and of any proposed Subconsultant.

B15.5 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 Services.

## **B16. OPENING OF PROPOSALS AND RELEASE OF INFORMATION**

B16.1 Proposals will not be opened publicly.

B16.2 After award of Contract, the names of the Proponents and the Contract amount of the successful Proponent 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/>

B16.3 To the extent permitted, the City shall treat all Proposal Submissions as confidential, however the Proponent is advised 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).

B16.4 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.

## **B17. IRREVOCABLE OFFER**

B17.1 The Proposal(s) submitted by the Proponent shall be irrevocable for the time period specified in Paragraph 10 of Form A: Proposal.

B17.2 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.

## **B18. WITHDRAWAL OF OFFERS**

B18.1 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.

B18.1.1 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.

B18.1.2 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 11 of Form A: Proposal, and only such person, has authority to give notice of withdrawal.

B18.1.3 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 11 of Form A: Proposal; and
- (c) if the notice has been given by any one of the persons specified in B18.1.3(b), declare the Proposal withdrawn.

B18.2 A Proponent who withdraws its Proposal after the Submission Deadline but before its offer has been released or has lapsed as provided for in B17.2 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.

## **B19. INTERVIEWS**

B19.1 The Contract Administrator may, in his/her sole discretion, interview Proponents during the evaluation process.

## **B20. NEGOTIATIONS**

B20.1 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.

B20.2 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.

B20.3 If, in the course of negotiations pursuant to B21.2 or otherwise, 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.

## **B21. EVALUATION OF PROPOSALS**

B21.1 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 Subconsultants, if any, pursuant to B15: (pass/fail)
- (c) Fees; (Section B) 40%
- (d) Experience of Proponent and Subconsultant; (Section C) 20%
- (e) Experience of Key Personnel Assigned to the Project; (Section D) 15%
- (f) Project Understanding and Methodology (Section E) 20%
- (g) Project Schedule. (Section F) 5%

B21.2 Further to B21.1(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.

B21.3 Further to B21.1(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.

B21.4 Further to B21.1(c), Fees will be evaluated based on Fees submitted in accordance with B9.

B21.5 Further to B21.1(d), Experience of Proponent and Subconsultants 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 B10.

B21.6 Further to B21.1(e), Experience of Key Personnel Assigned to the Project will be evaluated considering the experience and qualifications of the Key Personnel and Subconsultant personnel on Projects of comparable size and complexity requested and submitted in accordance with B11.

- B21.7 Further to B21.1(f), Project Understanding and Methodology will be evaluated considering the Proponent's understanding of the City's Project, project management approach and team organization requested and submitted in accordance with B12.
- B21.8 Further to B21.1(g), Project Schedule will be evaluated considering the Proponent's ability to comply with the requirements of the Project requested and submitted in accordance with B13.
- B21.9 Notwithstanding B21.1(d) to B21.1(g), where Proponents fail to provide a response to B7.2(a) to B7.2(d), the score of zero may be assigned to the incomplete part of the response.
- B21.10 Proposals will be evaluated considering the information in the Proposal Submission and any interviews held in accordance with B19.

## **B22. AWARD OF CONTRACT**

- B22.1 The City will give notice of the award of the Contract, or will give notice that no award will be made.
- B22.2 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.
- B22.2.1 Without limiting the generality of B22.2, the City will have no obligation to award a Contract where:
- (a) the prices exceed the available City funds for the Services;
  - (b) the prices are materially in excess of the prices received for similar services in the past;
  - (c) the prices are materially in excess of the City's cost to perform the Services, 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.
- B22.3 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.
- B22.4 The City may, at its discretion, award the Contract in phases.
- B22.5 Notwithstanding Paragraph 6 of Form A: Proposal and C4, the City will issue a Letter of Intent to the successful Proponent in lieu of execution of a Contract.
- B22.5.1 The Contract documents as defined in C1.1(o)(ii) 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.
- B22.6 The form of Contract with the City of Winnipeg will be based on the Contract as defined in C1.1(o).
- B22.7 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.
- B22.8 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 2017-03-17) 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](http://www.winnipeg.ca/matmgt/gen_cond.stm).
- C0.2 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 Consultant Services*.

## PART D - SUPPLEMENTAL CONDITIONS

### GENERAL

#### D1. GENERAL CONDITIONS

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

#### D2. CONTRACT ADMINISTRATOR

D2.1 The Contract Administrator is:

Sean Gordon, E.I.T.

