



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Public Works and Government Services Canada
Canada Place/Place du Canada
10th Floor/10e étage
9700 Jasper Ave/9700 ave Jasper
Edmonton
Alberta
T5J 4C3
Bid Fax: (780) 497-3510

**REQUEST FOR PROPOSAL
DEMANDE DE PROPOSITION**

**Proposal To: Public Works and Government
Services 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 therefor.

**Proposition aux: Travaux Publics et Services
Gouvernementaux 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-annexée, au(x) prix indiqué(s).

Comments - Commentaires

Title - Sujet Professional and Technical Services	
Solicitation No. - N° de l'invitation W7714-207172/A	Date 2019-11-19
Client Reference No. - N° de référence du client W7714-207172	
GETS Reference No. - N° de référence de SEAG PW-\$EDM-607-11735	
File No. - N° de dossier EDM-9-42090 (607)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-12-11	Time Zone Fuseau horaire Mountain Standard Time MST
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Jenkinson, Lorraine	Buyer Id - Id de l'acheteur edm607
Telephone No. - N° de téléphone (587) 337-2458 ()	FAX No. - N° de FAX (780) 497-3510
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: DEPARTMENT OF NATIONAL DEFENCE BLDG 560 RECEIVING 560 MOUNT SORRELL RALSTON Alberta T0J2N0 Canada	

Instructions: See Herein

Instructions: Voir aux présentes

Vendor/Firm Name and Address

**Raison sociale et adresse du
fournisseur/de l'entrepreneur**

Issuing Office - Bureau de distribution

Public Works and Government Services Canada
Canada Place/Place du Canada
10th Floor/10e étage
9700 Jasper Ave/9700 ave Jasper
Edmonton
Alberta
T5J 4C3

Delivery Required - Livraison exigée See Herein	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
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)	
Signature	Date

Solicitation No. - N° de l'invitation
W7714-207172/A
Client Ref. No. - N° de réf. du client
W7714-207172

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-9-42090

Buyer ID - Id de l'acheteur
EDM607
CCC No./N° CCC - FMS No./N° VME

**TITLE: Electromagnetic Propagation, Scattering, and Emission Modeling and Analysis Support
for Sensor Development**

TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION	3
1.1 INTRODUCTION.....	3
1.2 SUMMARY.....	3
1.3 DEBRIEFINGS.....	3
PART 2 - BIDDER INSTRUCTIONS	4
2.1 STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS	4
2.2 SUBMISSION OF BIDS	4
2.3 FORMER PUBLIC SERVANT - COMPETITIVE BID	4
2.4 ENQUIRIES - BID SOLICITATION	5
2.5 APPLICABLE LAWS	6
2.6 IMPROVEMENT OF REQUIREMENT DURING SOLICITATION PERIOD	6
2.7 BASIS FOR CANADA'S OWNERSHIP OF INTELLECTUAL PROPERTY	6
PART 3 - BID PREPARATION INSTRUCTIONS.....	6
3.1 BID PREPARATION INSTRUCTIONS.....	6
PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION	8
4.1 EVALUATION PROCEDURES	8
4.2 BASIS OF SELECTION	8
PART 5 - CERTIFICATIONS AND ADDITIONAL INFORMATION	9
5.1 CERTIFICATIONS REQUIRED WITH THE BID.....	9
5.2 CERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION.....	9
PART 6 - THIS PART IS LEFT BLANK INTENTIONALLY.....	10
PART 7 - RESULTING CONTRACT CLAUSES.....	11
7.1 STATEMENT OF WORK.....	11
7.2 STANDARD CLAUSES AND CONDITIONS	12
7.3 SECURITY REQUIREMENTS	13
7.4 TERM OF CONTRACT	13
7.5 AUTHORITIES	13
7.6 PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS.....	14
7.7 PAYMENT	14
7.8 INVOICING INSTRUCTIONS.....	17
7.9 CERTIFICATIONS AND ADDITIONAL INFORMATION	18
7.10 APPLICABLE LAWS	18
7.11 PRIORITY OF DOCUMENTS	18
7.12 DEFENCE CONTRACT	19
7.13 SACC MANUAL CLAUSES	19
7.14 INSURANCE REQUIREMENTS	19
ANNEX "A" - STATEMENT OF WORK.....	20
ANNEX "B" - BASIS OF PAYMENT	23
ANNEX "C" - DND 626 TASK AUTHORIZATION FORM.....	25
ANNEX "D" - TASK AUTHORIZATION REPORT	26

Solicitation No. - N° de l'invitation
W7714-207172/A
Client Ref. No. - N° de réf. du client
W7714-207172

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-9-42090

Buyer ID - Id de l'acheteur
EDM607
CCC No./N° CCC - FMS No./N° VME

ANNEX "E" - DISCLOSURE CERTIFICATION	27
ANNEX "F" - ELECTRONIC PAYMENT INSTRUMENTS	28
ANNEX "G" - EVALUATION CRITERIA	29

PART 1 - GENERAL INFORMATION

1.1 Introduction

The bid solicitation is divided into seven parts plus attachments and annexes, as follows:

- Part 1 General Information: provides a general description of the requirement;
- Part 2 Bidder Instructions: provides the instructions, clauses and conditions applicable to the bid solicitation;
- Part 3 Bid Preparation Instructions: provides Bidders with instructions on how to prepare their bid;
- Part 4 Evaluation Procedures and Basis of Selection: indicates how the evaluation will be conducted, the evaluation criteria that must be addressed in the bid, and the basis of selection;
- Part 5 Certifications and Additional Information: includes the certifications and additional information to be provided;
- Part 6 This part is left blank intentionally; and
- Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The Annexes include the Statement of Work, the Basis of Payment, the Electronic Payment Instruments, the DND 626 Task Authorization Form and any other annexes.

1.2 Summary

- 1.2.1 Defence Research and Development Canada – Suffield Research Station has a requirement for electromagnetic propagation, scattering, and emission modeling and analysis support for sensor development. There is a military requirement to detect threat objects, including improvised explosive devices, near the surface of the Earth. Of relevance are electromagnetic-based methods that comprise the transmission of radio-frequency waves and subsequent reception of the scattered waves by the threat object to be detected. The amount of energy scattered from the threat object of interest, and hence the chance of detecting it, can vary greatly with a number of parameters including but not limited to frequency, geometry, polarization, and soil conditions.

