



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Bid Receiving Public Works and Government
Services Canada/Réception des soumissions
Travaux publics et Services gouvernementaux
Canada

Pacific Region
401 - 1230 Government Street
Victoria, B.C.
V8W 3X4
Bid Fax: (250) 363-3344

**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 ngVLA Antenna Mold Design	
Solicitation No. - N° de l'invitation 31034-191084/A	Date 2019-09-23
Client Reference No. - N° de référence du client 31034-191084	
GETS Reference No. - N° de référence de SEAG PW-\$VIC-251-7821	
File No. - N° de dossier VIC-9-42104 (251)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2019-10-09	Time Zone Fuseau horaire Pacific Daylight Saving Time PDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Fletcher, Erin	Buyer Id - Id de l'acheteur vic251
Telephone No. - N° de téléphone (250) 415-6020 ()	FAX No. - N° de FAX () -
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: NATIONAL RESEARCH COUNCIL CANADA See herein	

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 - Pacific
Region
401 - 1230 Government Street
Victoria, B. C.
V8W 3X4

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

TABLE OF CONTENTS

PART 1 - GENERAL INFORMATION	2
1.1 INTRODUCTION.....	2
1.2 SUMMARY	2
1.3 DEBRIEFINGS.....	3
PART 2 - BIDDER INSTRUCTIONS	3
2.1 STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS.....	3
2.2 SUBMISSION OF BIDS.....	3
2.3 FORMER PUBLIC SERVANT.....	4
2.4 ENQUIRIES - BID SOLICITATION.....	5
2.5 APPLICABLE LAWS.....	5
2.6 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	7
4.1 EVALUATION PROCEDURES.....	7
4.2 BASIS OF SELECTION.....	8
PART 5 - CERTIFICATIONS AND ADDITIONAL INFORMATION	8
5.1 CERTIFICATIONS REQUIRED WITH THE BID.....	8
5.2 CERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION	8
PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS.....	9
6.1 INSURANCE - NO SPECIFIC REQUIREMENT.....	9
PART 7 - RESULTING CONTRACT CLAUSES	10
7.1 STATEMENT OF WORK.....	10
7.2 STANDARD CLAUSES AND CONDITIONS.....	11
7.3 SECURITY REQUIREMENTS	12
7.4 TERM OF CONTRACT	12
7.5 AUTHORITIES	12
7.6 PROACTIVE DISCLOSURE OF CONTRACTS WITH FORMER PUBLIC SERVANTS	13
7.7 PAYMENT	13
7.8 INVOICING INSTRUCTIONS	16
7.9 CERTIFICATIONS AND ADDITIONAL INFORMATION.....	16
7.10 APPLICABLE LAWS.....	17
7.11 PRIORITY OF DOCUMENTS	17
7.12 INSURANCE - NO SPECIFIC REQUIREMENT.....	17
ANNEX "A" - STATEMENT OF WORK.....	18
ANNEX "B" - BASIS OF PAYMENT / SCHEDULE OF MILESTONES.....	19
ANNEX "C" - TASK AUTHORIZATION FORM PWGSC-TPSGC 572	20
ANNEX "D" - MANDATORY TECHNICAL EVALUATION CRITERIA.....	21
ANNEX "E" TO PART 3 OF THE BID SOLICITATION - ELECTRONIC PAYMENT INSTRUMENTS.....	23

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 Annexes include the Statement of Work, the Basis of Payment, the Task Authorization Form 572, the Mandatory Technical Evaluation Criteria, the Electronic Payment Instruments and any other annexes.

1.2 Summary

The Next Generation Very Large Array (ngVLA) is a project of the National Radio Astronomy Observatory (NRAO) to design and build an astronomical observatory that will operate at centimetre wavelengths. As a contribution to the ngVLA, the National Research Council of Canada (NRC) through its Herzberg Astronomy and Astrophysics (HAA) Astronomy Technology Program is undertaking to design the 6m antennas.

