



**REQUEST FOR PROPOSALS**

**RFP PROGRAM TITLE:**

**RFP-2017-06**

**CITY OF DUNCAN SANITARY  
SEWER SYSTEM ASSESSMENT**



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## **DEFINITIONS**

The following provides a definition of some of the terms used in the Request for Proposals document.

### **“CONTRACTOR or CONSULTANT”**

The Proponent who’s Proposal has been accepted by the City of Duncan and is awarded a contract by the City of Duncan to carry out the Work.

### **“CoD”**

City of Duncan.

### **“PROPONENT”**

The responder to this RFP.

### **“RFP”**

This Request for Proposals.

### **“PROPOSAL”**

The document submitted by Proponents to carry out the Work submitted by a Proponent in response to this RFP.

### **“WORK”**

Means and includes anything and everything required to be done for fulfillment and completion of the project in accordance with this RFP and Proposal.

### **“OCP”**

Official Community Plan

### **“I&I”**

Inflow and Infiltration

### **“GPR”**

Ground Penetrating Radar



## **1 INTRODUCTION**

### **1.1 INVITATION**

The City of Duncan (CoD) requires a number of Civil Engineering Consulting services, including but not limited to ground penetrating radar, CCTV inspection, hydraulic modeling, and survey to complete a City wide sanitary sewer system assessment. The total length of the CoD's sanitary system that is to be televised and assessed is approximately 31.9km, and the approximate length of the system to be located through means of GPR is 1.18km.

### **1.2 BACKGROUND AND PURPOSE**

The majority the CoD's sanitary sewer system was installed between the 1950's and 1960's. In the past the CoD has assessed the sanitary sewer system through CCTV inspection solely to repair deficient sections of main and reduce Inflow and infiltration (I&I).

Along with commercial and dense residential growth the CoD is looking to develop a prioritized phased 10 year capital sanitary sewer system upgrade and renewal plan to maintain and upgrade the sanitary sewer system for anticipated growth, land use, environmental, and social and economic sustainability.

## **2 INSTRUCTIONS TO PROPONENTS**

### **2.1 SUBMISSION OF PROPOSALS**

The Proposals are to be sealed in envelopes and should be clearly marked with the name and address of the Proponent and the RFP program title. The sealed envelope should be addressed to:

Steven De Vries  
Engineering Technologist  
City of Duncan  
200 Craig Street  
Duncan, BC V9L 1W3

Office No. (250) 746-5321  
Fax No. (250) 746-5898  
Email: [steven@duncan.ca](mailto:steven@duncan.ca)

Proposals must be received on or before the Closing Time of:

TIME: 2:30:00 PM local time  
DATE: October 2, 2017

Proposals (3 hard copies) will be accepted until the Closing Time specified. It is the Proponent's sole responsibility to ensure its Proposal is received at the address set out above by the Closing Time. Proposals received after the Closing Time will not be accepted or considered.

More than one proposal from an individual, firm, partnership or association under the same or different names will not be considered.

## 2.2 INQUIRIES

Proponents must carefully examine the RFP documents and should fully inform themselves as to the intent, existing conditions and limitations that may affect their Proposal submission. No consideration will be given after submission of a Proposal to any claim that there was any misunderstanding with respect to the conditions imposed.

Proponents finding discrepancies or omissions in the RFP, or having doubts as to the meaning or intent of any provision, should immediately notify the above listed project contact. If there are any changes, additions, or deletions to the Proposal scope, conditions, or closing date, Proponents will be advised by means of an Addendum issued by the CoD. All Addenda will become part of the Proposal documents, and Proponents must acknowledge receipt of Addenda in the Proposal submission.

Verbal discussions between CoD Councillors or staff and a Proponent will not become a part of the RFP or modify the RFP or the Proposal unless confirmed by the CoD in writing.