The focus of this contract is to model aspects of the detection of threat objects from remotely-operated platforms. Initial efforts will involve analytical modeling of electromagnetic scattering from linear conductors using transmission line approaches and/or numerical modeling. This will aid in sensor development and frequency selection for potential detector deployment on remotely-operated platforms.

The Contract will be effective from the date of contract award to 2022-March-31.

- 1.2.2 The requirement is subject to the provisions of the Canadian Free Trade Agreement (CFTA).
- 1.2.3 The requirement is limited to Canadian services.
- 1.2.4 This bid solicitation allows bidders to use the epost Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

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 \(2019-03-04\)](#), 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: 120 days

2.2 Submission of Bids

Bids must be submitted only to the Public Works and Government Services Canada (PWGSC) Bid Receiving Unit specified below by the date and time indicated on page 1 of the bid solicitation:

Bid Receiving Unit (BRU):	Western Region
Physical delivery address:	Bid Receiving Public Works and Government Services Canada Canada Place, Suite 1000 9700 Jasper Avenue Edmonton AB, T5J 4C3
epost Connect service email address:	ROReceptionSoumissions.WRBidReceiving@tpsgc-pwgsc.gc.ca
<i>(Bids/Offers will be not be accepted if emailed directly to this email address. This email address is to be used to open an ePost Connect conversation, as detailed in Standard Instructions 2003, or to send bids through an ePost Connect message if the bidder is using its own licensing agreement for ePost Connect.)</i>	
Bid facsimile number:	(780) 497-3510

2.3 Former Public Servant - Competitive Bid

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.

2.3.1 Definitions

For the purposes of this clause,

Solicitation No. - N° de l'invitation
W7714-207172/A
Client Ref. No. - N° de réf. du client
W7714-207172

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-9-42090

Buyer ID - Id de l'acheteur
EDM607
CCC No./N° CCC - FMS No./N° VME

"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.

2.3.2 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: 2012-2](#) and the [Guidelines on the Proactive Disclosure of Contracts](#).

2.3.3 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.

For all contracts awarded during the lump sum payment period, the total amount of fees that may be paid to a FPS who received a lump sum payment is \$5,000, including Applicable Taxes.

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 Alberta.

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 Improvement of Requirement During Solicitation Period

Should bidders consider that the specifications or Statement of Work contained in the bid solicitation could be improved technically or technologically, bidders are invited to make suggestions, in writing, to the Contracting Authority named in the bid solicitation. Bidders must clearly outline the suggested improvement as well as the reason for the suggestion. Suggestions that do not restrict the level of competition nor favour a particular bidder will be given consideration provided they are submitted to the Contracting Authority at least FIVE (5) days before the bid closing date. Canada will have the right to accept or reject any or all suggestions.

2.7 Basis for Canada's Ownership of Intellectual Property

Defence Research and Development Canada has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to Canada, for the following reasons, as set out in the [Policy on Title to Intellectual Property Arising Under Crown Procurement Contracts](#): an exemption has been granted through a Treasury Board submission.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

- If the Bidder chooses to submit its bid electronically, Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. The epost Connect system has a limit of 1GB per single message posted and a limit of 20GB per conversation. The bid must be gathered per section and separated as follows:
 - Section I: Technical Bid
 - Section II: Financial Bid
 - Section III: Certifications
- If the Bidder chooses to submit its bid in hard copies, Canada requests that the Bidder submits its bid in separately bound sections as follows:
 - Section I: Technical Bid (1 hard copy or 1 fax copy)
 - Section II: Financial Bid (1 hard copy or 1 fax copy)
 - Section III: Certifications (1 hard copy or 1 fax copy)

- Prices must appear in the financial bid only. No prices must be indicated in any other section of the bid.
- Canada requests that bidders follow the format instructions described below in the preparation of hard copy of their bid:
 - (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
 - (b) use a numbering system that corresponds to the bid solicitation.
- In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573) (https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573). To assist Canada in reaching its objectives, bidders should:
 - 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
 - 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

3.1.1 Section I: Technical Bid

In their technical bid, Bidders should demonstrate their understanding of the requirements contained in the bid solicitation and explain how they will meet these requirements. Bidders should demonstrate their capability and describe their approach in a thorough, concise and clear manner for carrying out the work. Bidders should describe their capability and experience, the project management team and provide client contact(s).

The technical bid should address clearly and in sufficient depth the points that are subject to the evaluation criteria against which the bid will be evaluated. Simply repeating the statement contained in the bid solicitation is not sufficient. In order to facilitate the evaluation of the bid, Canada requests that Bidders address and present topics in the order of the evaluation criteria under the same headings. To avoid duplication, Bidders may refer to different sections of their bids by identifying the specific paragraph and page number where the subject topic has already been addressed.

3.1.2 Section II: Financial Bid

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

3.1.2.2 Electronic Payment of Invoices – Bid

The Bidder must complete Annex "F" - Electronic Payment Instruments to identify which electronic payment instruments they are willing to accept.

If you are willing to accept payment of invoices by Electronic Payment Instruments, complete Annex "F" - Electronic Payment Instruments, to identify which ones are accepted.

If Annex "F" - Electronic Payment Instruments is not completed, it will be considered as if Electronic Payment Instruments are not being accepted for payment of invoices.

Acceptance of Electronic Payment Instruments will not be considered as an evaluation criterion.

3.1.3 Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

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/management and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

4.1.1 Technical Evaluation

Mandatory and point rated technical evaluation criteria are included in Annex "F".

4.1.2 Financial Evaluation

4.1.2.1 Financial evaluation as per Annex "F", Evaluation Criteria.

4.1.2.2 *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 and Price

4.2.1.1 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 points specified for each criterion for the technical evaluation.
The rating is performed on a scale of 30 points.

4.2.1.2 Bids not meeting (a) or (b) or (c) will be declared non-responsive.

4.2.1.3 The selection will be based on the highest responsive combined rating of technical merit and price. The ratio will be 30% for the technical merit and 70% for the price.

4.2.1.4 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 30%.