Telephone No. 204 986-8643

Email Address: [sgordon@winnipeg.ca](mailto:sgordon@winnipeg.ca) -

D2.2 At the pre-commencement meeting, the Contract Administrator will identify additional personnel representing the Contract Administrator and their respective roles and responsibilities for the Services.

D2.3 Proposal Submissions must be submitted to the address in B7.

#### D3. DEFINITIONS

D3.1 When used in this Request for Proposal:

- (a) “**CS**” means Combined Sewer.
- (b) “**CSO**” means Combined Sewer Overflow.
- (c) “**DNP**” means Distributed Network Protocol.
- (d) “**DMZ**” means Demilitarized Zone.
- (e) “**EVDO**” means Evolution Data Optimized.
- (f) “**FAT**” means Factory Acceptance Testing.
- (g) “**FRS**” means Functional Requirements Specification.
- (h) “**HMI**” means Human Machine Interface.
- (i) “**HSPA**” means High Speed Packet Access cellular technology.
- (j) “**I/O**” means Inputs/Outputs.
- (k) “**IP**” means Internet Protocol.
- (l) “**LDS**” means Land Drainage Sewer.
- (m) “**LTE**” means Long Term Evolution cellular technology.
- (n) “**NEWPCC**” means North End Water Pollution Control Centre.
- (o) “**P&ID**” means Process and Instrumentation Drawings.
- (p) “**PLC**” means Programmable Logic Controller.
- (q) “**PPE**” means Personal Protective Equipment.
- (r) “**PPLC**” means Pump Programmable Logic Controller.
- (s) “**PSTN**” means Public Switched Telephone Network.
- (t) “**RFP**” means Request for Proposal.
- (u) “**RTC**” means Real Time Control.
- (v) “**RTU**” means Remote Terminal Unit.

- (w) “**SCADA**” means Supervisory Control and Data Acquisition.
- (x) “**SEWPCC**” means South End Water Pollution Control Centre.
- (y) “**UPS**” means Uninterruptable Power Supply.
- (z) “**WAN**” means Wide Area Network.
- (aa) “**WEWPCC**” means West End Water Pollution Control Centre.
- (bb) “**WWD**” means Water And Waste Department.

#### **D4. BACKGROUND**

##### **D4.1 General Wastewater Sewer Operation**

D4.1.1 The City Of Winnipeg’s local and regional sewer collection system is comprised of service connections from residences/businesses to lateral and trunk sewers. Sewage is then collected into the interceptor sewer system. The sewage from the interceptor sewer system is transferred to one of the three sewage treatment plants in the City: the NEWPCC, SEWPCC or WEWPCC.

D4.1.2 The lift stations, diversion structures, flood stations, outfalls, and underpass pumping stations throughout the sewer collection system contain various valves, gates and pumps, of which only limited remote control can be provided. In the majority of situations a field crew must be assigned to the wastewater installation to complete any pump or valve activation/de-activation as required.

##### **D4.2 Wastewater SCADA System**

###### **D4.2.1 General**

- (a) The department currently has approximately 130 facilities that are being monitored by a Supervisory Control And Data Acquisition (SCADA) system. This system provides data on operating conditions at lift stations, diversion structures, flood stations, outfalls, and underpass pumping stations to a central control center. It also receives alarms from these facilities when normal operating parameters are exceeded. The control system communicates to the remote locations predominately through dialup analog modems using the Public Switched Telephone Network (PSTN).

###### **D4.2.2 Current Data Communication Configuration**

- (a) Currently the SCADA control center communicates to the majority of remote locations through dialup along modems using the PSTN. Each location is dialled in sequence and the stored information is retrieved.
  - (i) It takes approximately 10 minutes to cycle though all the stations. If a station cannot be contacted for two consecutive cycles it is assumed a communication failure has occurred and an alarm is issued. This means that a station could have an issue but the control centre may not be aware of the issue for over 20 minutes.
  - (ii) Since the stations are using PSTN infrastructure they are assigned regular telephone numbers. As a result, anyone can dial into the modems. The lack of security associated with the phone lines has forced the Water & Waste Department to lock out this functionality.
  - (iii) All new installations and select existing installations communicate over digital wireless HSPA and LTE technologies. This network is supplied by Bell-MTS and is accessed via two firewalls and the City’s corporate network.
    - ◆ PSTN communication remains at these upgraded installations to provide network redundancy.

