



**RETURN BIDS TO:  
RETOURNER LES SOUMISSIONS À :**

[diane.jazzar@tc.gc.ca](mailto:diane.jazzar@tc.gc.ca)

**REQUEST FOR PROPOSAL  
DEMANDE DE PROPOSITION**

Comments – Commentaires

**Proposal To: Transport Canada**

We hereby offer to sell to Her Majesty the Queen in right of Canada, in accordance with the terms and conditions set out herein, referred to herein or attached hereto, the goods, services, and construction listed herein and on any attached sheets at the price(s) set out thereof.

On behalf of the bidder, by signing below, I confirm that I have read the entire bid solicitation including the documents incorporated by reference into the bid solicitation and I certify that:

1. The bidder considers itself and its products able to meet all the mandatory requirements described in the bid solicitation;
2. This bid is valid for the period requested in the bid solicitation;
3. All the information provided in the bid is complete, true and accurate; and
4. If the bidder is awarded a contract, it will accept all the terms and conditions set out in the resulting contract clauses included in the bid solicitation.

**Proposition à : Transports Canada**

Nous offrons par la présente de vendre à Sa Majesté la Reine du chef du Canada, aux conditions énoncées ou incluses par référence dans la présente et aux annexes ci-jointes, les biens, services et construction énumérés ici sur toute feuille ci-annexées, au(x) prix indiqué(s).

En apposant ma signature ci-après, j'atteste, au nom du soumissionnaire, que j'ai lu la demande de propositions (DP) en entier, y compris les documents incorporés par renvoi dans la DP et que :

1. le soumissionnaire considère qu'il a les compétences et que ses produits sont en mesure de satisfaire les exigences obligatoires décrites dans la demande de soumissions;
2. cette soumission est valide pour la période exigée dans la demande de soumissions ;
3. tous les renseignements figurant dans la soumission sont complets, véridiques et exacts; et
4. si un contrat est attribué au soumissionnaire, ce dernier se conformera à toutes les modalités énoncées dans les clauses concernant le contrat subséquent et comprises dans la demande de soumissions

<b>Title – Sujet</b>	
<b>SMART INTERSECTION DATA COLLECTION</b>	
<b>Solicitation No. – N° de l'invitation</b>	<b>Date</b>
T8080-220267	<b>October 17, 2022</b>
<b>Client Reference No. – N° référence du client</b>	
T8009-220137	
<b>GETS Reference No. – N° de référence de SEAG</b>	
<b>Solicitation Closes L'invitation prend fin</b>	<b>Time Zone Fuseau horaire</b>
<b>at – à</b> 02:00 PM – 14h00	Eastern Standard Time (EST)
<b>on – le</b> <b>November 28, 2022</b>	Heure de l'Est (HE)
<b>F.O.B. - F.A.B.</b>	
<b>Plant-Usine:</b> <input type="checkbox"/>	<b>Destination:</b> <input checked="" type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>
<b>Address inquiries to – Adresser toute demande de renseignements à :</b>	
Diane Jazzar	
<b>Area code and Telephone No. Code régional et N° de téléphone</b>	<b>E-mail Courriel</b>
613-866-4767	<a href="mailto:Diane.jazzar@tc.gc.ca">Diane.jazzar@tc.gc.ca</a>
<b>Destination – of Goods, Services, and Construction: Destination – des biens, services et construction</b>	
<b>National Capital Region</b>	

**Instructions:** See Herein

**Instructions :** Voir aux présentes

<b>Delivery required -Livraison exigée</b>	<b>Delivery offered -Livraison proposée</b>
See Herein – Voir aux présentes	
<b>Jurisdiction of Contract:</b> Province in Canada the bidder wishes to be the legal jurisdiction applicable to any resulting contract (if other than as specified in solicitation)	
<b>Compétence du contrat :</b> Province du Canada choisie par le soumissionnaire et qui aura les compétences sur tout contrat subséquent (si différente de celle précisée dans la demande)	
<b>Vendor/firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b>	
<b>e-mail - courriel</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

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## **PART 1 - GENERAL INFORMATION**

### **1.1 Security Requirements**

There is no security requirement applicable to the Contract.

### **1.2 Statement of Work**

The Work to be performed is detailed under **Annex "A"** of the resulting contract clauses.

### **1.3 Debriefings**

Bidders may request a debriefing on the results of the bid solicitation process. Bidders should make the request to the Contracting Authority within 15 working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

## **PART 2 - BIDDER INSTRUCTIONS**

### **2.1 Standard Instructions, Clauses and Conditions**

All instructions, clauses and conditions identified in the bid solicitation by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) issued by Public Works and Government Services Canada.

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The [2003 \(2022-03-29\)](#) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days

Insert: 180 days

### **2.2 Submission of Bids**

Unless specified otherwise in the RFP, bids must be received by the Contract Authority at the location identified by the date, time and place indicated on page 1 of the solicitation. If your bid is transmitted by electronic mail, Canada will not be responsible for late bids received at destination after the closing date and time, even if it was submitted before.

Bids must be submitted by Electronic Submission only to [diane.jazzar@tc.gc.ca](mailto:diane.jazzar@tc.gc.ca).

Refer to Part 3, section 3.1 "Bid Preparation Instructions".

Due to the nature of the bid solicitation, bids transmitted by facsimile to TC will not be accepted.

## 2.3 Former Public Servant

Contracts awarded to former public servants (FPS) in receipt of a pension or of a lump sum payment must bear the closest public scrutiny, and reflect fairness in the spending of public funds. In order to comply with Treasury Board policies and directives on contracts awarded to FPSs, bidders must provide the information required below before contract award. If the answer to the questions and, as applicable the information required have not been received by the time the evaluation of bids is completed, Canada will inform the Bidder of a time frame within which to provide the information. Failure to comply with Canada's request and meet the requirement within the prescribed time frame will render the bid non-responsive.

### Definitions

For the purposes of this clause, "former public servant" is any former member of a department as defined in the [Financial Administration Act](#), R.S., 1985, c. F-11, a former member of the Canadian Armed Forces or a former member of the Royal Canadian Mounted Police. A former public servant may be:

- a. an individual;
- b. an individual who has incorporated;
- c. a partnership made of former public servants; or
- d. a sole proprietorship or entity where the affected individual has a controlling or major interest in the entity.

"lump sum payment period" means the period measured in weeks of salary, for which payment has been made to facilitate the transition to retirement or to other employment as a result of the implementation of various programs to reduce the size of the Public Service. The lump sum payment period does not include the period of severance pay, which is measured in a like manner.