4.2.1.5 To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 70%.

4.2.1.6 For each responsive bid, the technical merit score and the pricing score will be added to determine its combined rating.

4.2.1.7 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 60/40 ratio of technical merit and price, respectively. The total available points equals 135 and the lowest evaluated price is \$45,000 (45).

Basis of Selection - Highest Combined Rating Technical Merit (60%) and Price (40%)				
	Bidder 1	Bidder 2	Bidder 3	
Overall Technical Score	115/135	89/135	92/135	
Bid Evaluated Price	\$55,000.00	\$50,000.00	\$45,000.00	
Calculations	Technical Merit Score	115/135 x 60 = 51.11	89/135 x 60 = 39.56	92/135 x 60 = 40.89
	Pricing Score	45/55 x 40 = 32.73	45/50 x 40 = 36.00	45/45 x 40 = 40.00
Combined Rating	83.84	75.56	80.89	
Overall Rating	1st	3rd	2nd	

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 Integrity 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 specified 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 Federal Contractors Program for Employment Equity - Bid Certification

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social Development Canada \(ESDC\) - Labour's](https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#) website (<https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#>).

Canada will have the right to declare a bid non-responsive if the Bidder, or any member of the Bidder if the Bidder is a Joint Venture, appears on the "FCP Limited Eligibility to Bid list at the time of contract award.

5.2.3 Additional Certifications Precedent to Contract Award

5.2.3.1 Canadian Content Certification

5.2.3.1.1 *SACC Manual* clause [A3050T \(2018-12-06\)](#), Canadian Content Definition

5.2.3.1.2 This procurement is limited to Canadian services.

The Bidder certifies that:

() the service offered is a Canadian service as defined in paragraph 2 of clause [A3050T](#).

Bidders should submit the completed certification with their bid. If the certification is not completed and submitted with the bid, the Contracting Authority will so inform the Bidder and provide the Bidder with a time frame within which to submit this completed certification. Failure to comply with the request of the Contracting Authority and submit the completed certification will render the bid non-responsive.

5.2.3.2 Status and Availability of Resources

The Bidder certifies that, should it be awarded a contract as a result of the bid solicitation, every individual proposed in its bid will be available to perform the Work as required by Canada's representatives and at the time specified in the bid solicitation or agreed to with Canada's representatives. If for reasons beyond its control, the Bidder is unable to provide the services of an individual named in its bid, the Bidder may propose a substitute with similar qualifications and experience. The Bidder must advise the Contracting Authority of the reason for the substitution and provide the name, qualifications and experience of the proposed replacement. For the purposes of this clause, only the following reasons will be considered as beyond the control of the Bidder: death, sickness, maternity and parental leave, retirement, resignation, dismissal for cause or termination of an agreement for default.

If the Bidder has proposed any individual who is not an employee of the Bidder, the Bidder certifies that it has the permission from that individual to propose his/her services in relation to the Work to be performed and to submit his/her résumé to Canada. The Bidder must, upon request from the Contracting Authority, provide a written confirmation, signed by the individual, of the permission given to the Bidder and of his/her availability.

5.2.3.3 Education and Experience

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

PART 6 – This part is left blank intentionally.

PART 7 - RESULTING CONTRACT CLAUSES

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

7.1 Statement of Work

The Contractor must perform the Work in accordance with the Statement of Work at Annex "A" and the Contractor's technical bid entitled _____, dated _____.

7.1.2 Task Authorization

The Work or a portion of the Work to be performed under the Contract will be on an "as and when requested basis" using a Task Authorization (TA). The Work described in the TA must be in accordance with the scope of the Contract.

7.1.2.1 Task Authorization Process

- a) The Procurement Authority will provide the Contractor with a description of the task using the DND 626, Task Authorization Form specified in Annex "C".
- b) The Task Authorization (TA) will contain the details of the activities to be performed, a description of the deliverables, and a schedule indicating completion dates for the major activities or submission dates for the deliverables. The TA will also include the applicable basis(bases) and methods of payment as specified in the Contract.
- c) The Contractor must provide the Procurement Authority within ten (10) calendar days of its receipt, the proposed total estimated cost for performing the task and a breakdown of that cost, established in accordance with the Basis of Payment specified in the Contract.
- d) Contractor must not commence work until a TA authorized by the Procurement Authority has been received by the Contractor. The Contractor acknowledges that any work performed before a TA has been received will be done at the Contractor's own risk.

7.1.2.2 Task Authorization Limit

The Procurement Authority may authorize individual task authorizations up to a limit of **\$100,000.00**, Applicable Taxes included, inclusive of any revisions.

Any task authorization to be issued in excess of that limit must be authorized by the Procurement Authority and the Contracting Authority before issuance.

7.1.2.3 Minimum Work Guarantee - All the Work - Task Authorizations

- a) In this clause,
"Maximum Contract Value" means the amount specified in the "Limitation of Expenditure" clause set out in the Contract; and
"Minimum Contract Value" means 10%.
- b) Canada's obligation under the Contract is to request Work in the amount of the Minimum Contract Value or, at Canada's option, to pay the Contractor at the end of the Contract in accordance with paragraph 3. In consideration of such obligation, the Contractor agrees to stand in readiness throughout the Contract period to perform the Work described in the Contract. Canada's maximum liability for work performed under the Contract must not exceed the Maximum Contract Value, unless an increase is authorized in writing by the Contracting Authority.
- c) In the event that Canada does not request work in the amount of the Minimum Contract Value during the period of the Contract, Canada must pay the Contractor the difference between the Minimum Contract Value and the total cost of the Work requested.

-
- d) Canada will have no obligation to the Contractor under this clause if Canada terminates the Contract in whole or in part for default.

7.1.2.4 Periodic Usage Reports - Contracts with Task Authorizations

The Contractor must compile and maintain records on its provision of services to the federal government under authorized Task Authorizations issued under the Contract.

The Contractor must provide this data in accordance with the reporting requirements detailed below or in Annex "D". If some data is not available, the reason must be indicated. If services are not provided during a given period, the Contractor must still provide a "nil" report.

The data must be submitted on a quarterly basis to the Contracting Authority.

The quarterly periods are defined as follows:

- 1st quarter: April 1 to June 30;
- 2nd quarter: July 1 to September 30;
- 3rd quarter: October 1 to December 31; and
- 4th quarter: January 1 to March 31.

