



RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Travaux publics et Services gouvernementaux
Canada
1550 d'Estimauville
Voir aux présentes - See herein
Québec
Québec
G1J 0C7
FAX pour soumissions: (418) 648-2209

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 Numerical modeling of a novel recoi	
Solicitation No. - N° de l'invitation W7701-186548/A	Date 2017-11-20
Client Reference No. - N° de référence du client W7701-186548	
GETS Reference No. - N° de référence de SEAG PW-\$QCL-042-17264	
File No. - N° de dossier QCW-7-40027 (042)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2017-12-12	Time Zone Fuseau horaire Heure Normale du l'Est HNE
F.O.B. - F.A.B. Specified Herein - Précisé dans les présentes Plant-Usine: <input type="checkbox"/> Destination: <input type="checkbox"/> Other-Autre: <input checked="" type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Hamel, Jonathan	Buyer Id - Id de l'acheteur mta255
Telephone No. - N° de téléphone (418) 649-2806 ()	FAX No. - N° de FAX (418) 648-2209
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: MINISTERE DE LA DEFENSE NATIONALE BATISSE 53 2459 ROUTE DE LA BRAVOURE QUEBEC Québec G3J1X5 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

Travaux publics et Services gouvernementaux Canada
Place Bonaventure,
800 rue de la Gauchetière Ouest
Voir aux présentes - See herein
Montréal
Québec
H5A 1L6

Delivery Required - Livraison exigée Voir doc.	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

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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 Security, Financial and Other Requirements: includes specific requirements that must be addressed by Bidders; and
- Part 7 Resulting Contract Clauses: includes the clauses and conditions that will apply to any resulting contract.

The following Annexes:

Annex A Statement of Work
Annex B Basis of Payment
Annex C Contractor Disclosure of Foreground Information

The following Attachments:

Attachment 1 to Part 4 – Mandatory and point rated technical evaluation criteria

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1.2 Summary

Project Title

NUMERICAL MODELING OF A NOVEL RECOIL TEST BENCH

Description

Public Works and Government Services Canada (PWGSC) on behalf of Defense Research and Development Canada (DRDC) located in Valcartier, (Quebec), is seeking bids to qualify a contractor with an advanced expertise in modelling, simulation and mechanical-numerical analysis, using mainly Adams software.

Period of Contract

From date of award until March 15 2019

Intellectual Property

Canada has determined that any intellectual property rights arising from the performance of the Work under the resulting contract will belong to the Canada

Security Requirements

There are no security requirements associated with this requirement.

Trade Agreements

This requirement is subject to the provisions of the Canadian Free Trade Agreement (CFTA)

Canadian Content

The requirement is limited to Canadian goods and Canadian services.

Federal Contractors Program for Employment Equity

"The Federal Contractors Program (FCP) for employment equity applies to this procurement; see Part 5 – Certifications.

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 fifteen (15) working days from receipt of the results of the bid solicitation process. The debriefing may be in writing, by telephone or in person.

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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/policyand-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 (2016-04-04) 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

2.1.1 SACC Manual clauses

A7035T **(2007-05-25)**, List of proposed sub-contractors

2.2 Submission of Bids

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

**Public Works and Government Services Canada
Quebec Region, Place Bonaventure, 1st Floor
800 de la Gauchetière Street West
Suite 1110 Montreal (QC), H5A 1L6**

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 with FPS, 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.R11, 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 FPS 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.

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, preferably via email, at jonathan.hamel@tpsgc-pwgsc.gc.ca, no later than eight (8) 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 Quebec.

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 Basis for Canada's Ownership of Intellectual Property

Defense Research and Development for Canada (DRDC) 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*:

2. Where statutes, regulations or prior obligations of the Crown to a third party or parties preclude Contractor ownership of the Foreground IP.

PART 3 - BID PREPARATION INSTRUCTIONS

3.1 Bid Preparation Instructions

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

Section I: Technical Bid (3 hard copies and 1 soft copies on CD, DVD)

Section II: Financial Bid (1 hard copy)

Section III: Certifications (1 hard copy)

Section IV: Additional Information (1 hard copy)

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft 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 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](http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html>). 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.

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.

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.