###### **D4.2.3 Current SCADA System Software**

- (a) The SCADA system utilizes Schneider Electric’s ClearSCADA software. The currently installed version is ClearSCADA 2013 R2.

- (b) This software is expected to be updated to ClearSCADA 2015 R2 in late 2017 or early 2018.

#### D4.2.4 Current SCADA System Hardware

##### (a) RTUs & PLCs

- (i) The SCADA system communicates with the following currently installed RTU models:
  - ◆ SCADAPack Micro 16
  - ◆ SCADAPack 334
  - ◆ SCADAPack 357
  - ◆ SCADAPack 357E
  - ◆ SCADAPack ES
- (ii) The City is in the process of evaluating the suitability of Schneider Electric Modicon M580 PLCs with BMX NOR 0200 H DNP3 communication module as a replacement for the older SCADAPack RTUs.

##### (b) Servers

- (i) The system is comprised of two main servers operating in a redundant hot-standby configuration, as well as a third server situated on a DMZ network, which acts as a web server.
- (ii) The two main servers handle all communications with RTUs and make the data available to the HMI clients. Each also hosts approximately six years of historical data.
- (iii) The web server also maintains current and historical data, but receives updates only from the redundant main servers, and allows read-only access to the system via the ClearSCADA WebX web interface. Up to 5 remote users may log into the web server concurrently.
- (iv) SCADA servers are expected to be replaced by internal City forces in late 2017 or early 2018, allowing an upgrade to ClearSCADA 2015 R2.

##### (c) Workstations

- (i) Three operator HMI client workstations with a total of six large monitors provide the user interface for the SCADA operators to monitor the remote sites, including alarms and data trends.
- (ii) Some minimal remote control is also available to operators. The three operator workstations connect to the main redundant servers. Two additional engineering workstations allow for programming and configuration of the system.
- (iii) In late 2017 an additional two operator workstations, along with four additional monitors, will be added to the SCADA control room, allowing operators to view trends for all critical sites concurrently.

##### (d) Modems

- (i) A bank of ten US Robotics modems are used to communicate over all PSTN only installations, and are dedicated to the older RTUs that utilize the Modbus communication protocol.
- (ii) Two US Robotics modems that support DNP3 protocol are also utilized to connect with all PSTN backup connections in case of a failure of the primary wireless communication at the upgraded installations. As part of the upgrade to these installations the PSTN connections at these locations were upgraded to DNP3 communications protocol.
- (iii) A bank of forty-two Blue Tree BT-6801 model, eight Sixnet SN-6801 model, and seven Sixnet SN-670 model digital wireless models are used to communicate over the wireless network for the new and upgraded installations.
- (iv) In addition there are two Blue Tree BT-6801 model and three Sierra Wireless RV50 model standby wireless modems. These models are temporarily deployed to PSTN-only sites in the event that a PSTN communication line is



down. By deploying these standby modems, cellular communication is temporarily enabled to these PSTN only installations.

#### D4.3 Background Literature

##### D4.3.1 City Of Winnipeg Waste Water System SCADA Study (2012) By SNC Lavalin Inc.

- (a) The City retained SNC-Lavalin Inc. to assess the condition of the various components of the wastewater SCADA system. This report identified any risks with the current SCADA operating strategy.
- (b) The Final Report was a broad review of all aspects of the SCADA system. Several recommendations regarding the SCADA communications system were incorporated in this report, including the following:
  - (i) upgrading the HMI system,
  - (ii) Upgrading the communications technology at the installation from PTSN to DSL or wireless cellular technologies.
  - (iii) Upgrading the existing communications protocol from Modbus to DNP3.
  - (iv) Implementing features to improve the security across the communications network.
  - (v) Adding network redundancy to all communication paths in the SCADA network.
- (c) Following the issue of this report:
  - (i) The City completed the upgrade of the HMI system to ClearSCADA software.
  - (ii) All new wastewater installations, or existing installations as part of large-scale upgrades, were upgraded to communicate through the SCADA network via wireless cellular technologies. The PSTN communication remains at these installations to provide network redundancy.
  - (iii) All sites with cellular communications were upgraded to the Modbus protocol. All sites still connected via PSTN only remain on DNP3 protocol.
  - (iv) There is still a need to improve communications system redundancy, and add network security to all existing PSTN only connected installations.
- (d) This report began the investigation of upgrading the existing communications technology throughout the SCADA network.