The current concept design phase of this study is to develop a design to sufficient level to determine if it is likely to meet the ngVLA requirements. A critical aspect is the surface accuracy requirement, operation at the highest frequencies requires the surface to be accurate to the design surface to within 160 microns RMS under operating conditions. Sources of distortion include wind, thermal, gravity and manufacturing errors. Manufacturing errors for a moulded composite part are governed by the mold accuracy and the Process Induced Distortions (PID). An estimate of the expected PID errors is a critical input to the overall error budget.

This requirement is for the mold design. The behaviour of the mold is a key factor in the PID error analysis and therefore a conceptual mold design is required as input to the study. The PID study may provide feedback to the mold design and so the mold design statement of work also includes a provision to iterate the mold design if required.

All of the deliverables for the firm requirement must be received by December 31, 2019. Additional design work, if required, to be completed using the Task Authorization process outlined in the contract.

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

The requirement is subject to a preference for Canadian services.

Solicitation No. - N° de l'invitation
31034-191084/A
Client Ref. No. - N° de réf. du client
31034-191084

Amd. No. - N° de la modif.
File No. - N° du dossier
VIC-9-42104

Buyer ID - Id de l'acheteur
VIC 251
CCC No./N° CCC - FMS No./N° VME

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: 90 days

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 in the bid solicitation.

Address:

Bid Receiving Public Works and Government Services Canada
Pacific Region
401-1230 Government Street
Victoria, BC
V8W 3X4

e-post Connect email:

TPSGC.RPReceptiondessaoumissions-PRBidReceiving.PWGSC@tpsgc-pwgsc.gc.ca

Note: Bids will 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.

Bid Facsimile number: (250) 363-3344

2.3 Former Public Servant

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

Definitions

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

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

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

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

Former Public Servant in Receipt of a Pension

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

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

- a. name of former public servant;

- b. date of termination of employment or retirement from the Public Service.

By providing this information, Bidders agree that the successful Bidder's status, with respect to being a former public servant in receipt of a pension, will be reported on departmental websites as part of the published proactive disclosure reports in accordance with [Contracting Policy Notice: 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 no later than 7 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 British Columbia.

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

The National Research Council 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](#):

- statutes, regulations or prior obligations of Canada to a third party or parties preclude Contractor ownership of the Intellectual Property Rights in Foreground Information.

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 (one) hard copy)
Section II: Financial Bid (1 (one) hard copy)
Section III: Certifications (1 (one) hard copy)

If the Bidder is simultaneously providing copies of its bid using multiple acceptable delivery methods, and if there is a discrepancy between the wording of any of these copies and the electronic copy provided through epost Connect service, the wording of the electronic copy provided through epost Connect service will have priority over the wording of the other copies.

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>). 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 Basis of Payment in Annex "B".

3.1.2 Electronic Payment of Invoices – Bid

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

If Annex "E" 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 Exchange Rate Fluctuation

[C3011T](#) (2013-11-06), Exchange Rate Fluctuation

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

- (c) The evaluation team will determine first if there are two or more bids with a valid Canadian Content certification. In that event, the evaluation process will be limited to the bids with the certification; otherwise, all bids will be evaluated. If some of the bids with a valid certification are declared non-responsive, or are withdrawn, and less than two responsive bids with a valid certification remain, the evaluation will continue among those bids with a valid certification. If all bids with a valid certification are subsequently declared non-responsive, or are withdrawn, then all the other bids received will be evaluated.

4.1.1 Technical Evaluation

4.1.1.1. Mandatory Technical Criteria

See Annex "D".

4.1.2 Financial Evaluation

4.1.2.1 Mandatory Financial Criteria

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

4.2 Basis of Selection

4.2.1 Mandatory Technical Criteria

A bid must comply with the requirements of the bid solicitation and meet all mandatory technical evaluation criteria to be declared responsive. The responsive bid with the lowest evaluated price will be recommended for award of a contract.

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

This procurement is conditionally limited to Canadian services.