"pension" means a pension or annual allowance paid under the [Public Service Superannuation Act](#) (PSSA), R.S., 1985, c. P-36, and any increases paid pursuant to the [Supplementary Retirement Benefits Act](#), R.S., 1985, c. S-24 as it affects the PSSA. It does not include pensions payable pursuant to the [Canadian Forces Superannuation Act](#), R.S., 1985, c. C-17, the [Defence Services Pension Continuation Act](#), 1970, c. D-3, the [Royal Canadian Mounted Police Pension Continuation Act](#), 1970, c. R-10, and the [Royal Canadian Mounted Police Superannuation Act](#), R.S., 1985, c. R-11, the [Members of Parliament Retiring Allowances Act](#), R.S. 1985, c. M-5, and that portion of pension payable to the [Canada Pension Plan Act](#), R.S., 1985, c. C-8.

### Former Public Servant in Receipt of a Pension

As per the above definitions, is the Bidder a FPS in receipt of a pension? **Yes** ( ) **No** ( )

If so, the Bidder must provide the following information, for all FPSs in receipt of a pension, as applicable:

- a. name of former public servant;
- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with [Contracting Policy Notice: 2019-01](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

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## Work Force Adjustment Directive

Is the Bidder a FPS who received a lump sum payment pursuant to the terms of the Work Force Adjustment Directive? **Yes** ( ) **No** ( )

If so, the Bidder must provide the following information:

- a. name of former public servant;
- b. conditions of the lump sum payment incentive;
- c. date of termination of employment;
- d. amount of lump sum payment;
- e. rate of pay on which lump sum payment is based;
- f. period of lump sum payment including start date, end date and number of weeks;
- g. number and amount (professional fees) of other contracts subject to the restrictions of a work force adjustment program.

## 2.4 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than five (5) calendar days before the bid closing date. Enquiries received after that time may not be answered.

Bidders should reference as accurately as possible the numbered item of the bid solicitation to which the enquiry relates. Care should be taken by Bidders to explain each question in sufficient detail in order to enable Canada to provide an accurate answer. Technical enquiries that are of a proprietary nature must be clearly marked "proprietary" at each relevant item. Items identified as "proprietary" will be treated as such except where Canada determines that the enquiry is not of a proprietary nature. Canada may edit the question(s) or may request that the Bidder do so, so that the proprietary nature of the question(s) is eliminated, and the enquiry can be answered to all Bidders. Enquiries not submitted in a form that can be distributed to all Bidders may not be answered by Canada.

## 2.5 Applicable Laws

Any resulting contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario.

Bidders may, at their discretion, substitute the applicable laws of a Canadian province or territory of their choice without affecting the validity of their bid, by deleting the name of the Canadian province or territory specified and inserting the name of the Canadian province or territory of their choice. If no change is made, it acknowledges that the applicable laws specified are acceptable to the Bidders.

## 2.6 Bid Challenge and Recourse Mechanisms

- (a) Several mechanisms are available to potential suppliers to challenge aspects of the procurement process up to and including contract award.
- (b) Canada encourages suppliers to first bring their concerns to the attention of the Contracting Authority. Canada's [Buy and Sell](#) website, under the heading "[Bid Challenge and Recourse Mechanisms](#)" contains information on potential complaint bodies such as:
  - Office of the Procurement Ombudsman (OPO)

- Canadian International Trade Tribunal (CITT)
- (c) Suppliers should note that there are **strict deadlines** for filing complaints, and the time periods vary depending on the complaint body in question. Suppliers should therefore act quickly when they want to challenge any aspect of the procurement process.

## **PART 3 - BID PREPARATION INSTRUCTIONS**

### **3.1 Bid Preparation Instructions**

The Bidder must submit its bid electronically by the date and time of closing identified on page 1.

Canada requests that bidders provide their bid in separately bound sections as follows:

- i. Section I: Technical Bid One(1) soft copy, Submitted by email;
- ii. Section II: Financial Bid One(1) soft copy, Submitted by email;
- iii. Section III: Certifications – Not included in the technical bid, One(1) soft copy, Submitted by email

The bids must be sent by E-mail to: [diane.jazzar@tc.gc.ca](mailto:diane.jazzar@tc.gc.ca).

**Epost Connect service and facsimile are not accepted by Transport Canada at this time.**

Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.

Format for Bid: Canada requests that bidders follow the format instructions described below in the preparation of their bid:

- i. use a numbering system that corresponds to the bid solicitation;
- ii. include a title page at the front of each volume of the bid that includes the title, date, bid solicitation number, bidder's name and address and contact information of its representative; and
- iii. Include a table of contents.

#### **Section I: Technical Bid**

In their technical bid, Bidders should explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

#### **Section II: Financial Bid**

Bidders must submit their financial bid in accordance with the Annex "B" - Basis of Payment

SACC Manual Clause **C3011T** (2013-11-06) Exchange Rate Fluctuation.

#### **Electronic Payment of Invoices – Bid**

Government of Canada Acquisition Cards (credit cards) will not be accepted for payment of invoices.

The Bidder accepts to be paid by the following Electronic Payment Instrument(s):

- ( ) Direct Deposit (Domestic and International);
- ( ) Electronic Data Interchange (EDI).

### **Section III: Certifications**

In Section III of their bid, bidders should provide the certifications required under Part 5 and, as applicable, any associated additional information.

## **PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION**

### **4.1 Evaluation Procedures**

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and the financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

#### **4.1.1 Technical Evaluation**

##### **4.1.1.1 Mandatory Technical Criteria**

Each bid will be reviewed to determine whether it meets the mandatory requirements of the bid solicitation. Any element of the bid solicitation that is identified specifically with the words "must" or "mandatory" is a mandatory requirement. Bids that do not comply with each and every mandatory requirement will be considered non-responsive and be disqualified. The Mandatory evaluation criteria are described in Attachment 1 to Part 4 - Bid Evaluation Criteria.

##### **4.1.1.2 Point Rated Technical Criteria**

Each bid will be rated by assigning a score to the rated requirements, which are identified in the bid solicitation by the word "rated" or by reference to a score. Bidders who fail to submit complete bids with all the information requested by this bid solicitation will be rated accordingly. The rated requirements are described in Attachment 1 to Part 4 - Bid Evaluation Criteria.