#### D5. SCOPE OF SERVICES

D5.1 The City intends to procure Consultant services to develop a Study including an evaluation of the different communication technologies currently available in the industry. The Consultant shall provide a recommendation as to which communication technologies the Wastewater SCADA System should upgrade to, and its associated costs.

- (a) If there is no one communication technology which is optimal throughout the SCADA System, a separate listing of the considerations which should be included to determine the optimal communications technology (i.e. If no single communication technology is recommended throughout SCADA, a flow-chart and/or step by step evaluation procedure should be developed). This will be used by WWD staff to evaluate the conditions surrounding any one particular installation and determine the optimal communication technology.
- (b) The approximate costs applicable to implementing any of the communication technologies under this Study should also be included. Cost estimates should not be limited to the communication technology recommended.

D5.2 It is in the City's interests that the communication technology implemented across each of the SCADA installations must provide the following at a minimum:

- (a) Continuous real-time data transfer from each installation to SCADA,
- (b) Secure data transfer not accessible to the public, properly encrypted from access by outside sources.

- (c) Provide for real-time control (RTC) capabilities for each SCADA installation.
- (d) Ensure redundancy should communications be temporarily out of operation.
- (e) Must be compatible with existing SCADA system and infrastructure.

D5.2.1 Refer to Appendix A below for further detail on the current and future goals for the wastewater collections system, and how the communications technology upgrade must take these goals into account.

D5.3 The Services required under this Contract shall consist of the following:

- (a) Existing SCADA system evaluation, including on-site inspection of select installations;
- (b) Research and documentation of the features and considerations for all communication technologies currently available and viable for the SCADA system;
- (c) Recommendations of appropriate communication technology or technologies to be used for each SCADA installation, along with estimated costs;
- (d) Study development and periodic review by City staff.

D5.4 Contract Administration

- (a) Contract Administration Services shall be performed by City staff assigned to coordinate the SCADA Communications Study development and evaluation process.
- (b) The Contract Administrator shall be seen as the prime contact within the City of Winnipeg that the Consultant will utilize for the duration of the project, including but not limited to the following instances:
  - (i) Coordinating site investigations of specific SCADA installations;
  - (ii) Fielding any technical questions regarding existing SCADA system.
  - (iii) Coordinating periodic study draft reviews by City staff.
  - (iv) Communicating or clarifying any draft revisions requested by City staff.
  - (v) Coordinating meetings with City staff as required.

D5.5 Project Management

- (a) The Consultant will be required to provide the following deliverables in addition to the Research Study:
  - (i) Presentation on Study findings.
  - (ii) Specifications for each recommended communications technology.

D5.6 Project Management Meetings

- (a) Throughout the Project, the Consultant PM shall meet with City's Contract Administrator and any other City staff for the Project to discuss findings and obtain input from City personnel.
- (b) Meeting minutes are to be drafted by the Consultant as part of these meetings and provided within one week of the meeting date.

## **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 Consultant are the property of the City and shall not be appropriated for the Consultant's own use, or for the use of any third party.

D6.2 The Consultant 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 Consultant to the media or any member of the public without the prior written authorization of the Contract Administrator:

- (a) information provided to the Consultant by the City or acquired by the Consultant 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 Consultant who violates any provision of D6 may be determined to be in breach of Contract.

## **SUBMISSIONS**

### **D7. AUTHORITY TO CARRY ON BUSINESS**

D7.1 The Consultant 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 Consultant does not carry on business in Manitoba, in the jurisdiction where the Consultant does carry on business, throughout the term of the Contract, and shall provide the Contract Administrator with evidence thereof upon request.

### **D8. INSURANCE**

D8.1 The Consultant shall procure and maintain, at its own expense and cost, insurance policies with limits no less than those shown below.