Section II: Financial Bid

3.1.1 Bidders must submit their financial bid in accordance with the following:

- (a) A firm, all-inclusive lot price in accordance with Annex B- Basis of Payment.
- (b) Prices must be in Canadian dollars, Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

3.1.2 Price breakdown

Bidders are requested to detail the following elements for the performance of each task, milestone or phase of the Work, as applicable:

- (a) Labour: For each individual and (or) labour category to be assigned to the Work, indicate:
 - i) the hourly rate, inclusive of overhead and profit; and ii) the estimated number of hours.
- (b) Equipment: Specify each item required to complete the Work and provide the pricing basis of each one, Canadian customs duty and excise taxes included, as applicable.
- (c) Materials and Supplies: Identify each category of materials and supplies required to complete the Work and provide the pricing basis.
- (d) Travel and Living Expenses: Indicate the number of trips and the number of days for each trip, the cost, destination and purpose of each journey, together with the basis of these costs which must not exceed the limits of the National Joint Council (NJC). With respect to the NJC's Directive, only the meal, private vehicle and incidental allowances specified in Appendices B, C and D of the Directive <http://www.njc-cnm.gc.ca/directive/travelvoyage/index-eng.php>, and the other provisions of the Directive referring to "travellers", rather than those referring to "employees", are applicable. The Treasury Board Secretariat's Special Travel Authorities, http://www.tbssct.gc.ca/pubs_pol/hrpubs/tbm_113/statb-eng.asp, also apply.
- (e) Subcontracts: Identify any proposed subcontractor and provide for each one the same price breakdown information as contained in this article.
- (f) Other Direct Charges: Identify any other direct charges anticipated, such as long distance communications and rentals, and provide the pricing basis.
- (g) Applicable Taxes: Identify any Applicable Taxes separately.

Section III: Certifications

Bidders must submit the certifications required under Part 5.

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Section IV: Additional Information

- Bidders must provide a list of names, or other related information as needed, pursuant to section 01 of Standard Instructions 2003.
- For services requirements, Bidders in receipt of a pension or a lump sum payment must provide the required information as detailed in article 3 of Part 2 of the bid solicitation.
- Canada requests that bidders provide the following information:

Administrative representant :

Name : _____

Téléphone : _____

Facsimile : _____

E-mail : _____

Technical representant :

Name : _____

Téléphone : _____

Facsimile : _____

E-mail : _____

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 managerial and 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 and point-rated Technical Criteria

Mandatory and Point Rated Technical Evaluation Criteria are described at **Attachment 1 to Part 4: Mandatory and Point Rated Technical Evaluation Criteria**. Criteria not addressed will be given a score of zero.

4.1.1.2 Bidder Experience

Except where expressly provided otherwise, the experience described in the bid must be the experience of one or more of the following:

1. The Bidder itself (which includes the experience of any companies that formed the Bidder by way of a merger but does not include any experience acquired through a purchase of assets or an assignment of contract); or
2. The Bidder's affiliates (i.e. parent, subsidiary or sister corporations), provided the Bidder identifies and demonstrates the transfer of know-how, the use of toolsets and the use of key personnel from the affiliate for the applicable criterion; or
3. The Bidder's subcontractors, provided the Bidder includes a copy of the teaming agreements and identifies the roles and responsibilities of all parties under the agreement and how their work will be integrated.

The experience of the Bidder's suppliers will not be considered.

4.1.2 Financial Evaluation

4.1.2.1 Mandatory Financial Criteria

The Bidder must submit a firm, all-inclusive lot price for the Work described at Annex "A" – Statement of work.

Bids which fail to meet the mandatory financial criteria will be declared nonresponsive.

4.1.2.2 Evaluation of Price

The price of the bid will be evaluated in Canadian dollars, the Applicable Taxes excluded, FOB destination, Canadian customs duties and excise taxes included.

4.2 Basis of Selection

Highest Combined Rating of Technical Merit (i.e all point-rated technical criteria stated at Attachment 1 to Part 4) and Price

- 4.2.1 To be declared responsive, a bid must:
- (a) comply with all the requirements of the bid solicitation;
 - (b) meet all mandatory evaluation criteria;
 - (c) obtain the required minimum of 10 points in each of the point rated technical criteria
 - (d) obtain the required minimum of 20 points (out of 60 points) all divisions of the point-rated evaluation criteria

The rating is performed on a scale of 60 points.