#### **4.1.3 Financial Evaluation**

SACC Manual Clause [A0220T \(2014-06-26\)](#), Evaluation of Price-Bid

### **4.2 Basis of Selection**

#### **4.2.1 Basis of Selection - Highest Combined Rating of Technical Merit (70%) and Price (30%)**

1. To be declared responsive, a bid must:
  - a. comply with all the requirements of the bid solicitation; and
  - b. meet all mandatory criteria; and
  - c. obtain the required minimum number of points specified in Attachment 1 to Part 4 for the point rated technical criteria
2. Bids not meeting (a) or (b) or (c) will be declared non-responsive.

3. The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 70% for the technical merit and 30% for the price.
4. To establish the technical merit score, the overall technical score for each responsive bid will be determined as follows: total number of points obtained / maximum number of points available multiplied by the ratio of 70%.
5. To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 30%.
6. For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.
7. Neither the responsive bid obtaining the highest technical score nor the one with the lowest evaluated price will necessarily be accepted. The responsive bid with the highest combined rating of technical merit and price will be recommended for award of a contract.

The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 70/30 ratio of technical merit and price, respectively. The total available points equal 135 and the lowest evaluated price is \$50,000.00 (50).

<b>Basis of Selection - Highest Combined Rating of Technical Merit (70%) and Price (30%)</b>			
<b>Bidder</b>	<b>Bidder 1</b>	<b>Bidder 2</b>	<b>Bidder 3</b>
<b>Overall Score for All the Point Rated Technical Criteria</b>	OS1: 120/135	OS2: 98/135	OS3: 82/135
<b>Bid Evaluated Price</b>	P1: C\$60,000	P2: C\$55,000	LP and P3: C\$50,000
<b>Calculations</b>	<b>Technical Merit Score (OSi x 70)</b>	<b>Pricing Score ( LP/Pi x 30 )</b>	<b>Combined Rating</b>
<b>Bidder 1</b>	120/135 x 70 = 62.22	50/60 x 30 = 24.99	87.21
<b>Bidder 2</b>	98/135 x 70 = 50.81	50/55 x 30 = 27.77	78.08
<b>Bidder 3</b>	82/135 x 70 = 42.52	50/50 x 30 = 30	72.52



**ATTACHMENT 1 to PART 4 – BID EVALUATION CRITERIA**

**1. Technical Evaluation criteria**

Proposal compliance will be evaluated on the basis of the following mandatory and rated requirements. Bidders must provide necessary documentation to support compliance. Bidders are also advised to refer to Part 3.1 – Bid Preparation Instructions.

**Table 1: REQUIRED FORMAT FOR DEMONSTRATING EXPERIENCE**

When requested in a technical evaluation criterion to demonstrate either work experience or project experience, the bidder must provide (at a minimum) the following information below in order to demonstrate compliance (in addition to any other required information identified in the criterion):

- a. The name of the client organization
- b. A description of the project, including the scope and elements of the framework, and the results/outcomes of the work undertaken by the bidder;
- c. The dates/-duration of the work/project indicating the year/months of engagement by the bidder
- d. Description of the activities performed by one of the proposed resource team members relevant to the criteria
- e. The name of the client organization and the name, title and email address of a contact person that may be used as a reference to validate projects or experiences

**2.0 Mandatory Technical Criteria**

The Mandatory Technical Criteria listed below will be evaluated on a simple met/not met (i. e. compliant/non-compliant) basis.

Each Mandatory Technical Criterion should be addressed separately. Proposals that do not meet the Mandatory Technical Criteria will be deemed non-responsive and given no further consideration.

Proposals must demonstrate compliance with all Mandatory Technical Criteria and must provide the necessary documentation to support compliance.

No	Mandatory Requirement	Bidder Response / Cross Reference to Proposal and/or CV	Compliant? (Yes/No)
M1	The Bidder must propose at least one (1) resource as the Project Lead with demonstrated work or project managerial experience in the last 60 months (5 years) from the date of bid closing, having performed all of the following: <ul style="list-style-type: none"> <li>a) Lead a team that has collected and validated data according to specific set of criteria given by</li> </ul>		Yes: <input type="checkbox"/> No: <input type="checkbox"/>

No	Mandatory Requirement	Bidder Response / Cross Reference to Proposal and/or CV	Compliant? (Yes/No)
	<p>client</p> <p>b) Produced, reviewed and managed the creation of reports and summaries on technical subjects</p> <p>c) Has worked with a municipal partner related to engineering services involving data collection, data analysis, connectivity, intelligent transportation integration, infrastructure or any projects involving the assistance, collaboration or permission request with a public partner.</p> <p>d) Has demonstrated extensive experience (5+ years) in conducting and managing projects related to advanced transportation technologies or similar applications proposed under this RFP.</p> <p>To demonstrate compliance, the Bidder must provide</p> <ol style="list-style-type: none"> <li>1. A CV (resume) for the proposed resource identified as the Project Lead; (with a minimum of 5 years' experience) and</li> <li>2. A description of the proposed resource(s) work experience and project experience in accordance with the format as outlined in Table 1, which identifies how the proposed resource meets experience requirement a, b, c, d, above</li> </ol>		
<b>M2</b>	<p>The Bidder must propose at least one (1) resource as an Electric, Electronic Engineer or equivalent experience with demonstrated work in the field of instrumentation and data acquisition equipment in the last 60 months (5 years) from the date of bid closing, having performed the following:</p> <ol style="list-style-type: none"> <li>a) Has worked with sensors that collects dynamic properties of vehicle and/or pedestrian</li> <li>b) Has field experience regarding design, selection and implementation of technologies in Canadian climate</li> <li>c) Has experience with data storage for post processing purposes.</li> </ol> <p>To demonstrate compliance, the Bidder must provide</p> <ol style="list-style-type: none"> <li>1. A CV (resume) for the proposed resource identified as the Electronic, Electrical Engineer or equivalent; (with a minimum of 5 years' experience) and</li> <li>2. A description of the proposed resource(s) work experience and project experience in accordance with the format as outlined in Table 1, which identifies how the proposed resource meets experience requirement a, b, c above</li> </ol>		<p><b>Yes:</b> <input type="checkbox"/></p> <p><b>No:</b> <input type="checkbox"/></p>