D8.2 As a minimum, the Consultant shall, without limiting its obligations or liabilities under any other contract with the City, procure and maintain, at its own expense and cost, the following insurance policies:

- (a) Comprehensive or Commercial General Liability Insurance including:
  - (i) an inclusive limit of not less than \$2,000,000 for each occurrence or accident with a minimum \$2,000,000 Products and Completed Operations aggregate and \$5,000,000 general aggregate;
  - (ii) all sums which the Consultant shall become legally obligated to pay for damages because of bodily injury (including death at any time resulting therefrom) sustained by any person or persons or because of damage to or destruction of property caused by an occurrence or accident arising out of or related to the Services or any operations carried on in connection with this Contract;
  - (iii) coverage for Products/Completed Operations, Blanket Contractual, Consultant's Protective, Personal Injury, Contingent Employer's Liability, Broad Form Property Damage, Employees as Additional Insureds, and Non-Owned Automobile Liability;
  - (iv) a Cross Liability clause and/or Severability of Interest clause providing that the inclusion of more than one Insured shall not in any way affect the rights of any other Insured hereunder in respect to any claim, demand, suit or judgment made against any other Insured;
- (b) if applicable, Automobile Liability Insurance covering all motor vehicles, owned and operated and used or to be used by the Consultant directly or indirectly in the performance of the Service. The limit of liability shall not be less than \$2,000,000 inclusive for loss or damage including personal injuries and death resulting from any one accident or occurrence.
- (c) Professional Errors and Omissions Liability Insurance including:
  - (i) an amount not less than \$250,000 per claim and \$500,000 in the aggregate.

D8.2.1 The Consultant's Professional Errors and Omissions Liability Insurance shall remain in force for the duration of the Project and for twelve (12) months after Total Performance.

D8.3 The policies required in D8.2(a) shall provide that the City is named as an Additional Insured thereunder and that said policies are primary without any right of contribution from any insurance otherwise maintained by the City.

- D8.4 The Consultant shall require each of its Subconsultants to provide comparable insurance to that set forth under D8.2(a) and D8.2(c).
- D8.5 The Consultant shall provide the Contract Administrator with a certificate(s) of insurance for itself and for all of its Subconsultants, in a form satisfactory to the City Solicitor, at least two (2) Business Days prior to the commencement of any Services, but in no event later than the date specified in C4.1 for the return of the executed Contract. Such certificates shall state the exact description of the Services and provide for written notice in accordance with D8.8.
- D8.6 The Consultant may take out such additional insurance as it may consider necessary and desirable. All such additional insurance shall be at no expense to the City.
- D8.7 All insurance, which the Consultant is required to obtain with respect to this Contract, shall be with insurance companies registered in and licensed to underwrite such insurance in the Province of Manitoba.
- D8.8 The Consultant shall not cancel, materially alter, or cause any policy to lapse without providing at least thirty (30) Calendar Days prior written notice to the City.

## **SCHEDULE OF SERVICES**

### **D9. COMMENCEMENT**

- D9.1 The Consultant shall not commence any Services until it is in receipt of a notice of award from the City authorizing the commencement of the Services.
- D9.2 The Consultant 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 D7;
    - (ii) evidence of the insurance specified in D8;
  - (b) the Consultant has attended a meeting with the Contract Administrator, or the Contract Administrator has waived the requirement for a meeting.
- D9.3 The City intends to award this Contract by **October 1, 2017**.

### **D10. CRITICAL STAGES**

- D10.1 The Consultant shall achieve critical stages of the Services for this Contract in accordance with the following requirements:
- (a) Submission of table of contents for City Of Winnipeg review.
  - (b) Submission of 33% draft of report for City of Winnipeg review.
  - (c) Submission of 66% draft of report for City of Winnipeg review.
  - (d) Submission of 99% draft of report for City of Winnipeg review.
  - (e) Final Submission of draft of report for City Of Winnipeg review.
- Final Submission of the report shall be no later than **14 months** following project award.

## **APPENDICES**

**APPENDIX A - SCADA SYSTEM CURRENT AND FUTURE GOALS**

**APPENDIX B - RELEVANT DOCUMENTS AVAILABLE UPON REQUEST**

**APPENDIX C - SAMPLE NON-DISCLOSURE AGREEMENT**

**APPENDIX D - WATER AND WASTE DEPARTMENT IDENTIFICATION STANDARD**

**APPENDIX E - WATER AND WASTE DEPARTMENT ELECTRICAL DESIGN GUIDE**

**APPENDIX F – TYPICAL SMITH & LOVELESS LIFT STATION DRAWINGS**

**APPENDIX G - SITE INVESTIGATION ROUTE**