## 2.3 INSURANCE

The Consultant shall, without limiting its obligations or liabilities and at its own expense, provide and maintain the following insurances with insurers licensed in British Columbia and in forms and amounts acceptable to the CoD:

- a) Commercial General Liability insurance in an amount not less than \$2,000,000 inclusive per occurrence against bodily injury and property damage;
- b) Such insurance shall include, but not be limited to:
  - i) Blanket Written Contractual Liability
  - ii) Personal Injury Liability
  - iii) Non-Owned Automobile Liability
  - iv) Cross Liability
  - v) Professional Liability (Errors and Omissions) in an amount not less than \$5,000,000 per occurrence with an annual aggregate amount not less than \$5,000,000.
- c) Provision naming the Corporation of the CoD as an additional insured.
- d) If the policy is 'claims made', the policy must contain an extended reporting period provision for a minimum of three years (36 months). Both 'claims made' and 'occurrence' form policies are acceptable.
- e) Automobile Liability on all owned or leased vehicles in an amount not less than \$2,000,000.

**2.3.1** All the foregoing insurance shall be primary and not require the sharing of any loss by any insurer of the CoD. The Consultant shall provide evidence of all required insurance prior to the commencement of the Work or Services. Such evidence shall be in the form of a certificate of insurance. When requested by the CoD, the Consultant shall provide certified copies of required insurance policies.

**2.3.2** All required insurance shall be maintained throughout the duration of the Contract and be endorsed to provide the CoD with thirty (30) days advance written notice of cancellation or material change.



**2.3.3** The Consultant shall require and ensure that each Subcontractor maintain liability insurance comparable to that required above.

**2.3.4** If both the CoD and the Consultant have claims to be indemnified pursuant to the policy of insurance required under section 2.3(a), the indemnity shall be applied first to the claim of the CoD and the balance, if any, to the claim of the Consultant.

## **2.4 PROPONENT'S REPRESENTATIVE**

Each proponent is requested to designate, within 5 days of receiving this RFP, one individual to whom any additional information deemed relevant to this RFP may be communicated. This information is to be emailed or faxed to the CoD's contact noted above.

## **3 GENERAL TERMS OF PROPOSAL PROCESS**

### **3.1 PROPOSAL PREPARATION COSTS**

All expenses incurred by the Proponent in the preparation and submission of a Proposal are to be borne by the Proponent, with the express understanding that no claims for reimbursements against the CoD will be accepted. The CoD will not be responsible for any costs involved in or associated with any meetings, site visits, discussion or negotiation following submission that could lead to acceptance of the Proposal and award of a contract.

### **3.2 PROPOSAL EVALUATION**

The CoD recognizes that "Best Value" is the essential element of purchasing a product and/or service and therefore the CoD may prefer a Proposal with a higher price, if it offers greater value and better serves the CoD's interests, as determined by the CoD, over a Proposal with a lower price. Section 6 contains the information regarding how Proposals will be evaluated. The evaluation team will not be limited to the criteria listed in Section 6, and the evaluation team may consider other criteria that the team identifies as relevant during the evaluation process. However, any criteria considered will be applied evenly and fairly to all Proposals.

The CoD, at its sole discretion, reserves the right to:

- Reject any or all Proposals whether complete or not;
- Reject any Proposal it considers not in its best interests;
- Waive any irregularity or insufficiency in the Proposal submitted;
- Not be liable for misunderstandings or errors in the RFP;
- Issue addenda to the Request for Proposals;
- Contact references provided by the Proponents;
- Retain independent persons or contractors for assistance in evaluating Proposals;
- Request points of clarification to assist the CoD in evaluating Proposals;
- Negotiate changes with the Proponent; and
- Withdraw the RFP.

### **3.3 PRESENTATION OF PROPOSAL**

The CoD reserves the right to request one or more of the Proponents whose submissions are of particular interest to the CoD, to make oral presentations to the CoD.



### **3.4 PROPOSAL CONFIDENTIALITY AND PROPRIETARY INFORMATION**

All submissions become the property of the CoD and will not be returned to the Proponent. The CoD will consider all Proposals submitted as confidential but reserves the right to make copies of all Proposals received for its internal review and for review by its financial, accounting, legal, and technical consultants.