The data must be submitted to the Contracting Authority no later than fifteen (15) calendar days after the end of the reporting period.

Reporting Requirement- Details

A detailed and current record of all authorized tasks must be kept for each contract with a task authorization process. This record must contain:

For each authorized task:

- i. the authorized task number or task revision number(s);
- ii. a title or a brief description of each authorized task;
- iii. the total estimated cost specified in the authorized Task Authorization (TA) of each task, exclusive of Applicable Taxes;
- iv. the total amount, exclusive of Applicable Taxes, expended to date against each authorized task;
- v. the start and completion date for each authorized task; and
- vi. the active status of each authorized task, as applicable.

For all authorized tasks:

- i. the amount (exclusive of Applicable Taxes) specified in the contract (as last amended, as applicable) as Canada's total liability to the contractor for all authorized TAs; and
- ii. the total amount, exclusive of Applicable Taxes, expended to date against all authorized TAs.

7.1.2.5 Task Authorization - Department of National Defence

The administration of the Task Authorization process will be carried out by Defence Research and Development Canada. This process includes monitoring, controlling and reporting on expenditures of the contract with task authorizations to the Contracting Authority.

7.2 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.

Solicitation No. - N° de l'invitation
W7714-207172/A
Client Ref. No. - N° de réf. du client
W7714-207172

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-9-42090

Buyer ID - Id de l'acheteur
EDM607
CCC No./N° CCC - FMS No./N° VME

7.2.1 General Conditions

2040 (2018-06-21). General Conditions - Research & Development, apply to and form part of the Contract.

7.2.2 SACC Manual Clauses

K3410C (2015-02-25), Canada to Own Intellectual Property Rights in Foreground Information

7.3 Security Requirements

7.3.1 There is no security requirement applicable to the Contract.

7.4 Term of Contract

7.4.1 Period of the Contract

The period of the Contract is from **date of Contract to 2022-03-31** inclusive.

7.5 Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Lorraine Jenkinson
Procurement Specialist
Procurement Branch, Western Region
Public Services and Procurement Canada
Canada Place, Suite 1000
9700 Jasper Avenue
Edmonton AB, T5J 4C3

Telephone: 587-337-2458
Facsimile: 780-497-3510
Email: lorraine.jenkinson@pwgsc-tpsgc.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.

7.5.2 Technical Authority

The Technical Authority for the Contract is: ***(To be named in the Contract.)***

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: ____ - ____ - _____
Facsimile: ____ - ____ - _____
E-mail address: _____

The Technical Authority named above 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 Technical Authority, however the Technical 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.

Solicitation No. - N° de l'invitation
W7714-207172/A
Client Ref. No. - N° de réf. du client
W7714-207172

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-9-42090

Buyer ID - Id de l'acheteur
EDM607
CCC No./N° CCC - FMS No./N° VME

7.5.3 Procurement Authority

The Procurement Authority for the Contract is: *(To be named in the Contract.)*

Name: _____
Title: _____
Organization: _____
Address: _____
Telephone: ____ - ____ - ____
Facsimile: ____ - ____ - ____
E-mail address: _____

The Procurement Authority is the representative of the department or agency for whom the Work is being carried out under the Contract. The Procurement Authority is responsible for the implementation of tools and processes required for the administration of the Contract. The Contractor may discuss administrative matters identified in the Contract with the Procurement Authority however the Procurement Authority has no authority to authorize changes to the scope of the Work. Changes to the scope of Work can only be made through a contract amendment issued by the Contracting Authority.

7.5.3 Contractor's Representative

Name: _____
Title: _____
Organization: _____
Telephone: ____ - ____ - ____
Facsimile: ____ - ____ - ____
E-mail address: _____

7.6 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: 2012-2](#) of the Treasury Board Secretariat of Canada.

7.7 Payment

7.7.1 Limitation of Expenditure - Cumulative Total of all Task Authorizations

- 7.7.1.1 Canada's total liability to the Contractor under the Contract for all authorized Task Authorizations (TAs), inclusive of any revisions, must not exceed the sum of \$ _____. Customs duties are included and Applicable Taxes are extra.
- 7.7.1.2 No increase in the total liability of Canada will be authorized or paid to the Contractor unless an increase has been approved, in writing, by the Contracting Authority.
- 7.7.1.3 The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
- when it is 75 percent committed, or
 - four (4) months before the contract expiry date, or
 - as soon as the Contractor considers that the sum is inadequate for the completion of the Work required in all authorized TAs, inclusive of any revisions, whichever comes first.

7.7.1.4 If the notification is for inadequate contract funds, the Contractor must provide to the Contracting Authority, a written estimate for the additional funds required. Provision of such information by the Contractor does not increase Canada's liability.

7.7.2 Basis of Payment - Task Authorizations

7.7.2.1 The Basis of Payment, Annex "B", will be used to price any Task Authorization requested under this Contract. Depending on the type of Task Authorization, one of the following will apply:

- (a) **For Firm Price Task Authorizations:** In consideration of the Contractor satisfactorily completing all of its obligations under the authorized Task Authorization (TA), the Contractor will be paid the firm price stipulated in the authorized TA, calculated in accordance with the Basis of Payment in Annex "B". Customs duties are included and Applicable Taxes are extra, if applicable.

Canada will not pay the Contractor for any design changes, modifications or interpretations of the Work, unless they have been authorized, in writing, by the Contracting Authority before their incorporation into the Work.

- (b) **For Task Authorizations subject to a Ceiling Price:** The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work in the authorized Task Authorization (TA), to the ceiling price stipulated in the authorized TA, calculated in accordance with the Basis of Payment in Annex "B".

The ceiling price is subject to downward adjustment so as not to exceed the actual charges and costs reasonably incurred in the performance of the Work and computed in accordance with the basis of payment specified in the authorized TA.

- (c) **For Task Authorizations subject to a Limitation of Expenditure:** The Contractor will be reimbursed for the costs reasonably and properly incurred in the performance of the Work specified in the authorized Task Authorization (TA), as determined in accordance with the Basis of Payment in Annex "B", to the limitation of expenditure specified in the authorized TA.