- 4.2.2 Bids not meeting (a) or (b) or (c) or (d) will be declared non-responsive;
- 4.2.3 The selection will be based on the highest combined rating of the Technical Merit (point-rated evaluation criteria) and price. The ratio will be 20% for the point-rated evaluation criteria and 80% for the price.
- 4.2.4 To establish the Technical Merit score, the overall point-rated evaluation criteria 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 20%.
- 4.2.5 To establish the pricing score, each responsive bid will be prorated against the lowest evaluated price and the ratio of 80%.
- 4.2.6 For each responsive bid, the Technical Merit score and the pricing score will be added to determine its combined rating.
- 4.2.7 Neither the responsive bid obtaining the highest Technical Merit score nor, the one with the lowest evaluated price, will necessarily be accepted. The responsive bid with the highest combined rating of the point-rated evaluation criteria and price will be recommended for award of contract.
- 4.2.8 In the event that more than one responsive bid obtain the same combined rating of the Technical and price, the bid which obtained the highest rating for the Technical Merit will be recommended for award of a contract.
- 4.2.9 In the event that more than one responsive bid obtain the same combined rating of the Technical Merit and price, and the same rating for the technical merit, the bid which obtains the highest rating for the "P1" criteria will be recommended for award of a contract.

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The table below illustrates an example where all three bids are responsive and the selection of the contractor is determined by a 20/80 ratio of technical merit and price, respectively. The total available points equal 135 and the lowest evaluated price is \$45,000 (45).

Basis of Selection - Highest Combined Rating Technical Merit (20%) and Price (80%)

	Bidder		
	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	$115/135 \times 20 = 17.04$	$89/135 \times 20 = 13.18$	$92/135 \times 20 = 13.63$
Pricing Score	$45/55 \times 80 = 65.45$	$45/50 \times 80 = 72$	$45/45 \times 80 = 80$
Combined Rating	82.49	85.18	93.63
Overall Rating	3e	2e	1e

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 *Ineligibility and Suspension Policy* (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide with its bid the required documentation, as applicable, to be given further consideration in the procurement process.

5.2 Certifications Precedent to Contract Award

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 *Ineligibility and Suspension Policy* (<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/canada-esdc-labour-s) 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.

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5.2.3 Canadian Content Certification

This procurement is limited to Canadian goods and Canadian services.

The Bidder certifies that:

() a minimum of 80 percent of the total bid price consist of Canadian goods and Canadian services as defined in paragraph 5 of clause A3050T.

5.2.3.1 *SACC Manual* clause A3050T **(2014-11-27)** Canadian Content Definition

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PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Security requirements

There are no security requirements associated with this requirement.

6.2 Financial Capability

SACC Manual clause A9033T (**2012-07-16**), Financial Capability

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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 in Annex A and the Contractor's technical and Managerial Bid entitled _____, dated **(will be inserted at contract award)**.

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-andguidelines/standard-acquisition-clauses-and-conditions-manual>) issued by Public Works and Government Services Canada.

7.2.1 General Conditions

2040 (2016-04-04), 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

K3305C **(2008-05-12)**, License to 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 *(will be inserted at contract award)*

From date of Contract award until _____.

7.5 Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Jonathan Hamel
Title: Procurement Specialist
Public Works and Government Services Canada
Acquisitions Branch
601-1550, avenue d'Estimauville
Québec (Québec) G1J 0C7
Telephone: 418-649-2806
Facsimile: 418-648-2209

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E-mail address: jonathan.hamel@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 *(will be inserted at contract award)*

The Technical Authority for the Contract is:

Name: _____
Title: _____
Organization: _____
Address: _____

Telephone: ____ - ____ - _____
Facsimile: ____ - ____ - _____
E-mail address: _____

The Technical 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 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.

7.5.3 Contractor's Representative

Administrative representative :

Name : _____
Telephone : _____
Facsimile : _____
E-mail : _____

Technical representative :

Name : _____
Telephone : _____
Facsimile : _____
E-mail : _____

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 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 the Contract for a cost of \$ _____ **(the amount will be inserted at contract award)**. 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 approved, in writing, by the Contracting Authority before their incorporation into the Work.

7.7.2 Method of payment

7.7.2.1 Milestone Payments

Canada will make milestone payments in accordance with the Schedule of Milestones detailed in Annex B - Basis of Payment and the payment provisions of the Contract if:

- (a) an accurate and complete claim for payment using form PWGSC-TPSGC 1111 (<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>) and any other document required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- (b) all the certificates appearing on form PWGSC-TPSGC 1111 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.

7.7.2.2 Schedule of Milestones

The schedule of milestones for which payments will be made in accordance with the Contract is detailed in Annex B.