Proponents should be aware that the CoD is a “public body” as defined in and subject to the provisions of the Freedom of Information and Protection of Privacy Act. If the Proponent believes any of the information requested in this RFP and provided by them is confidential, then they should identify it as such and provide a rationale as to why it should not be released under “Freedom of Information” legislation.

The rationale for keeping information confidential under this legislation includes:

- Trade secrets of the Proponent;
- Financial, commercial, scientific or technical information, the disclosure of which could reasonably be expected to result in material financial loss or gain or could reasonably be expected to prejudice the competitive position of the Proponent; or
- Information the disclosure of which could be reasonably expected to interfere with contractual or other negotiations of the Proponent.

### **3.5 CONFLICT OF INTEREST**

A Proponent shall disclose in its Proposal any actual or potential conflicts of interest and existing business relationships it may have with the CoD, its elected or appointed officials or employees, and any property ownership direct or indirect in the jurisdiction. The CoD may rely on such disclosure.

### **3.6 NO COLLUSION**

Except as otherwise specified or as arising by reason of the provision of the contract documents, no person whether natural, or body corporate, other than the Proponent has or will have any interest or share in this Proposal or in the proposed contract which may be completed in respect thereof. There is no collusion or arrangement between the Proponent and any other actual or prospective Proponents in connection with Proposals submitted for this project and the Proponent has no knowledge of the contents of other Proposals and has made no comparison of figures or agreement or arrangement, express or implied, with any other party in connection with the making of the Proposal.

### **3.7 LITIGATION**

Proponents who, either directly or indirectly through another corporation or entity, have been or are in litigation, or who have served notice with intent to proceed with court action against the CoD in connection with any contract for works or services, may be considered ineligible Proponents. Receipt of Proposals from such Proponents may result in disqualification from the evaluation process.





### **3.8 CANCELLATION**

**3.8.1** The CoD reserves the right to cancel this Request for Proposal at any time and for any reason, and will not be responsible for any loss, damage, cost or expense incurred or suffered by any Proposer as a result of that cancellation.

**3.8.2** The CoD reserves the right to cancel the Contract, at its sole and absolute discretion, with 30 days' written notice to the Consultant, and the Consultant will have no rights or claims against the CoD. The Consultant will be entitled to be paid for all authorized work and expenses to termination date. Cancellation would not, in any manner whatsoever, limit the CoD's right to bring action against the Consultant for damages for breach of contract.

### **3.9 LIMITATION OF DAMAGES**

Except as expressly and specifically permitted in these Instructions to Proponents, no Proponent shall have any claim for any compensation of any kind whatsoever, as a result of participating in the RFP, and by submitting a proposal each Proponent shall be deemed to have agreed that it has no claim.

### **3.10 ACCEPTANCE OF PROPOSAL**

The acceptance of a Proposal will be made in writing from the CoD and will be addressed to the successful Proponent at the address given in the submitted Proposal. Following acceptance and approval to proceed with the Work, the Proponent is expected to enter into a contract with the CoD to perform the works or services set out and agreed upon in the Proposal.

The contract between the successful Proponent and the CoD will be in a format consistent with industry practice and acceptable to the City of Duncan. The contract will include the entire Request for Proposal, the Proponent's total Proposal submission and any mutually agreed upon modifications, changes or negotiated adjustments.

## **4 PROPOSAL CONTENT**

The following outlines information to be included in the Proposal. Proponents are encouraged to provide additional information as deemed appropriate:

### **4.1 GENERAL**

Full name, address and telephone number of the submitting office of the Proponent and where applicable, the name, address and telephone number of any branch office, affiliate or subconsultant(s)/subcontractor(s) that will be involved in the project.



## **4.2 PERSONNEL**

### Project Manager

The Proposal shall identify the proposed project manager who will be the single point of contact, responsible for direct interaction with the CoD. State his/ her position and professional discipline. Describe the work to be performed by the project manager, his/ her qualifications and substantive experience directly related to the proposed Work.

### Proposed Project Team

The Proposal shall list key individuals including the project manager who will have major responsibilities for the performance of the Work. Describe the work to be performed by each listed individual and their qualifications in terms of education and substantive experience directly related to the proposed project.