Canada's liability to the Contractor under the authorized TA must not exceed the limitation of expenditure specified in the authorized TA. Customs duties are included and Applicable Taxes are extra, if applicable.

7.7.3 Method of Payment

7.7.3.1 For Firm Price Task Authorizations

Depending on the type of Task Authorization, one of the following will apply:

7.7.3.1.1 Single Payment

Canada will pay the Contractor upon completion and delivery of the Work in accordance with the payment provisions of the Contract if:

- a) an accurate and complete invoice and any other documents required by the Task Authorization have been submitted in accordance with the invoicing instructions provided in the Contract;
- b) all such documents have been verified by Canada;
- c) the Work delivered has been accepted by Canada.

7.7.3.1.2 Milestone Payments Subject to a Holdback

- a) Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Task Authorization and the payment provisions of the Contract and the Task Authorization, up to 90 percent of the amount claimed and approved by Canada if:

-
- (i) an accurate and complete claim for payment using form PWGSC-WR01, Claim for Progress Payment, and any other document required by the Task Authorization have been submitted in accordance with the invoicing instructions provided in the Contract;
 - (ii) the total amount for all milestone payments paid by Canada does not exceed 90 percent of the total amount to be paid under the Task Authorization;
 - (iii) all the certificates appearing on form PWGSC-WR01 have been signed by the respective authorized representatives;
 - (iv) all work associated with the milestone and as applicable any deliverable required have been completed and accepted by Canada.
- b) The balance of the amount payable will be paid in accordance with the payment provisions of the Contract and the Task Authorization upon completion and delivery of all Work required under the Task Authorization if the Work has been accepted by Canada and a final claim for the payment is submitted.

7.7.3.1.3 Milestone Payments Not Subject to a Holdback

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in the Task Authorization and the payment provisions of the Contract and the Task Authorization if:

- (a) an accurate and complete claim for payment using form PWGSC-WR01, Claim for Progress Payment, and any other document required by the Task Authorization have been submitted in accordance with the invoicing instructions provided in the Contract;
- (b) all the certificates appearing on PWGSC-WR01, have been signed by the respective authorized representatives;
- (c) all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

7.7.3.2 For Task Authorizations Subject to a Limitation of Expenditure or a Ceiling Price

Depending on the type of Task Authorization, one of the following will apply:

7.7.3.2.1 Single Payment

Canada will pay the Contractor upon completion and delivery of the Work in accordance with the payment provisions of the Contract if:

- a) an accurate and complete invoice and any other documents required by the Task Authorization have been submitted in accordance with the invoicing instructions provided in the Contract;
- b) all such documents have been verified by Canada;
- c) the Work delivered has been accepted by Canada.

7.7.3.2.2 Progress Payments Subject to a Holdback

- a) For Task Authorizations with a duration of more than one (1) month, Canada will make progress payments in accordance with the payment provisions of the Task Authorization, no more than once a month, for cost incurred in the performance of the Work, up to ninety (90) percent of the amount claimed and approved by Canada if:
 - (i) an accurate and complete claim for payment using form PWGSC-WR01 and any other document required by the Task Authorization have been submitted in accordance with the invoicing instructions provided in the Contract;
 - (ii) the amount claimed is in accordance with the basis of payment;
 - (iii) the total amount for all progress payments paid by Canada does not exceed 100 percent of the total amount to be paid under the Task Authorization;

- (iv) all certificates appearing on form PWGSC-TPSGC 1111 have been signed by the respective authorized representatives.
- b) The balance of the amount payable will be paid in accordance with the payment provisions of the Contract upon completion and delivery of all work required under the Task Authorization if the Work has been accepted by Canada and a final claim for the payment is submitted.
- c) Progress payments are interim payments only. Canada may conduct a government audit and interim time and cost verifications and reserves the rights to make adjustments to the Contract from time to time during the performance of the Work. Any overpayment resulting from progress payments or otherwise must be refunded promptly to Canada.

7.7.4 Electronic Payment of Invoices – Contract

Contracting officers must reproduce below, the information from Annex "F" - Electronic Payment Instruments, in which were identified electronic payment instruments accepted by the Contractor and renumber accordingly.

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

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);
- e. Wire Transfer (International Only);
- f. Large Value Transfer System (LVTS) (Over \$25M)

7.7.5 SACC Manual Clauses

A9117C (2007-11-30), T1204 - Direct Request by Customer Department

C0705C (2010-01-11), Discretionary Audit

C0102C (2010-01-11), Discretionary Audit - Canadian Universities and Colleges (*applicable to universities and colleges only*)

7.8 Invoicing Instructions

7.8.1 For Task Authorizations subject to Single Payment

7.8.1.1 The Contractor must a claim for progress payment using form PWGSC-WR01, Claim for Progress Payment, 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.

7.8.1.2 Claims must be distributed as follows:

- a) The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.

7.8.2 For Task Authorizations subject to Milestone Payments

7.8.2.1 The Contractor must submit a claim for progress payment using form PWGSC-WR01, Claim for Progress Payment, to the Procurement Authority. Each claim must show:

- a) all information required on form PWGSC-WR01;
- b) all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;
- c) holdback of 10 percent, as applicable;
- d) the description and value of the milestone claimed as detailed in the Task Authorization.

7.8.3 For Task Authorizations subject to Progress Payments

7.8.3.1 The Contractor must submit a claim for progress payment using form PWGSC-WR01, Claim for Progress Payment, to the Procurement Authority. Each claim must show:

- a) all information required on form PWGSC-WR01;
- b) all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;
- c) a list of all expenses;
- d) a copy of time sheets to support the time claimed;
- e) a copy of the invoices, receipts, vouchers for all direct expenses, travel and living expenses;
- e) a copy of the invoice for total consumables and non-consumable items valued at \$1,000 or more; (*Universities only*)
- f) withholding of 10 per cent, if applicable;
- g) a copy of the monthly progress report as detailed in the Task Authorization.

7.8.4 Applicable Taxes, must be calculated on the total amount of the claim before the holdback is applied. At the time the holdback is claimed, there will be no Applicable Taxes payable as it was claimed and payable under the previous claims for progress payments.

7.8.5 The Contractor must not submit claims until all work identified in the claim is completed.

7.9 Certifications and Additional Information

7.9.1 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.