<p><b>M3</b></p>	<p>The Bidder must propose at least one (1) resource as a software engineer or equivalent experience and background with demonstrated work in the field of image recognition, AI algorithm, data treatment using post processing tools or other process that would enable the identification of vehicles and pedestrians' dynamic properties in the last 60 months (5 years) from the date of bid closing, having performed the following:</p> <ul style="list-style-type: none"> <li>a) Post analysis of raw data for the purpose of classification of events</li> <li>b) Has experience with machine learning, computer vision or relating field that will enable post analysis for this project (more points for batch processing)</li> <li>c) Managed large amount of data for the purpose of analysis</li> <li>d) Experience with post processing software the purpose of identifying vehicles and pedestrians</li> <li>e) Experience with post processing software for the purpose of batch processing specific tasks.</li> </ul> <p>To demonstrate compliance, the Bidder must provide</p> <ol style="list-style-type: none"> <li>1. A CV (resume) for the proposed resource identified as the Software Engineer or equivalent; (with a minimum of 5 years' experience) and</li> <li>2. A description of the proposed resource(s) work experience and project experience in accordance with the format as outlined in Table 1, which identifies how the proposed resource meets experience requirement a, b, c, d, e above</li> </ol>		<p><b>Yes:</b> <input type="checkbox"/></p> <p><b>No:</b> <input type="checkbox"/></p>
<p><b>M4</b></p>	<p>The Bidder must propose at least one (1) resource as able to conduct field installation of electronic equipment such as data acquisition system, sensors such as but not limited to cameras, lidar, radar, antenna and peripherals that would enable the remote capture of data in the field in the last 36 months (3 years) having performed activities similar or equivalent to:</p> <ul style="list-style-type: none"> <li>a) Installing cameras, lidar, radar, antenna and peripherals that would enable the remote capture of data in the field</li> <li>b) Working with current roadway infrastructure</li> <li>c) Working on projects that involved support from a municipality.</li> <li>d) Has established work zone on municipal roads.</li> </ul> <p>To demonstrate compliance, the Bidder must provide</p> <ol style="list-style-type: none"> <li>1. A CV (resume) for the proposed resource identified as the Project Lead; (with a minimum of 3 years'</li> </ol>		<p><b>Yes:</b> <input type="checkbox"/></p> <p><b>No:</b> <input type="checkbox"/></p>

	experience) and 2. A description of the proposed resource(s) work experience and project experience in accordance with the format as outlined in Table 1, which identifies how the proposed resource meets experience requirement a, b, c, d above		
<b>M5</b>	The Bidder must demonstrate having completed one (1) project within the past five (5) years (from the date of bid closing), involving detailed analysis of large dataset using AI, camera, lidar, radar or other means of cataloguing object data.  To demonstrate compliance, the Bidder must provide a description of the proposed resource(s) work experience and project experience in accordance with the format as outlined in Table 1. The description must identify how the proposed resource acquired the mandatory experience requirements		<b>Yes:</b> <input type="checkbox"/> <b>No:</b> <input type="checkbox"/>

### 3. Point Rated Technical Criteria (R)

Bids which meet all of the mandatory technical criteria will be further evaluated and scored against the following rated requirements. Bids which fail to obtain the required minimum number of points specified for each rated criteria will be declared non-responsive. Each point rated technical criterion should be addressed separately.

No.	Rated Requirements	Bidder Response / Cross Reference to Proposal and/or CV	Maximum Score	Note minimal	Bidder score
R1	<b>The Bidder is to demonstrate in their proposal their understanding of the project's objective, scope, tasks and deliverables as stated in the Statement of Work (SOW): Annex A. A combination of methodology and relevant previous experience will be considered.</b>  <b>(20 points):</b> Bidder's proposal demonstrates a <b>complete and thorough</b> understanding of the project's objective, scope, tasks and deliverables <b>(15 points):</b> Bidder's proposal demonstrates a <b>thorough</b> understanding of the project's objective, scope, tasks, and deliverables <b>(10 points):</b> Bidder's proposal demonstrates a <b>general</b> understanding of the project's objective, scope, tasks and deliverables. <b>(5 points):</b> Bidder's proposal demonstrates an incomplete or incorrect understanding of the project's		20	15	

No.	Rated Requirements	Bidder Response / Cross Reference to Proposal and/or CV	Maximum Score	Note minimal	Bidder score
	<p>objective, scope, tasks, and deliverables.  <b>(0 point):</b> Bidder's proposal does not demonstrate or address any understanding of the project's objective, scope, tasks, and deliverables.</p> <p>The following definitions will be used to evaluate R1</p> <ul style="list-style-type: none"> <li>• <b>Complete and thorough</b> means the proposal satisfies all elements of the objectives, scope, tasks, and deliverables and includes significant added insights that demonstrate the completeness of understanding of the objectives.</li> <li>• <b>Thorough</b> means the proposal satisfies all elements of the objectives, scope, tasks, and deliverables.</li> <li>• <b>General</b> means the proposal satisfies most but not all elements of the objectives, scope, tasks, and deliverables.</li> <li>• <b>Incomplete or incorrect</b> mean the proposal does not satisfy or include most elements of the objectives, scope, tasks and deliverables.</li> </ul>				
R2	<p><b>Proposed approach, Project Work-plan and schedule</b></p> <p>The Bidder's proposal is to include a proposed approach, project workplan and schedule that details deadlines and milestones regarding how they would complete the tasks included in the Statement of Work (SOW): <b>Annex A</b></p> <p>Namely:</p> <ol style="list-style-type: none"> <li>a) methodology/approach to addressing the issues;</li> <li>b) description of potential risks and risk mitigation strategies;</li> <li>c) Identification and discussion of assumptions they make in their proposed approach;</li> <li>d) Identification of management, administrative and engineering tasks required for successful completion of each task outlined in the SOW;</li> <li>e) A schedule that includes all the tasks and subtasks, and the required inputs from Canada (if any are identified in the bidder's proposal);</li> <li>f) Identifies critical path activities; and presents consideration to anticipate and avoid delays;</li> </ol>		40	30	