The Proposal should include the following endorsement:

Identified Key Project Team members may only be replaced with written approval of the City of Duncan.

## **4.3 CORPORATE EXPERIENCE**

The proposals are to include a list of experience on similar projects and descriptions as to how the proponent would handle administration, supply and installation and overall project management.

## **4.4 METHODOLOGY**

The Proposal should contain an outline of strategies and skills that will be used to manage the project's expectations, resources, budget, and quality control. Discuss how each task will be carried out and what services or interaction is required from/with the CoD. Suggest alternatives, if appropriate. Identify any specialized equipment, unique approaches, or concepts or cost saving measures, which your company may use, relevant to the required services.

## **4.5 REFERENCES**

Provide no less than two (2) references that are relevant to the proposed Work. The references should be from a third party who can provide information about the performance of the Proponent in delivering services related to the experience cited.

## **4.6 SUBCONTRACTORS/SUBCONSULTANTS**

Provide the name of all sub-contractors and/or sub-consultants (companies and individuals) proposed to be used in the performance of the Work, with a description of the work they would be performing.

The sub-contractors and sub-consultants listed in the Proposal may not be changed without the written consent of the CoD. If the CoD so requires, the Proponent must be prepared to demonstrate/confirm to the CoD the competence of proposed sub-contractors and sub-consultants prior to acceptance of the Proposal.

#### **4.7 PROPOSAL CONTENT & INNOVATION**

The Proponent must provide all of the information as requested in the RFP documentation in the Proposal submission. The Proponent is also encouraged to include innovative, alternative or unique solutions to the Proposal subject that may, along with other things, indicate cost saving initiatives, improved environmental impacts, better public relations and/or project acceptance, reduced risk, improved management or administrative efficiencies, etc.

Where alternatives are proposed, the submitted Proposal should include all of the information required in accordance with the RFP and the suggested alternative(s), including costs for comparative purposes.

#### **4.8 WORKERS COMPENSATION ACT**

The Proponent, and any proposed sub-contractors and sub-consultants, must provide a WorkSafe BC (Workers Compensation Board) Registration Number in the Proposal and, at the time of signing a contract agreement, must provide proof of good standing with WorkSafe BC, including confirmation of payment of all related fees/claims.

#### **4.9 PROJECT SCHEDULE**

It is the CoD's intent to have all Work completed by January 15<sup>th</sup>, 2018. Specific related details would be negotiated upon award and signing of the project contract. The completion date is contingent upon receipt of the start work order and receipt of the customer account data as detailed in these specifications.

This project will be split into Phase 1 and an optional Phase 2. The Phases are described further in this document. Regardless if Phase 2 is included all Work is still to be completed by January 15<sup>th</sup>, 2018.

A work schedule must be provided with consideration to seasonal weather and equipment availability.

The proposal must include a written commitment from the Proponent that the proposed schedule will be maintained.

#### **4.10 PRICES**

The proposal must include a schedule of fees and disbursements. This should be separated into the following sections:

##### **Phase 1**

- Ground Penetrating Radar (GPR)
- Topographic survey
- CCTV inspection with reports and condition score
- Data reconciliation
- Base network/model creation (Theoretical existing model and full buildout model based on the OCP)
- Necessary field investigation
- Development of a prioritized phased 10 year capital upgrade and renewable program with cost estimates based on pipe service life, condition and risk.
- 3 draft reports, final written report, and presentation to Council (Only if the CoD decides against moving forward with Phase 2)

## Phase 2 – Optional

- Flow monitoring
- I&I analysis
- Model Calibration (comparing the theoretical models to the actual observed flows)
- Model summarization
- 3 draft reports, final written report, and presentation to Council

Each section should be itemized by task. Each section should have its own separate subtotal.

In addition a schedule of hourly rates should be included to be used in the event of unforeseen extra work. It is suggested that this schedule should include, but not be limited to, the following:

- Hourly rates of all office staff such as Engineer, EIT, Technologist, Draftsman, Receptionist, etc.
- Hourly rates of all field staff such as Surveyor, Rodman, Chainman, Field Inspector, etc.
- Hourly or unit rates of all equipment such as Survey Equipment, Vehicles, Testing Equipment, etc.