7.9.2 Disclosure Certification

On completion of the Work, the Contractor must submit to the Procurement Authority and to the Contracting Authority a copy of the Disclosure Certification attached as Annex "D" stating that all applicable disclosures were submitted or that there were no disclosures to submit under section 27 and 28 of general conditions 2040.

7.9.3 SACC Manual Clauses

A3060C (2008-05-12), Canadian Content Certification

7.10 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____ (*insert the name of the province or territory as specified by the Bidder in its bid, if applicable*).

7.11 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 general conditions 2040 (2016-04-04), General Conditions - Research & Development;
- (c) Annex A, Statement of Work;
- (d) Annex B, Basis of Payment;
- (e) the signed Task Authorizations (including all of its annexes, if any);

Solicitation No. - N° de l'invitation

W7714-207172/A

Client Ref. No. - N° de réf. du client

W7714-207172

Amd. No. - N° de la modif.

File No. - N° du dossier

EDM-9-42090

Buyer ID - Id de l'acheteur

EDM607

CCC No./N° CCC - FMS No./N° VME

-
- (f) Annex D, Task Authorization Reports;
- (g) Annex E, Disclosure Certification;
- (g) the Contractor's bid dated _____, (*insert date of bid*) (*If the bid was clarified or amended, insert at the time of contract award:*"), as clarified on _____ " **or** ", as amended on _____ " *and insert date(s) of clarification(s) or amendment(s)*).

7.12 Defence Contract

SACC *Manual* clause [A9006C \(2012-07-16\)](#), Defence Contract

7.13 SACC Manual clauses

[A2000C \(2006-06-16\)](#), Foreign Nationals (Canadian Contractor)

[A9062C \(2011-05-16\)](#), Canadian Forces Site Regulations

[B6800C \(2007-11-30\)](#), List of Non-Consumable Equipment and Material

7.14 Insurance Requirements

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

ANNEX "A" - STATEMENT OF WORK

1. TITLE

Electromagnetic Propagation, Scattering, and Emission Modeling and Analysis Support for Sensor Development

2. BACKGROUND

There is a military requirement to detect threat objects, including improvised explosive devices, near the surface of the Earth. Of relevance are electromagnetic-based methods that comprise the transmission of radio-frequency waves and subsequent reception of the scattered waves by the threat object to be detected. The amount of energy scattered from the threat object of interest, and hence the chance of detecting it, can vary greatly with a number of parameters including but not limited to frequency, geometry, polarization, and soil conditions.

The ability to detect such threat objects at large distances (greater than 10 m, from detector to object) would be very advantageous. However, the associated scattered fields tend to decay rapidly and limit the distance of detection. The focus of this contract is to model aspects of the detection of threat objects from remotely-operated platforms.

Initial efforts will involve analytical modeling of electromagnetic scattering from linear conductors using transmission line approaches and/or numerical modeling. This will aid in sensor development and frequency selection for potential detector deployment on remotely-operated platforms. Previous work has focused on the development of an analytical model based on the transmission line model. Here, the problem could be studied at frequencies less than 15 MHz [Ref 1.]. However, it is required to extend the upper frequency beyond the previous limit and into the VHF band (30 – 300 MHz). This will require modification of the theory and verification against a numerical model.

Pending available funding, additional work may be carried out. This would include the modeling of electrical noise sources found on remotely-operated platforms. For example, many remotely-operated platforms contain electronic converters and motors, which emit electromagnetic radiation at various frequencies. Modeling of these emissions will be required to understand the problem and identify potential mitigation strategies for particular detectors. Modeling of the payload capacity will also be useful in assessment of size, weight, and power issues and their impact on the performance of the remotely-operated platform when equipped with a detector as a payload.

Future work, also pending available funding, would consider the detection of electronic components using nonlinear scattering methods. Researching and modeling of nonlinear interactions of electromagnetic waves with electronic components, such as transistors and diodes, will be conducted with a view toward developing sensor technology.

3. ACRONYMS

DRDC	Defence Research and Development Canada
SOW	Statement of Work
SRC	Suffield Research Centre
TA	Technical Authority

4. APPLICABLE DOCUMENTS & REFERENCES

1. S. E. Irvine and J. K. E. Tunaley, "Transmission Line Modeling of Scattering From a Linear Conductor Near the Surface of the Ground," IEEE Transactions on Antennas and Propagation, vol. 66, pp. 1446-1455, 2018.

5. TASKS

The Technical Authority (TA) will provide the contractor with specific tasks in the form of separate Task Authorizations that must be completed by the contractor. A wide variety of modeling and/or data analysis tasks may be required during the course of the contracted work period. Accordingly, the work will be performed in consultation with DRDC SRC personnel as defined in the Task Authorizations. For each Task Authorization, the contractor must do the following:

- a. Provide the TA with a brief summary including approach, schedule and cost breakdown of how the Task Authorization activities will be performed, for approval by the TA before work proceeds.
- b. Perform identified modeling and/or data analysis as required for the particular task.
- c. Record, process, interpret, and report on the resulting data.

Specific aspects of any one Task Authorization may require, but not limit, the contractors to:

1. Perform research and option analysis. This would include literature surveys and collation of information, and the development of analytical model for electromagnetic scattering. It may also include the analysis and/or interpretation of data
2. Design experimental apparatuses (but not build). For example, the contractor would provide designs for experimental arrangements for the measurement of electromagnetic fields emitted from motors and other electronic components associated with remotely operated vehicles.
3. Develop modeling or analysis software. Initial efforts will focus on the development of transmission line models considering frequencies in the VHF band or potentially beyond.

Communication with the TA throughout the contract is critical to ensure the best outcome of this project.

6. DELIVERABLES

Each Task Authorization will specify its deliverables. It is anticipated that these deliverables will include:

1. A final Task Authorization report outlining the structure and operational concept behind the data analysis or interpretation, any limitations or assumptions made that would affect the applicability of results, and any suggestions for additions or improvements; and/or
2. Publication of a report or manuscript; and/or
3. A mirror of any generated code base, documentation and/or user's manual in electronic form on CD.