No.	Rated Requirements	Bidder Response / Cross Reference to Proposal and/or CV	Maximum Score	Note minimal	Bidder score
	<p>The above will be evaluated for completeness, clarity, and achievability, as demonstrated through use of a work-breakdown structure mapped to the tasks in the Statement of Work (SOW).</p> <p><b>(40 points):</b> Bidder provides a <b>comprehensive</b> description of their proposal with significant added insights. For the purposes of evaluating R2, a <b>comprehensive</b> description is defined as including all of the above {a-f)} and more.</p> <p><b>(30 points):</b> Bidder provides a <b>complete</b> description of their proposed approach with some added insights. For the purposes of evaluating R2, a <b>complete</b> description is defined as including all of the above {a-f)}.</p> <p><b>(20 points):</b> Bidder provides a <b>general</b> description of their proposed approach with few added insights. For the purposes of evaluating R2, a <b>general</b> description is defined as including most but not all of the above {a-f)}.</p> <p><b>(10 points):</b> Bidder provides an <b>incomplete</b> description of their proposed technical approach with no added insights. For the purposes of evaluating R2, an <b>incomplete</b> description is defined as not even including most of the above {a-f)}.</p> <p><b>(0 points):</b> Bidder does not provide a proposed approach or a project plan to complete the Statement of Work (SOW).</p>				
R3	<p><b>The Bidder is to demonstrate that the Project Lead identified in Mandatory Criteria M1 has the following managerial experience:</b></p> <p><b>(20 points):</b> Bidder's proposal demonstrates the following experience:</p> <ul style="list-style-type: none"> <li>a) Leading a team that collected and validated data on pedestrians and vehicles in urban environment;</li> <li>b) Producing, reviewing, managing the creation of reports about analysis of pedestrians and vehicles dynamic properties;</li> <li>c) Working with a municipal partner related the intelligent transportation system implicating field work;</li> <li>d) 10+ years in managing project related to the transportation technologies.</li> </ul> <p><b>(15 points):</b> Bidder's proposal demonstrates the following experience:</p>		20	10	

No.	Rated Requirements	Bidder Response / Cross Reference to Proposal and/or CV	Maximum Score	Note minimal	Bidder score
	<p>a) Leading a team that collected and validated data on pedestrians and vehicles;</p> <p>b) Producing, reviewing, managing the creation of reports about analysis of pedestrians and vehicles dynamic properties;</p> <p>c) Working with a municipal partner related the intelligent transportation system;</p> <p>d) 5+ years in managing project related to the transportation technologies.</p> <p><b>(10 points):</b> Bidder's proposal demonstrates the following experience partially (2/4) of the following:</p> <p>a) Leading a team that collected and validated data on pedestrians and vehicles;</p> <p>b) Producing, reviewing, managing the creation of reports about analysis of pedestrians and vehicles dynamic properties;</p> <p>c) Working with a municipal partner related the intelligent transportation system;</p> <p>d) 5+ years in managing project related to the transportation technologies.</p> <p><b>(5 points):</b> Bidder's proposal demonstrates only marginal (1/4) of the following:</p> <p>a) Leading a team that collected and validated data on pedestrians and vehicles;</p> <p>b) Producing, reviewing, managing the creation of reports about analysis of pedestrians and vehicles dynamic properties;</p> <p>c) Working with a municipal partner related the intelligent transportation system;</p> <p>d) 5+ years in managing project related to the transportation technologies.</p> <p><b>(0 point):</b> Bidder's proposal does not demonstrate or address any of the key areas.</p>				
R4	<p><b>The Bidder is to demonstrate that the Electrical, Electronic Engineer or equivalent identified in Mandatory Criteria M2 has the following experience and qualifications:</b></p> <p><b>(15 points):</b> Bidder's proposal demonstrates 5+ years in the following areas:</p> <p>a) Has worked with sensors that collects dynamic properties of vehicle and/or pedestrian</p> <p>b) Has field experience regarding design, selection and implementation of technologies in</p>		15	10	

No.	Rated Requirements	Bidder Response / Cross Reference to Proposal and/or CV	Maximum Score	Note minimal	Bidder score
	<p>Canadian climate</p> <p>c) Has experience with data storage for post processing purposes.</p> <p>d) Has demonstrate Electrical, electronic engineer or equivalent education/training/experience.</p> <p><b>(10 points):</b> Bidder's proposal demonstrates 5+ years in 3/4 key areas:</p> <p>a) Has worked with sensors that collects dynamic properties of vehicle and/or pedestrian</p> <p>b) Has field experience regarding design, selection and implementation of technologies in Canadian climate</p> <p>c) Has experience with data storage for post processing purposes.</p> <p>d) Has demonstrate Electrical, electronic engineer or equivalent education/training/experience.</p> <p><b>(5 points):</b> Bidder's proposal demonstrates 5+years in 2/4 key areas:</p> <p>a) Has worked with sensors that collects dynamic properties of vehicle and/or pedestrian</p> <p>b) Has field experience regarding design, selection and implementation of technologies in Canadian climate</p> <p>c) Has experience with data storage for post processing purposes.</p> <p>d) Has demonstrate Electrical, electronic engineer or equivalent education/training/experience.</p> <p><b>(0 points):</b> Bidder's proposal does not qualify in terms of qualification and experience required for this RFP.</p>				
R5	<p><b>The Bidder is to demonstrate that the software Engineer or equivalent identified in Mandatory Criteria M3 has the following experience and qualifications:</b></p> <p><b>(15 points):</b> Bidder's proposal demonstrates 5+ years in the following areas:</p> <p>a) Has demonstrate education or equivalent and work experience</p> <p>b) Can demonstrate 5/5 of the following:</p> <ol style="list-style-type: none"> <li>I. Post analysis of raw data for the purpose of classification of events</li> <li>II. Has experience with machine learning, computer vision or relating field that will enable post analysis for this project (more points for batch processing)</li> <li>III. Managed large amount of data for the purpose of analysis</li> </ol>		15	10	



No.	Rated Requirements	Bidder Response / Cross Reference to Proposal and/or CV	Maximum Score	Note minimal	Bidder score
	<p>IV. Experience with post processing software the purpose of identifying vehicles and pedestrians</p> <p>V. Experience with post processing software for the purpose of batch processing specific tasks.</p> <p><b>(10 points):</b> Bidder's proposal demonstrates 5+ years in the following areas:</p> <p>a) Has demonstrate education or equivalent and work experience</p> <p>b) Can demonstrate 3/5 of the following:</p> <p>I. Post analysis of raw data for the purpose of classification of events</p> <p>II. Has experience with machine learning, computer vision or relating field that will enable post analysis for this project (more points for batch processing)</p> <p>III. Managed large amount of data for the purpose of analysis</p> <p>IV. Experience with post processing software the purpose of identifying vehicles and pedestrians</p> <p>V. Experience with post processing software for the purpose of batch processing specific tasks.</p> <p><b>(5 points):</b> Bidder's proposal demonstrates 5+ years in the following areas:</p> <p>a) Has demonstrate education or equivalent and work experience</p> <p>b) Can demonstrate 0/5 of the following:</p> <p>I. Post analysis of raw data for the purpose of classification of events</p> <p>II. Has experience with machine learning, computer vision or relating field that will enable post analysis for this project (more points for batch processing)</p> <p>III. Managed large amount of data for the purpose of analysis</p> <p>IV. Experience with post processing software the purpose of identifying vehicles and pedestrians</p> <p>V. Experience with post processing software for the purpose of batch processing specific tasks.</p> <p><b>(0 points):</b> Bidder's proposal does not qualify in terms</p>				