All prices shall be in Canadian Funds and is to include PST taxes (if applicable). However GST and PST must be shown separately.

### 4.11 OTHER ITEMS

Proponents must ensure they provide confirmation that all materials and services conform with the requirements of the RFP, including the Specifications, and that all requested data is included in the Proposal.

The CoD reserves the right to all data collected, and the created models themselves to be used for internal purposes.

Please note that the software of the successful proponent is to be reviewed and approved by the CoD

The CoD is not asking under this RFP for the sewage lagoons or any of the CoD's pump stations to be reviewed.

## 5 NATURE AND SCOPE OF WORK – PHASE 1

### 5.1 GROUND PENETRATING RADAR (GPR)

The successful proponent will be responsible for coordinating and compiling GPR data of existing sanitary mains that have an unknown location or are viewed by the CoD as having an inaccurate location. The GPR data is to include location and elevation of the main. Reference appendix C for a map showing the required mains.

### 5.2 TOPOGRAPHICAL SURVEY

The successful candidate will be responsible for completing a topographical survey of absent manhole covers (approximately 83), pipe inverts (approximately 503), and any necessary paint

lines established from the GPR investigation. The survey is to be carried out in a manner of conducting a preliminary control survey to tie-in legal evidence based on UTM with NAD83 datum, Zone 10 coordinate system and provide the CoD with a text or CSV file of topo and control points.

### **5.3 CCTV INSPECTION**

The existing CCTV video inspections and reports previously mentioned within this RFP are outdated. The successful proponent will be responsible for but not limited to coordinating and completing CCTV video inspections for the entire CoD sanitary sewer system with the exception of 2<sup>nd</sup> Street. Along with completing the CCTV inspections the successful candidate will also be responsible for assigning a condition score to each section of sanitary sewer main as well as informing the CoD of any sections of main that may require immediate attention. Condition score should be based on industry standard methodologies and outlined in the proposal. See appendix A for a map showing the extent of the CoD sanitary sewer system along with appendix B which outlines to the best of the CoD's knowledge the length, size, and type of each sanitary sewer main.

### **5.4 DATA RECONCILIATION**

Upon completion of all data collection the successful Consultant is required to summarize each section of data collection (GPR, Topographic Survey, CCTV Inspection) as well as summarize all the data as a whole in as the CoD sees fit. A draft format will be submitted and reviewed by the CoD. The final data summary will be submitted fit and readily uploaded in GIS via SDF files.

### **5.5 BASE NETWORK/MODEL CREATION**

The successful Consultant will be responsible for creating a hydraulic model showing the theoretical existing hydraulic system. The model is to create two scenarios showing the theoretical system, and the system at full build out based on the City of Duncan's OCP. The following is a link to the CoD's OCP <https://duncan.ca/city-hall/planning-and-development/> .

### **5.6 NECESSARY FIELD INVESTIGATION**

It is the responsibility of the successful candidate to collect, document, and submit all manhole pipe inverts (inlets and outlets including sanitary services), as well as, determine and implement any further necessary field investigation that has not been described above in order to successfully achieve the scope and intent of this RFP. Any further field investigation and associated cost should be included in the proposal submission.

### **5.7 RISK ASSESSMENT**

Using condition scores, capacity analysis, pipe age, material and criticality the consultant will assign risk scores to each segment of pipe.

### **5.8 DEVELOPMENT OF A PRIORITIEZED PHASED 10 YEAR CAPITAL UPGRADE AND RENEWABLE PROGRAM WITH COST ESTIMATES**

A 10-year capital plan will be prepared with cost estimates that considers pipe risk and age.