Estimated Level of Effort in Days

	Category	FY 19/20	FY 20/21	FY 21/22
1	Junior Level: Research and Development	20 days	90 days	70 days

7. DATE OF DELIVERY

The delivery dates of each task will be specified within that Task Authorization. All Task Authorizations of the contract will be completed before Mar 31 2022.

8. Language of Work

English.

9. Location of Work

The work will be performed on Contractor site.

Solicitation No. - N° de l'invitation
W7714-207172/A
Client Ref. No. - N° de réf. du client
W7714-207172

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-9-42090

Buyer ID - Id de l'acheteur
EDM607
CCC No./N° CCC - FMS No./N° VME

10. Travel

The Contractor is not required to travel.

11. MEETINGS

The contractor is not required to travel. Should meetings be required, the Technical Authority will travel to the Contractor site. The preferred method for meetings is telephone.

12. GOVERNMENT SUPPLIED MATERIAL (GSM)

Should there be a need, experimental data may be shared with the contractor for purposes of comparison against models or analyses.

13. GOVERNMENT FURNISHED EQUIPMENT (GFE)

None.

14. SPECIAL CONSIDERATIONS

None

15. SECURITY

All work is unclassified and the Contractor will not have access to any classified information.

16. Intellectual Property (IP) Ownership

Canada to Own Intellectual Property Rights in Foreground Information - See Contract terms and conditions.

17. Controlled Goods

Not applicable

Solicitation No. - N° de l'invitation
W7714-207172/A
Client Ref. No. - N° de réf. du client
W7714-207172

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-9-42090

Buyer ID - Id de l'acheteur
EDM607
CCC No./N° CCC - FMS No./N° VME

ANNEX "B" - BASIS OF PAYMENT

Payment will be made for time expended and other costs reasonably and properly incurred from the date of contract to contract completion in accordance with the following:

- Labour at firm daily rates. One day consists of 7.5 hours. The rates will be prorated for any period of more or less than one day.

(The Estimated Usage is for evaluation purposes only and will not form any part of the resulting Contract.)

	Description (Title)	Period 1 : Contract Award to 2020-03-31		Period 2: 2020-04-01 to 2021-03-31		Period 3: Option Year - 2021-04-01 to 2022-03-31		Extended Price
		Est. Usage (A)	Daily Rate (B)	Est. Usage (C)	Daily Rate (D)	Est. Usage (E)	Daily Rate (F)	
A.	Junior Level: Research and Development Name: _____	20 Days	\$	90 Days	\$	70 Days	\$	\$
Total Estimated Labour:								\$

- Material and supplies at laid down cost without mark-up, as supported by invoice, including (list items).
- Purchased equipment at laid down cost without mark-up, including (list items).
- Subcontracting at actual cost incurred without mark-up, (subcontractor name)
- Other direct charges at actual cost incurred without mark-up, including (list any other costs which may be applicable, giving an estimated cost for each e.g. computing costs, long distance telephone/facsimile charges, reproduction, shipping).
- Computing charges at standard university rates.
(Applicable to Universities only)
- Standard University Overhead as follows:
(Applicable to Universities only)
 - at a maximum 65% of on-campus labour (item 1)
 - at a maximum 30% of off-campus labour (item 1)
 - at a maximum 2% of travel expenses (item 6)
- Profit at a firm _____% of items _____ above

Total Estimated Cost to a Limitation of Expenditure: \$____(TBD)_____.

Solicitation No. - N° de l'invitation

W7714-207172/A

Client Ref. No. - N° de réf. du client

W7714-207172

Amd. No. - N° de la modif.

File No. - N° du dossier

EDM-9-42090

Buyer ID - Id de l'acheteur

EDM607

CCC No./N° CCC - FMS No./N° VME

With the exception of the firm rate(s) and price(s), the amounts shown in the various items specified above are estimates only. Minor changes to these estimates will be accepted for billing purposes as the Work proceeds, provided that these changes have the prior approval of the Technical Authority, and provided that the estimated cost does not exceed the aforementioned "Limitation of Expenditure.

APPLICABLE TAXES: The applicable taxes are not included in the amounts above. The applicable taxes are to be shown as a completely separate item on each invoice.

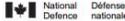
F.O.B. Point: Defence Research and Development Canada - Suffield

Solicitation No. - N° de l'invitation
W7714-207172/A
Client Ref. No. - N° de réf. du client
W7714-207172

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-9-42090

Buyer ID - Id de l'acheteur
EDM607
CCC No./N° CCC - FMS No./N° VME

ANNEX "C" - DND 626 TASK AUTHORIZATION FORM

		TASK AUTHORIZATION AUTORISATION DES TÂCHES	
All invoices/progress claims must show the reference Contract and Task numbers. Toutes les factures doivent indiquer les numéros du contrat et de la tâche.			Contract no. - N° du contrat
			Task no. - N° de la tâche
Amendment no. - N° de la modification	Increase/Decrease - Augmentation/Réduction	Previous value - Valeur précédente	
To - A	TO THE CONTRACTOR You are requested to supply the following services in accordance with the terms of the above reference contract. Only services included in the contract shall be supplied against this task. Please advise the undersigned if the completion date cannot be met. Invoices/progress claims shall be prepared in accordance with the instructions set out in the contract. À L'ENTREPRENEUR Vous êtes prié de fournir les services suivants en conformité des termes du contrat mentionné ci-dessus. Seuls les services mentionnés dans le contrat doivent être fournis à l'appui de cette demande. Prière d'aviser le signataire si la livraison ne peut se faire dans les délais prescrits. Les factures doivent être établies selon les instructions énoncées dans le contrat.		
Delivery location - Expédié à	Date _____ for the Department of National Defence pour le ministre de la Défense nationale		
Delivery/Completion date - Date de livraison/d'achèvement			
Contract item no. N° d'article du contrat	Services	Cost Prix	
		GST/HST TPS/TVH	
		Total	
APPLICABLE ONLY TO PWGSC CONTRACTS: The Contract Authority signature is required when the total value of the DND 626 exceeds the threshold specified in the contract. NE S'APPLIQUE QU'AUX CONTRATS DE TPSGC : La signature de l'autorité contractante est requise lorsque la valeur totale du formulaire DND 626 est supérieure au seuil précisé dans le contrat.			
for the Department of Public Works and Government Services pour le ministre des Travaux publics et services gouvernementaux			