7.8 SACC Manual Clauses

SACC Manual Clause **A9117C (2007-11-30)**, T1204 - Direct Request by Customer Department

7.9 Invoicing Instructions - Progress Claim - Firm Price

1. The Contractor must submit a claim for progress payment using form PWGSC-TPSGC 1111 Claim for Progress Payment (<https://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/1111.pdf>). Each claim must show:
 - (a) all information required on form PWGSC-TPSGC 1111;
 - (b) all applicable information detailed under the section entitled "Invoice Submission" of the general conditions;
 - (c) the description and value of the milestone claimed as detailed in the Contract.

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2. 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.
3. The Contractor must prepare and certify one (1) original and two (2) copies of the claim on form PWGSC-TPSGC 1111, and forward it to the Contracting Authority for certification.

**ATTN: Procurement support clerk - Claim
Public Works and Government Services Canada
601-1550 D'Estimauville
Québec, QC.
G1J 0C7**

The Contracting Authority will then forward the original and two (2) copies of the claim to the Technical Authority for appropriate certification after inspection and acceptance of the Work takes place, and onward submission to the Payment Office for the remaining certification and payment.

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

7.10 Certifications and Additional Information

7.10.1 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.

7.10.2 SACC Manual Clauses

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

7.11 Applicable Laws

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in _____ (To be inserted at contract award).

7.12 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 condition 2040 (2016-04-04), Research & Development (c)
- (c) Annex A, Statement of Work;
- (d) Annex B, Basis of Payment;
- (e) Annex C, Contractor Disclosure of Foreground Information

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- (f) 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)*).

7.13 Defence Contract

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

7.14 Foreign Nationals (Canadian Contractor)

SACC Manual clause [A2001C](#) (2012-07-16) Foreign Nationals (Foreign Contractor)

7.15 Insurance Requirements

SACC Manual clause [G1005C](#) (2016-01-28) Insurance – No specific requirement

ATTACHMENT 1 TO PART 4

MANDATORY AND POINT RATED TECHNICAL EVALUATION CRITERIA

1. MANDATORY EVALUATION CRITERIA

It is imperative that the bidder meets each of these criteria to demonstrate compliance with the requirements.

a. **ANY EXPERIENCE WHICH IS NOT SUPPORTED BY COMPLEMENTARY DOCUMENTATION TO SPECIFY WHERE, WHEN AND HOW IT HAS BEEN ACQUIRED WILL RESULT IN THE REJECTION OF THE RELATED EXPERIENCE FOR EVALUATION PURPOSES.**

b. All examples of work experience must be strictly related to the subject of this task. Study and training periods will not be considered, unless otherwise indicated.

c. The bidders must prove their work experience by describing past projects and/or jobs, including those completed or in progress.

d. References must be provided for each project or work experience.

It is suggested that references should be presented in the following format:

- a. Project description;
- b. Venue;
- c. Starting and completion dates;
- d. Value;
- e. Coordinates of the client (name, organization, telephone number, point of contact)

	CRITERIA	Cross-Reference to bid (indicate page #)
M1	At least three (3) years of experience on modelling robotic systems provided with five or more degree-of-freedom	
M2	At least three (3) years of experience on multi-objective optimization ¹ applied to robotic systems provided with five or more degree-of-freedom	
M3	At least one (1) year of experience on using the software MSC Adams	
M4	At least three (3) years of experience on using the CAD software Solid Edge	

¹It is understood in this request for proposal that « *multi-objective optimization* » is the simultaneous optimization of several objectives of the same problem.

2. POINT-RATED EVALUATION CRITERIA

It is imperative that the bidder provides a hard copy of all publications necessary to demonstrate compliance with the requirements. In addition, the bidder must provide the following information:

- a. Name of the editor
- b. Date of publication;

The author of the publication must be the bidder itself or an affiliate member of the bidder at the closing date and time of the request for proposal.

POINT-RATED EVALUATION CRITERIA		Minimum	Maximum
P1	Publication of peer-reviewed scientific papers in international journals ² , in which main field is the modelling of robotic systems provided with five or more degree-of-freedom	10	30
P2	Publication of peer-reviewed scientific papers in international journals ² , in which main field is the multi-objective optimization applied to robotic systems provided with five or more degree-of-freedom	10	30
TOTAL		20	60

²It is understood in this request for proposal that "*international journal*" is to be defined as per the following criteria:

- The journal must cover one or more fields of science of international interest;
- The authors who published in the journal are coming from diverse nationalities;
- The journal is distributed internationally (reflecting the international diversity of the readers).