No.	Rated Requirements	Bidder Response / Cross Reference to Proposal and/or CV	Maximum Score	Note minimal	Bidder score
	of qualification and experience required for this RFP.				
R6	<p><b>The Bidder is to demonstrate that the Field Installation resource identified in Mandatory Criteria M4 has the following experience and qualifications:</b></p> <p><b>(15 points)</b> Bidder's proposal demonstrates 3+ years in the following areas:</p> <ul style="list-style-type: none"> <li>a) Demonstrate education and experience required for field installation of electronic equipment:</li> <li>b) Can demonstrate 4/4 of the following: <ul style="list-style-type: none"> <li>I. Installing cameras, lidar, radar, antenna and peripherals that would enable the remote capture of data in the field</li> <li>II. Working with current roadway infrastructure</li> <li>III. Working on projects that involved support from a municipality.</li> <li>IV. Has established work zone on municipal roads.</li> </ul> </li> </ul> <p><b>(10 points)</b> Bidder's proposal demonstrates 3+ years in the following areas:</p> <ul style="list-style-type: none"> <li>a) Demonstrate education and experience required for field installation of electronic equipment:</li> <li>b) Can demonstrate 3/4 of the following: <ul style="list-style-type: none"> <li>I. Installing cameras, lidar, radar, antenna and peripherals that would enable the remote capture of data in the field</li> <li>II. Working with current roadway infrastructure</li> <li>III. Working on projects that involved support from a municipality.</li> <li>IV. Has established work zone on municipal roads.</li> </ul> </li> </ul> <p><b>(5 points)</b> Bidder's proposal demonstrates 3+ years in the following areas:</p> <ul style="list-style-type: none"> <li>a) Demonstrate education and experience required for field installation of electronic equipment:</li> <li>b) Can demonstrate 2/4 of the following:</li> </ul>		15	10	

No.	Rated Requirements	Bidder Response / Cross Reference to Proposal and/or CV	Maximum Score	Note minimal	Bidder score
	<ul style="list-style-type: none"> <li>I. Installing cameras, lidar, radar, antenna and peripherals that would enable the remote capture of data in the field</li> <li>II. Working with current roadway infrastructure</li> <li>III. Working on projects that involved support from a municipality.</li> <li>IV. Has established work zone on municipal roads.</li> </ul> <p><b>(0 points)</b> Bidder's proposal demonstrates 3+ years in the following areas:</p>				
R7	<p><b>The Bidder is to demonstrate the mandatory criteria M5 with respect to large dataset analysis involving advanced technologies in the past 5 years:</b></p> <p><b>(10 points)</b> Demonstrating a processing project involving detailed analysis of large dataset using AI, camera, lidar, radar or other means of cataloguing object data.</p> <p><b>(0 point)</b> Insufficient information provided.</p>		<b>10</b>	<b>10</b>	

Maximum available points	<b>135</b>
Minimum overall points required	<b>95</b>
<b>Bidder score (*)</b>	
<b>Result</b>	Met: <input type="checkbox"/> Not Met: <input type="checkbox"/>

(\*): Overall Technical score. This value constitutes the technical evaluation score for bid evaluation and contractor selection purposes.

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## **PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION**

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

### **5.1 Certifications Required with the Bid**

Bidders must submit the following duly completed certifications as part of their bid.

#### **5.1.1 Integrity Provisions - Declaration of Convicted Offences**

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

### **5.2 Certifications Precedent to Contract Award and Additional Information**

The certifications and additional information listed below should be submitted with the bid but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame provided will render the bid non-responsive.

#### **5.2.1 Integrity Provisions – Required Documentation**

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real property agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

#### **5.2.2 Additional Certifications Precedent to Contract Award**

##### **5.2.2.1 Status and Availability of Resources**

SACC Manual Clause [A3005T \(2010-08-16\)](#) Status and Availability of Resources

##### **5.2.2.2 Education and Experience**

SACC Manual clause [A3010T \(2010-08-16\)](#) Education and Experience

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## PART 6 - RESULTING CONTRACT CLAUSES

The following clauses and conditions apply to and form part of any contract resulting from the bid solicitation.

### 6.1 Security Requirements

There is no security requirement applicable to the Contract.

### 6.2 Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex "A"

### 6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the [Standard Acquisition Clauses and Conditions Manual](https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual) (<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

#### 6.3.1 General Conditions

[2010B \(2022-01-28\)](#) General Conditions - Professional Services (Medium Complexity) apply to and form part of the Contract.

#### 6.3.2 Supplemental General Conditions

[4007 \(2010-08-16\)](#) Supplemental General conditions - Canada to Own Intellectual Property Rights in Foreground Information apply to and form part of the Contract.

### 6.4 Term of Contract

#### 6.4.1 Period of the Contract

The work is to be performed during the period of contract award to 30 June 2025.

### 6.5 Authorities

#### 6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

**Diane Jazzar**  
Procurement Specialist  
Transport Canada  
275 Sparks Street, Ottawa, ON K1A 0N5  
613-866-4767  
[diane.jazzar@tc.gc.ca](mailto:diane.jazzar@tc.gc.ca)

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

## 6.5.2 Project Authority (to be inserted at contract award)

The Project Authority for the Contract is:

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_

Telephone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

The Project Authority is the representative of the department or agency for whom the Work is being carried out under the Contract and is responsible for all matters concerning the technical content of the Work under the Contract. Technical matters may be discussed with the Project Authority; however, the Project Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of the Work can only be made through a contract amendment issued by the Contracting Authority.