Subject to the evaluation procedures contained in the bid solicitation, bidders acknowledge that only bids with a certification that the service offered is a Canadian service, as defined in clause [A3050T](#), may be considered.

Failure to provide this certification completed with the bid will result in the service offered being treated as a non-Canadian service.

The Bidder certifies that:

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

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

PART 6 - SECURITY, FINANCIAL AND OTHER REQUIREMENTS

6.1 Insurance – No Specific Requirement

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

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".

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

Task Authorization Process:

1. The Technical Authority will provide the Contractor with a description of the task using the Task Authorization" form specified in Annex C.
2. 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.
3. The Contractor must provide the Technical Authority, within 5 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.
4. The Contractor must not commence work until a TA authorized by the Technical 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 Technical Authority may authorize individual task authorizations up to a limit of **\$25,000**, Applicable Taxes included, inclusive of any revisions.

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

7.1.2.3 Canada's Obligation - Portion of the Work - Task Authorizations

Canada's obligation with respect to the portion of the Work under the Contract that is performed through task authorizations is limited to the total amount of the actual tasks performed by the Contractor.

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.

Solicitation No. - N° de l'invitation
31034-191084/A
Client Ref. No. - N° de réf. du client
31034-191084

Amd. No. - N° de la modif.
File No. - N° du dossier
VIC-9-42104

Buyer ID - Id de l'acheteur
VIC 251
CCC No./N° CCC - FMS No./N° VME

The Contractor must provide this data in accordance with the reporting requirements detailed below. 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 semi-annual basis to the Contracting Authority.

The semi-annual reporting periods are defined as follows:

October 1 to March 31
April 1 – September 30

The data must be submitted to the Contracting Authority no later than 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 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.

7.2 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.

7.2.1 General Conditions

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

7.2.2 Supplemental General Conditions

7.2.2.1 *SACC Manual* Clause K3410C (2015-02-25), Canada to Own Intellectual Property Rights in Foreground Information, apply to and form part of the Contract.

7.2.2.2 Basis for Canada's Ownership of Intellectual Property

Solicitation No. - N° de l'invitation
31034-191084/A
Client Ref. No. - N° de réf. du client
31034-191084

Amd. No. - N° de la modif.
File No. - N° du dossier
VIC-9-42104

Buyer ID - Id de l'acheteur
VIC 251
CCC No./N° CCC - FMS No./N° VME

The National Research Council 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](#):

- statutes, regulations or prior obligations of Canada to a third party or parties preclude Contractor ownership of the 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 award to October 31, 2020, inclusive.

7.4.2 Delivery Date

All the deliverables for the firm requirement must be received on or before December 31, 2019.

7.5 Authorities

7.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Erin Fletcher
Title: Supply Specialist
Public Works and Government Services Canada
Acquisitions Branch
Directorate: Pacific Region
Address: 401-1230 Government St. Victoria, BC V8W 3X4

Telephone: 250-415-6020
E-mail address: erin.fletcher@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 provided at Contract award)*

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

Bidder to complete:

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

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 Basis of Payment

7.7.1.1 Basis of Payment – Contract

For the Firm Requirement described in Annex “A” Statement of Work:

In consideration of the Contractor satisfactorily completing its obligations under the Contract, the Contractor will be paid a firm price for a cost of \$ _____ (*amount inserted at Contract award*). Customs duties are included and Applicable Taxes are extra.

For the firm price portion of the Work only, 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.

7.7.1.1.1 Limitation of Price

C6000C (2017-08-17), Limitation of Price

7.7.1.2 Basis of Payment – Task Authorizations

One of the following types of basis of payment will form part of the approved Task Authorization (TA). The task price must be determined in accordance with the Basis of Payment as specified in the authorized TA.

- a) Firm Unit Price(s) or Firm Lot Price TA

In consideration of the Contractor satisfactorily completing all of its obligations under the authorized Task Authorization (TA), the Contractor will be paid _____, (*insert* "the firm lot price of \$ _____" *OR* "the firm unit price(s)" (*insert* "in accordance with the Basis of Payment in Annex ____" *OR* "as detailed in the Basis of Payment below"), as specified in the authorized TA. Customs duties are _____ (*insert* "included", "excluded" *OR* "subject to exemption") and Applicable Taxes are extra.