P1: Publication of peer-reviewed scientific papers in international journals², in which main field is the modelling of robotic systems provided with five or more degree-of-freedom.

0 publication: 0 point

1 to 2 publications: 10 points

3 to 4 publications: 20 points

5 or more publications: 30 points

P2: Publication of peer-reviewed scientific papers in international journals², in which main field is the multi-objective optimization applied to robotic systems provided with five or more degree-of-freedom.

0 publication: 0 point

1 to 2 publications: 10 points

3 to 4 publications: 20 points

5 or more publications: 30 points

ANNEX A

STATEMENT OF WORK

1. TITLE

NUMERICAL MODELING OF A NOVEL RECOIL TEST BENCH

2. BACKGROUND

Defence Research and Development Canada (DRDC) is building experimental and numerical capability to evaluate the effect of weapon recoil on the shooter's and the ancillaries' performance. This project consists on the development and validation of a numerical model used for weapon recoil evaluation, in collaboration with allied nations. Adams from MSC Software Corporation will be the software to be used for numerical modeling, since it was evaluated to be the most suitable tool for multibody dynamics simulation and it is already available within allied organizations.

3. ACRONYMS

CAD Computer-Aided Drawing
DRDC Defence Research and Development Canada
SOW Statement of Work
TA Technical Authority

4. APPLICABLE DOCUMENTS & REFERENCES

None.

5. TASKS

5.1 Development of the numerical model of a recoil test bench

The first phase of this project aims to develop a numerical model of a recoil test bench. This model must be done using MSC Adams and incorporate all mechanical components of a novel recoil test bench fabricated by CADEX Inc., the Mechanical Shooter V2.

5.1.1 The Contractor must study the Computer-Aided Drawing (CAD) of the existing Mechanical Shooter V2 in order to fully understand the mechanical interactions between the various components and determine how to model them. During this phase of the project, the Contractor must visit DRDC to fully understand the Mechanical Shooter V2 functioning.

5.1.2 The Contractor must develop a numerical model of the Mechanical Shooter V2 using MSC Adams software. The numerical model must include all the components of the Mechanical Shooter V2 and must

be capable of generating relevant parameters such as the recoil force, acceleration and displacement of the Mechanical Shooter V2 and the weapon being tested.

5.2 Validation of the numerical model of the Mechanical Shooter V2

The second phase of the project aims to validate the numerical model developed during phase 1, using experimental data. During this phase, the results of the simulations will be compared with certain experimental results (displacement of the Mechanical Shooter V2 and the weapon as a function of time), which will be provided by DRDC.

5.2.1 The Contractor must perform at least 3 (three) simulations, with the numerical model, and must calculate the recoil force and displacement of the Mechanical Shooter V2 and the weapon as a function of time. The Contractor must validate these results with the experimental data to be provided by DRDC.

5.3 Evaluation of the mechanical components of the Mechanical Shooter V2

In the third phase, the Contractor must use the numerical model validated during phase 2 to evaluate the characteristics of the mechanical components (springs and dampers) of the Mechanical Shooter V2 that better represent the human dynamics during a firing event. In order to support this task, the experimental measurements (high-speed video) on the human during firing events will be provided by DRDC.

5.3.1 Based on experimental data (high-speed video and MSEExcel database) to be provided by DRDC, the Contractor must evaluate what should be the characteristics of the all springs and dampers used in the Mechanical Shooter V2 to provide this test bench with the same dynamics of a human shooter during a firing event.

5.4 Numerical modeling of different weapon systems

During the fourth phase, the Contractor must model two different assault rifles to be used in MSC Adams.

5.4.1 The Contractor must develop numerical model of two existing assault rifles with the following characteristics: (1) piston action and (2) bullpup design.

5.5 Parametric study of weapon components affecting recoil

5.5.1 In the fifth phase, the Contractor must execute parametric study to evaluate the effect of different weapon components on the recoil force and weapon dynamics. The weapon components to be considered are: the barrel length, the bolt weigh, the spring buffer strength, charging action (piston versus direct impingement type) and the weapon design (bullpup and conventional).