## 6.5.3 Contractor's Representative (to be inserted by the contractor at time of bid)

Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Organization: \_\_\_\_\_  
Address: \_\_\_\_\_

Telephone: \_\_\_\_\_  
Facsimile: \_\_\_\_\_  
E-mail address: \_\_\_\_\_

## 6.6 Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2019-01](#) of the Treasury Board Secretariat of Canada.

## 6.7 Payment

### 6.7.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid a firm price as specified in Annex "B" for a cost of \$ \_\_\_\_\_ (*amount to be inserted at contract award*). Customs duties are included and Applicable Taxes are extra. Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been approved, in writing, by the Contracting Authority before their incorporation into the Work.

### 6.7.2 Milestone Payments

SACC Manual Clause [H3010C \(2016-01-28\)](#) – Milestone Payments – Not subject to holdback

### 6.7.3 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Direct Deposit (Domestic and International);
- b. Electronic Data Interchange (EDI);

## 6.8 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.
  - a. A copy of the release document and any other documents as specified in the Contract;
2. Invoices must be distributed as follows:
  - a. The original must be forwarded to the email address shown on page 1 of the Contract for certification and payment.

## 6.9 Certifications and Additional Information

### 6.9.1 Compliance

Unless specified otherwise, the continuous compliance with the certifications provided by the Contractor in its bid or precedent to contract award, and the ongoing cooperation in providing additional information are conditions of the Contract and failure to comply will constitute the Contractor in default. Certifications are subject to verification by Canada during the entire period of the Contract.

## 6.10 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in British Columbia.

## 6.11 Priority of Documents

If there is a discrepancy between the wording of any documents that appear on the list, the wording of the document that first appears on the list has priority over the wording of any document that subsequently appears on the list.

- (a) the Articles of Agreement;
- (b) the supplemental general conditions [4007 \(2010-08-16\)](#) – Canada to Own Intellectual Property rights in Foreground Information.
- (c) the general conditions [2010B \(2022-01-28\)](#) – Professional Services (medium complexity)
- (d) Annex "A", Statement of Work
- (e) Annex "B", Basis of Payment
- (f) the Contractor's bid dated \_\_\_\_\_ (*insert date of bid*) (*If the bid was clarified or amended, insert at the time of contract award: "* \_\_\_\_\_ *" or "* \_\_\_\_\_ *" and insert date(s) of clarification(s) or amendment(s) including its Inuit Benefits Plan. (if applicable).*

## 6.12 Insurance

SACC Manual Clause [G1005C \(2016-01-28\)](#), Insurance-No Specific Requirement

### **6.13 Dispute Resolution**

- (a) The parties agree to maintain open and honest communication about the Work throughout and after the performance of the contract.
- (b) The parties agree to consult and co-operate with each other in the furtherance of the contract and promptly notify the other party or parties and attempt to resolve problems or differences that may arise.
- (c) If the parties cannot resolve a dispute through consultation and cooperation, the parties agree to consult a neutral third party offering alternative dispute resolution services to attempt to address the dispute.
- (d) Options of alternative dispute resolution services can be found on Canada's Buy and Sell website under the heading "[Dispute Resolution](#)".



**ANNEX "A" - STATEMENT OF WORK**

**SMART INTERSECTION DATA COLLECTION: SEEING BEYOND THE SIDEWALK**

## 1. BACKGROUND

Transport Canada (TC), through its Innovation Centre, undertakes testing and evaluation of current and emerging advanced transportation technology to assist in the development of guidance documents, regulations, codes and standards for the next generation of transportation technologies.

There is a need to conduct a real world experiment in order to collect data on interaction between vehicles and other road users in order to study real time realistic scenarios. These natural characteristics will be the ground truth of the complex dynamic between vehicles and other road users at intersections. As Automated Driving Systems in vehicles have enormous potential to reduce the risk of fatalities and injuries on Canadian roads, it is important to have accurate data to reproduce critical intersection scenarios on a closed track using testing equipment. This work will support future activities and validation of the performance of safety technologies at Transport Canada. The intersection of interest for this project is a four-legged intersection that has a pedestrian cross walk and is equipped with automated traffic lights. The scenarios are to be documented with real world data. The data of interest consists of dynamic properties such as speed, direction, acceleration and distance between vehicles, pedestrians and cyclists. Environmental conditions shall be documented as well to highlight the challenges of driving on Canadian roads. Those conditions should address daytime, nighttime, rain, sunshine and potentially snow. This work will highlight the challenges and inherent risks at Canadian intersections.

## 2. OBJECTIVE

- 1) Select a municipal partner that will enable the data collection for this project. The agreement to operate the project with the municipal partner is the contractor's responsibility.
- 2) The data acquisition method shall enable the calculation of speed, distance and relationship between vehicles, pedestrians, cyclists that engage that intersection (e.g. actors in intersection as a function of time). The method, equipment, software, hardware and peripheral shall be provided by the contractor.
- 3) Collect dynamic data on the type of vehicles, pedestrians and cyclists that engage into a high traffic intersection. A high traffic intersection is considering an average of 100 (cars/pedestrians/cyclists) per day.
- 4) Data shall be collected for one month, 24/7 to capture interactions at different time of day, depending on traffic volume, days of the week.
- 5) The data will be post processed in order to categorize interactions as a function of frequency of occurrences and presented to TC, highlighting the most relevant interactions and their dynamic properties.

## 3. SCOPE

### Resources:

The Contractor will provide a project team that will be led by a Senior Project Manager and consist at a minimum of the following members and other staff who are required to support their work:

- 1) Project manager;
- 2) Senior engineer with expertise in image/data classification of vehicles/pedestrians/cyclists
- 3) Senior engineer with expertise in real world data collection
- 4) Software engineer or equivalent experience with expertise in post processing of real-world data.

**Milestone Deliverables:**

- Task 1 report - Identify real world site for data collection and provide brief literature review of similar studies conducted globally.
- Task 2 report – Data collection and validation
- Task 3 report - Smart Intersection Decommissioning
- Task 4 report - Data Analysis
- Brief weekly MS Teams meeting to discuss how project is proceeding and if any issues have come up
- Monthly one page progress report to briefly summarize project progression.

**4. TERMINOLOGY AND ACRONYMS**

MS: Microsoft

SOW: Statement of Work

TC: Transport Canada

TA: Technical Authority

VRU: Vulnerable Road Users

**5. REFERENCE DOCUMENT**

None.

**6. TASKS / MILESTONES**

Each month, the contractor will submit to the Project Authority a 1-page progress report and will be available for meeting (telephone, virtual or in-person) to track progress of this project. The report will briefly describe:

- 1) the work accomplished,
- 2) the support requirements from the Project Authority,
- 3) the project schedule, and
- 4) the financial status.