### **5.9 3 DRAFT REPORTS, FINAL WRITTEN REPORT, AND PRESENTATION TO COUNCIL (ONLY IF THE COD DECIDES AGAINST MOVING FORWARD WITH PHASE 2)**

In the event that the CoD decides against moving forward with Phase 2 of this RFP the Consultant is to create and submit 3 draft reports based on the Phase 1 information 30 days prior to November 30<sup>th</sup>, 2017 for CoD review. Comments from the CoD will be provided within approximately 2 weeks of the submission and returned to the consultant to complete the final report. Along with the draft reports the Consultant is to submit a draft power point presentation for the CoD's review. Comments from the CoD will be provided within approximately 2 weeks of the submission and returned to the consultant to complete the presentation to Council.

## **6 NATURE AND SCOPE OF WORK – PHASE 2 (OPTIONAL)**

### **6.1 FLOW MONITORING**

Further to the data collection in phase 1, the successful candidate will be responsible for establishing a catchment area map of the CoD's sanitary sewer system as well as define which manhole(s) within the catchment areas should be flow monitored (the chosen flow monitoring manholes are also to be shown within the catchment areas map). The catchment areas map is to be submitted for review, returned with comments if any and then a final submission. In addition to the catchment areas map, the successful candidate will be responsible for monitoring the flow of each sanitary sewer manhole related to the defined catchment area within the system. Flow monitoring data is to be collected/monitored at times of peak flow and during the first flush and or rainy season to capture regular system flows as well as I&I. The Consultant will also be responsible for providing flow monitoring data using dual parameter (velocity, depth) meters for a minimum of four (4) weeks and providing raw data (15 minute intervals maximum) tabulated, daily maximum and minimum flow rates, rain fall total per day and computation of total daily flow, average and Peak. Flow rates shall also be shown graphically. See appendix A for a map showing to the best of the CoD's knowlage all manholes of the CoD sanitary sewer system.

### **6.2 I&I ANALYSIS**

Further to the flow monitoring and CCTV inspection the CoD expects the Consultant to evaluate I&I in the CoD sanitary sewer system and provide a description of apparent and potential causes of I&I in the system.

### **6.3 MODEL CALIBRATION**

Model calibration shall provide a summary of field flow/rainfall measurements with a comparison of the theoretical results from the computer model. Methodology for calibration shall be determined by the consultant and an explanation of the analysis criteria, assumptions and methodology shall be included.

### **6.4 MODEL SUMMARIZATION**

The successful proponent will be responsible for comparing the calibrated model with the future full buildout model and summarize the data within a table and map showing existing size of main, proposed/future size of main, actual flow of existing main, proposed flow of future main, capacity of existing main, proposed capacity of future main, sections of the system that are subject to and or are experiencing I&I, sections of the system that are subject to and or are deficient (i.e. ponding, root intrusion, collapsed or cracked) and require immediate repair.

## **6.5 3 DRAFT REPORTS, FINAL WRITTEN REPORT, AND PRESENTATION TO COUNCIL**

See section 5 item 5.11 for details.

## **6.6 MATERIAL PROVIDED BY COD**

The COD agrees to provide the successful proponent with the following items:

- a) ESRI shape files (.shp) (or GIS) of the currently known water system
- b) Utility record drawings where available
- c) Sanitary sewer manhole cover survey points where available
- d) Sanitary sewer CCTV video's and inspection reports for 2<sup>nd</sup> Street

Please note that all GIS provided is currently a work in progress and as such may not necessarily be accurate or complete. It is the sole responsibility of the successful proponent to confirm the location of all infrastructure present within the Road Right of way.

## **7 EVALUATION CRITERIA**

The following may be considered, analyzed, and compared during the evaluation process:

- Inclusion of specifically requested items such as, but not limited to; schedule, price quotation, reference list, WorkSafe BC information, etc.
- Qualifications, experience, past performance, and references of proponent.
- Specifications of the proposed methodology to be used to complete the Work.
- Clarity and readability of the proposal itself. The proposal should be written in a logical format that touches on each section above making it easy to find and evaluate each section of the proposal.
- Quoted price.

Emphasis may be given by evaluators to the explanation of the methodology proposed and any innovative or alternate ideas or concepts for completing the work.



**APPENDIX "A"**

**Sanitary System Map – Overall**





**APPENDIX "B"**

**GPR Map**



**APPENDIX "C"**

**Sanitary System Map Table – Sanitary Main Information**