6. DELIVERABLES

Number	Task Reference	Description of the Deliverables	Quantity and Format
6.1	5.1.2	The new numerical model version of the Mechanical Shooter V2	1 (format MSC Adams on DVD)
	5.1.2	Report (in English) explaining the use of the numerical model of the Mechanical Shooter V2 using MSC Adams	1 (format MSWord on DVD)
6.2	5.2.1	Simulations and validation of Mechanical Shooter V2 model	1 (format MSC Adams on DVD)
	5.2.1	Report (in English) of numerical simulation and validation including the graphs and interpretations of the results and propose eventual improvements to the existing Mechanical Shooter V2.	1 (format MSWord sur DVD)
6.3	5.3.1	Simulations to evaluate the characteristics of the all springs and dampers to be used in the Mechanical Shooter V2	1 (format MSC Adams on DVD)
	5.3.1	Report (in English) presenting the characteristics of the springs and dampers to be used in the Mechanical Shooter V2. The report must include the graphs and interpretations of the results and propose eventual improvements to the existing Mechanical Shooter V2.	1 (format MSWord sur DVD)
6.4	5.4.1	Numerical model of two assault rifles	1 (format MSC Adams on DVD)
6.5	5.5.1	Parametric study of weapon components affecting recoil	1 (format MSC Adams on DVD)
	5.5.1	Report (in English) presenting the results obtained on the parametric study of weapon components affecting recoil. The report must include the graphs and interpretations of the results and propose eventual improvement to the existing Mechanical Shooter V2.	1 (format MSWord sur DVD)

7. DATE OF DELIVERY

Refer to Annex B – Basis of payment

8. LANGUAGE OF WORK

The working languages for this project are French or English. The report (deliverables) must be in English.

9. LOCATION OF WORK

The work must be performed on Contractor site.

10. TRAVEL

The Contractor is required to travel to the following location for the familiarization with the Mechanical Shooter CAD drawing :

Location: Defence Research and Development Canada – Valcartier Research Centre

Address: 2459 de la Bravoure Road, Quebec, G3J 1X5

Duration: one day

Frequency: one time

11. MEETINGS

Monthly meetings will be held by teleconference or on the Contractor's site.

12. GOVERNMENT SUPPLIED MATERIAL (GSM)

None.

13. GOVERNMENT FURNISHED EQUIPMENT (GFE)

GFE 1: Drawing of the Mechanical Shooter V2

Quantity: 1

Format: CAD on DVD

GFE 2: Experimental data

Quantity: 1

Format: MSExcel on DVD

GFE 3: Experimental data

Quantity: 1

Format: High-speed video on DVD

14. SPECIAL CONSIDERATIONS

The numerical model must be compatible with MSC Adams 2013.

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ANNEX B

BASIS OF PAYMENT

SCHEDULE OF MILESTONES

The schedule of milestones for which payments will be made in accordance with the Contract is as follows:

Milestone No.	Deliverable	Firm Amount	Delivery Date
1	6.1	_____ \$	Within 6 weeks after the award of the Contract.
2	6.2	_____ \$	Within 16 weeks after the award of the Contract.
3	6.3	_____ \$	Within 26 weeks after the award of the Contract.
4	6.4	_____ \$	Within 34 weeks after the award of the Contract.
5	6.5	_____ \$	Before March 15 th 2019

Total Firm Price CAN \$ _____
(Taxes Extra, if applicable)

ANNEX C

CONTRACTOR DISCLOSURE OF FOREGROUND INFORMATION

Please refer to **Article 1 - Interpretation of 2040 General Conditions** for the definition of Foreground Information to determine what information must be disclosed.

The Contractor must provide the following information:

1. Contract No.:
2. What is the descriptive title of the FIP (Foreground Intellectual Property)?
3. Abbreviated description of the FIP and, if applicable, of the different systems and sub-systems.
4. What is or was the objective of the project?
5. Explain how the FIP meets the objective of the project (for example: the advantage of the new solution, what problem did the FIP resolve or what benefits did the FIP deliver).
6. Under which category (ies) would you best describe the FIP and why: Patents, Inventions, Trade Secrets, Copyright, Industrial Designs, Rights in Integrated Circuit Topography, Know-how, Other?
7. Describe the features or aspects of the FIP that are novel, useful and not obvious.
8. Has the FIP been tested or demonstrated? If yes, please summarise the results.
9. Has any publication or disclosure to others been made? If so, to whom, when, where and how?
10. Provide names and addresses of the inventors.
11. Provide an explicit and detailed description of the FIP developed during the contract (Refer to pertinent section of the technical report, if necessary).

Please specify name and position of person approving / authorizing this disclosure. This person is to sign and date the disclosure.

Signature Date

Name Title

(Internal DRDC Valcartier)

Signature Date

Name Title (Technical authority)