**Task 1. Identify real world site for data collection**

- a) Explain the technology and method to be used for acquiring the data. The equipment to be used must be presented to the TA. The equipment shall not interfere with the function of the intersection and must not cause any potential hazardous situation for all users of the intersection. The supplier is responsible to demonstrate that the positioning, and installation of

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the equipment is conducted in a safe manner not to harm the public. The supplier is responsible to ensure the safety of the public with respect to the installation of the equipment.

- b) Select a municipal partner and present it to the TA;
- c) Select a four-legged intersection that has a pedestrian cross walk, traffic lights, and can accommodate the data acquisition system(s). Subsequently present it to the TA;
- d) Provide a short report to the TA at the completion of Task 1 identifying in a one-page document the outcome of a, b & c.

### **Task 2. Data collection and validation**

This task focuses on the quality of the data collected to enable a robust post processing exercise. The data collected should answer the following requirements and the method of data collection must accompany the data.

- a) Setup on site sensors and begin intersection data collection. During this time, sensors will be verified weekly either on site or remotely. A log of activities should be kept to illustrate if any, data gap occurred.
  - i. Data gap could be related to connectivity, sensor limitation, or weather parameters that could affect the system. When possible, identify the source.
  - ii. The data should be collected in all kinds of weather conditions (summer/winter) and if weather limitations from technology are a concern, they should be brought up to the TA. Track any changes made to the data collection process throughout the project. Weatherproof, specialized, easy to instrumentation.
- b) Data to be collected:
  - i. Must be able to reliably classify vehicles passing through intersection.
  - ii. Must be able to accurately count Vulnerable Road Users passing through intersection.
  - iii. Must be able to track speeds of vehicles and vulnerable road users passing through intersection.
  - iv. Must be able to, in real-time or through later data analysis, identify hazardous moments in intersection, i.e. potential near-misses or potentially dangerous traffic conflicts. These can include times of heavy braking, near collisions, instances of pedestrian jaywalking etc.
  - v. Must be able to collect weather parameters such as rain, snow, sunshine, day, darkness
  - vi. Data must be processed without TC intervention and provided back in the form a summary, using an agreed-up dashboard or report.

### **Task 3. Smart Intersection Decommissioning**

- a) The contractor is responsible for removing the equipment from the intersection at the end of the project and re-set the intersection in its original condition.

#### **Task 4. Data Analysis**

A report illustrating the method must accompany the data supporting the various interactions collected during the Task 2. Citing and explaining the tools used for the data collection, the rationale behind the intersection selection, and the challenges encountered during the data collection period are expected.

- a) The report should highlight the most frequent (risky?) interactions that occurred between vehicles, vehicles and pedestrians, vehicles and cyclists and classified in order of relevance. Up to 20 different scenarios are expected. The assumptions made to group interactions under specific trends are explained. The data is analyzed in terms of vehicle speed profile at the intersection
- b) The data is analyzed for close calls where collision might have occurred if vehicle speed would have stayed constant.
- c) Deceleration, velocity, distance and time to collision are all examples of data that can illustrate the relationship between vehicle, pedestrian, cyclists, etc.
- d) Organize the data to illustrate if one type of vehicle or event poses the greatest risk(s) to road users.

#### **7. REPORTING REQUIREMENT**

All the material resulting from this project must be prepared in English and provided electronically to TC. The reports shall be in a format consistent with high-quality, technical report and must be provided in Microsoft Word (DOCX) format, Microsoft Excel (XLSX) format.

- a) Presentations, outlines, interim and final reports can be in English only.

#### **8. LANGUAGE REQUIREMENT**

The principal language of communications both verbally and written will be English.

#### **9. LOCATION OF WORK**

Data collection must be conducted at the selected intersection site. The contractor is responsible for travelling arrangement to the data collection site to install and monitor data collection equipment. The post processing of the data must be performed at the supplier's site. Chosen intersection must be in Canada.

#### **10. INTELLECTUAL PROPERTY**

Transport Canada must own the dataset collected for this project.

#### **11. SECURITY**

There are no security provisions for this requirement.

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## 12. DELIVERABLES/ACCEPTANCE CRITERIA

### Progress report:

Each month, the contractor will submit to the project authority a 1-page progress report briefly describing 1) the work accomplished, 2) the support requirements from the Project Authority, 3) the project schedule, and 4) the financial status. The contractor will be available for meeting (MS Teams / Web Ex / Teleconference or in person) monthly to track progress of this project.

Table 1. Schedule of Deliverables (Tentative)

Task	Milestone Deliverables	Required by
1	Task 1 report - Identify real world site for data collection	January 16, 2023
2	Task 2 report – Data collection and validation	February 24, 2023
3	Task 3 report - Smart Intersection Decommissioning	March 6, 2023
4	Task 4 report - Data Analysis	March 31 <sup>st</sup> , 2023

### 13. Acceptance

All work and services shall be provided to the entire satisfaction of the Project Authority prior to payment of invoice.

**ANNEX “B” – BASIS OF PAYMENT**

The Contractor will be paid a firm price for the work, customs duties included and Applicable Taxes extra.

**Travel and Living expenses**

Canada will not reimburse any travel or living expenses associated with performing the Work.

**Method of Payment – Milestone Payments**

Canada will make milestone payments in accordance with the Schedule of Milestone Payments detailed in Table 1 below if all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada. The Bidder shall propose the amount of each instalment in the space provided. The Bidder may, at its discretion, consolidate Milestones into fewer Milestones as long as the payment percentages and number of deliverables are respected.

**Table 1. Schedule of Milestone Payments**

Milestone No.	Description of Deliverable	Completion Date/Due Date	Firm Amount
1	<b>Task 1</b> report - Identify real world site for data collection and provide brief literature review of similar studies conducted globally.	January 16, 2023	\$ _____ (30% of firm price) – amount to be inserted by Bidder
2	<b>Task 2</b> report – Data collection and validation	February 24, 2023	\$ _____ (20% of firm price) – amount to be inserted by Bidder
3	<b>Task 3</b> report - Smart Intersection Decommissioning	March 6, 2023	\$ _____ (20% of firm price) – amount to be inserted by Bidder
4	<b>Task 4</b> report - Data Analysis	March 31, 2023	\$ _____ (30% of firm price) – amount to be inserted by Bidder
Total Firm Price: <i>(Total Evaluated Cost)</i>			\$ _____
			<b>Applicable Taxes Extra</b>