DND 626 (01-05)

Design: Forms Management 993-4036
Conception: Gestion des formulaires 993-4002

Solicitation No. - N° de l'invitation
W7714-207172/A
Client Ref. No. - N° de réf. du client
W7714-207172

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-9-42090

Buyer ID - Id de l'acheteur
EDM607
CCC No./N° CCC - FMS No./N° VME

ANNEX "E" - DISCLOSURE CERTIFICATION

This document is to be completed and signed by the Contractor at the completion of the subject contract and submitted to the Contracting Officer and the Technical Authority designated below:

<u>Contracting Authority</u>	<u>Technical Authority</u>
Lorraine Jenkinson Procurement Specialist Public Services and Procurement Canada Procurement Branch, Western Region Canada Place, Suite 1000 Suite 1000, 9700 Jasper Avenue Edmonton AB, T5J 4C3	(T.A.) Defence Research & Development Canada – Suffield Research Centre P.O. Box 4000 Main Medicine Hat, AB T1A 8K6

CONTRACT TITLE: _____
(Department of _____, Prof. _____)

Please tick appropriate box:

- We hereby certify that all applicable disclosures were submitted in compliance with Section 27 and 28, General Conditions 2040 - Research and Development.

YOUR ATTENTION IS DRAWN TO SECTION 28, REGARDING IMPLICATIONS ON NON-DISCLOSURE OF any Technical Documentation, Prototypes, Inventions and Technical Information arising during the performance of work pursuant to the above identified contract.

OR

- We hereby certify that there are no disclosures to submit under the above-referenced Contract, referred to in Section 27 and 28, General Conditions 2040 - Research and Development.

Signature

Print Name

Title

Contractor Name

Date

Solicitation No. - N° de l'invitation

W7714-207172/A

Client Ref. No. - N° de réf. du client

W7714-207172

Amd. No. - N° de la modif.

File No. - N° du dossier

EDM-9-42090

Buyer ID - Id de l'acheteur

EDM607

CCC No./N° CCC - FMS No./N° VME

ANNEX "F" - ELECTRONIC PAYMENT INSTRUMENTS

As indicated in Part 3, clause 3.1.2, the Bidder must complete the information requested below, to identify which electronic payment instruments are accepted for the payment of invoices.

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

- VISA Acquisition Card;
- MasterCard Acquisition Card;
- Direct Deposit (Domestic and International);
- Electronic Data Interchange (EDI);
- Wire Transfer (International Only);
- Large Value Transfer System (LVTS) (Over \$25M)

ANNEX "G" - EVALUATION CRITERIA

A. TECHNICAL EVALUATION:

A.1. Mandatory Technical Criteria:

The Bidder must demonstrate they meet the following mandatory technical criteria. Failure to meet any of the following mandatory technical criteria at bid closing will render the bid non-responsive and it will be given no further consideration.

Curriculum vitae or other documentation must be included to demonstrate compliance to the mandatory technical criteria.

If the supporting documentation is not provided at bid closing, the Contracting Authority will notify the Bidder that they must provide supporting documentation within two (2) business days following notification. Failure to comply with the request of the Contracting Authority within that time period, will deem the bid non-responsive and the bid will be given no further consideration.

	Mandatory Technical Criteria	Met	Not Met
M1	Education: PhD level of education in Physics related to electromagnetics.		
M2	Experience: A minimum of 12 months of experience in the analytical development and data analysis of electromagnetic scattering from linear conductors within the last 24 months.		
M3	Experience: A minimum of 12 months of experience in creating modelling software for calculation of electromagnetic scattering from linear conductors within the last 24 months.		
M4	Experience: A minimum of 3 months experience researching remotely-operated platforms or vehicles within the last 24 months.		
M5	Experience: A minimum of 12 months of experience researching non-linear electromagnetic scattering within the last 36 months.		

A.2. Point-Rated Technical Criteria

- a) Each evaluation criterion has a point allotment that reflects its importance within the bid. The degree to which the bid satisfies the requirement of each criterion will be assessed and a score will be assigned ranging from 0 to the total point allotment, with 0 meaning the bid completely fails to satisfy the requirements, and the total allotment meaning the bid fully meets the outlined criterion.
- b) Each evaluation criterion has a minimum score. Bids that fail to achieve this minimum score will be considered technically unacceptable and will be given no further consideration.

	Point-Rated Technical Criteria	Minimum	Maximum	Score
P1	Years of experience in the research of electromagnetics: 1 point per year up to a maximum of 20.	2	20	
P2	Experience using GRWAVE software from the International Telecommunications Union. No experience 0 points 3 months or more 5 points	0	5	

Solicitation No. - N° de l'invitation
W7714-207172/A
Client Ref. No. - N° de réf. du client
W7714-207172

Amd. No. - N° de la modif.
File No. - N° du dossier
EDM-9-42090

Buyer ID - Id de l'acheteur
EDM607
CCC No./N° CCC - FMS No./N° VME

P3	Experience using commercial Method of Moments software.			
	No experience 0 points 3 months or more 5 points	0	5	
	Maximum points available		30	
	TOTAL POINTS AWARDED			

B. FINANCIAL EVALUATION:

Bidders must submit their Financial Bid in accordance with Annex B - Basis of Payment.

The Evaluated Bid Price will be determined based on the total cost of item 1. Labour. The Evaluated Bid Price will be calculated as follows:

- The Estimated Usage for Period 1 (A) will be multiplied by the quoted Daily Rate (B) determine the extended total for Period 1 (AB); the Estimated Usage for Period 2 (C) will be multiplied by quoted Daily Rate for Period 2 (D) rate to determine the extended total for Period 2 (CD);the Estimated Usage for Period 3 (E) will be multiplied by the quoted Daily Rate for Period 3 (F) rate to determine the extended total for Period 3 (EF);
- The extended totals AB, CD, and EF will be aggregated to determine the total Evaluated Bid Price.

C. MERIT/PRICE CALCULATION

MERIT: Bidder's Overall Total Point Score / Total Point Available X 30	
PRICE: Lowest Bid Evaluation Total Cost / Bidder's Evaluated Total Cost X 70	
Combined Total Of Technical Merit And Price	