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

b) TA 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 _____ (*insert* "in Annex ____" *OR* "detailed below"), 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 _____ (*insert* "included", "excluded" *OR* "subject to exemption") and Applicable Taxes are extra.

No increase in the liability of Canada or in the price of the Work specified in the authorized TA resulting from any design changes, modifications, or interpretations of the Work will be authorized or paid to the Contractor unless these design changes, modifications or interpretations have been authorized, in writing, by the Contracting Authority before their incorporation into the Work.

7.7.1.2.1 Limitation of Expenditure - Cumulative Total of all Task Authorizations

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 _____ (*insert* "included", "excluded" or "subject to exemption, as applicable") and Applicable Taxes are extra.
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.
3. The Contractor must notify the Contracting Authority in writing as to the adequacy of this sum:
 - a. when it is 75 percent committed, or
 - b. four (4) months before the contract expiry date, or
 - c. 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.
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.

7.7.3 Method of Payment – Contract

7.7.3.1 Milestone Payments

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

- a. an accurate and complete claim for payment using [PWGSC-TPSGC 1111](#), Claim for Progress Payment, 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.

7.7.3.2 Schedule of Milestones

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

7.7.4 Method of Payment – Task Authorizations

Payments will be made not more frequently than once per month.

Depending on the method of payment specified in the applicable TA, one of the following method of payment clauses will apply.

7.7.4.1 Single Payment

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

- a) an accurate and complete invoice and any other documents required by the Contract 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.

7.7.4.2 Milestone Payments (For a Firm Price TA)

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

- a) an accurate and complete invoice, and any other documents required by the Contract have been submitted in accordance with the invoicing instructions provided in the Contract;
- b) all work associated with the milestone and as applicable any deliverable required has been completed and accepted by Canada.

7.7.4.3 Progress Payments (For a TA subject to a Limitation of Expenditure or a Ceiling Price)

- a) Canada will make progress payments in accordance with the payment provisions of the Task Authorization and the Contract for cost incurred in the performance of the Work up to _____ (*insert*) percent of the amount claimed and approved by Canada if:
 - i. an accurate and complete invoice and any other document required by the Contract 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 and the Task Authorization;
 - iii. the total amount for all progress payments paid by Canada does not exceed _____ (*insert*) percent of the total amount to be paid under the Task Authorization.
- b) The balance of the amount payable will be paid in accordance with the payment provisions of the Task Authorization and the Contract upon completion and delivery of all work required under the Task Authorization if the Work has been accepted by Canada and the 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 right 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.

7.7.5 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s): **(as indicated in Annex “E”)**

- 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)

7.8 Invoicing Instructions

7.8.1 Invoicing Instructions – Progress Payment Claim

1. The Contractor must submit claim for payment using form [PWGSC-TPSGC 1111](#), Claim for Progress Payment.

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.
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 a copy of the claim on form [PWGSC-TPSGC 1111](#), and forward it to NRC.InvoiceVic-FacturesVic.CNRC@nrc-cnrc.gc.ca for appropriate certification after inspection and acceptance of the Work takes place.
 4. 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.

7.10 Applicable Laws

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

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 supplemental general conditions K3410C (2015-02-25), Canada to Own Intellectual Property Rights in Foreground Information;
- (c) the general conditions 2040 (2018-06-21), General Conditions - Research & Development;
- (d) Annex A, Statement of Work;
- (e) Annex B, Basis of Payment;
- (f) the signed Task Authorizations (including all of its annexes, if any);
- (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 Insurance - No Specific Requirement

The Contractor is responsible for deciding if insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any insurance acquired or maintained by the Contractor is at its own expense and for its own benefit and protection. It does not release the Contractor from or reduce its liability under the Contract.

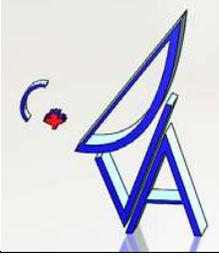
Solicitation No. - N° de l'invitation
31034-191084/A
Client Ref. No. - N° de réf. du client
31034-191084

Amd. No. - N° de la modif.
File No. - N° du dossier
VIC-9-42104

Buyer ID - Id de l'acheteur
VIC 251
CCC No./N° CCC - FMS No./N° VME

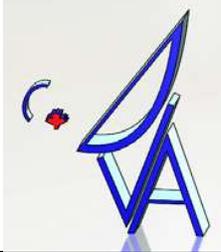
ANNEX "A" - STATEMENT OF WORK

(see attached)



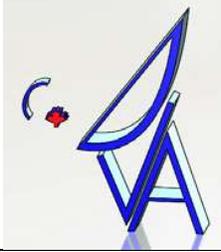
102-0000-001-SOW-000
Revision: A

[This document describes the statement of work for the primary surface mold and associated tooling for the ngVLA 6m Antenna Design project.]



LIST OF ACRONYMS AND ABBREVIATIONS

CAD	Computer Aided Design
CTE	Coefficient of Thermal Expansion
ngVLA	next generation Very Large Array
NRAO	National Radio Astronomy Observatory (USA)
NRC	National Research Council (Canada)
PID	Process Induced Distortions
RMS	Root Mean Square
SOW	Statement of Work
SRC	Single-piece Rim-supported Composite reflector

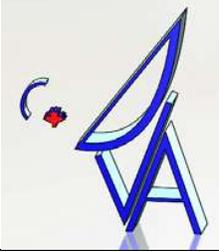


1 INTRODUCTION

The Next Generation Very Large Array (ngVLA) is a project of the National Radio Astronomy Observatory (NRAO) to design and build an astronomical observatory that will operate at centimetre wavelengths (25 to 0.26 centimetres, corresponding to a frequency range extending from 1.2 GHz to 116 GHz). The observatory will be a synthesis radio telescope comprised of approximately 214 reflector antennas each of 18 meters diameter, and 19 of 6 meters diameter operating in a phased or interferometric mode.

As a contribution to the ngVLA the National Research Council of Canada (NRC) through its Herzberg Astronomy and Astrophysics (HAA) Astronomy Technology Program is undertaking to design the 6m antennas. The design is an Offset Gregorian Feed-low Antenna based on NRC's Single-piece, Rim-supported Composite (SRC) reflector technology.

The current concept design phase of this study is to develop a design to sufficient level to determine if it is likely to meet the ngVLA requirements. A critical aspect is the surface accuracy requirement, operation at the highest frequencies requires the surface to be accurate to the design surface to within 160 microns RMS under operating conditions. Sources of distortion include wind, thermal, gravity and manufacturing errors. Manufacturing errors for a moulded composite part are governed by the mold accuracy and the Process Induced Distortions (PID). An estimate of the expected PID errors is a critical input to the overall error budget and so NRC has issued a Request for Proposal for a study of the PID errors. The behaviour of the mold is a key factor in the PID error analysis and therefore a conceptual mold design is required as input to the study. This document is the statement of work for the mold design.



2 STATEMENT OF WORK

2.1 Objective

NRC requires a mold design for the ngVLA 6m telescope project as input to the PID study. The total PID errors are a function not only of the part geometry and chemical and mechanical properties of the composite part but also of the mold configuration, material properties, and other factors such as heating or cooling systems. The mold design is required to proceed with the PID study. The PID study may provide feedback to the mold design and so the mold design statement of work also includes a provision to iterate the mold design if required.

2.2 Requirements

The mold is to have a surface shape dictated by the surface file supplied by NRC, Figure 1. The mold will be made in two pieces joined on the axis of symmetry (long axis) of the part with a bolted flange to facilitate relocating the mold if required. The mold is to be made from Invar. The NRC supplied surface file includes the outer horizontal mold flange so no additional mold flange needs to be added.

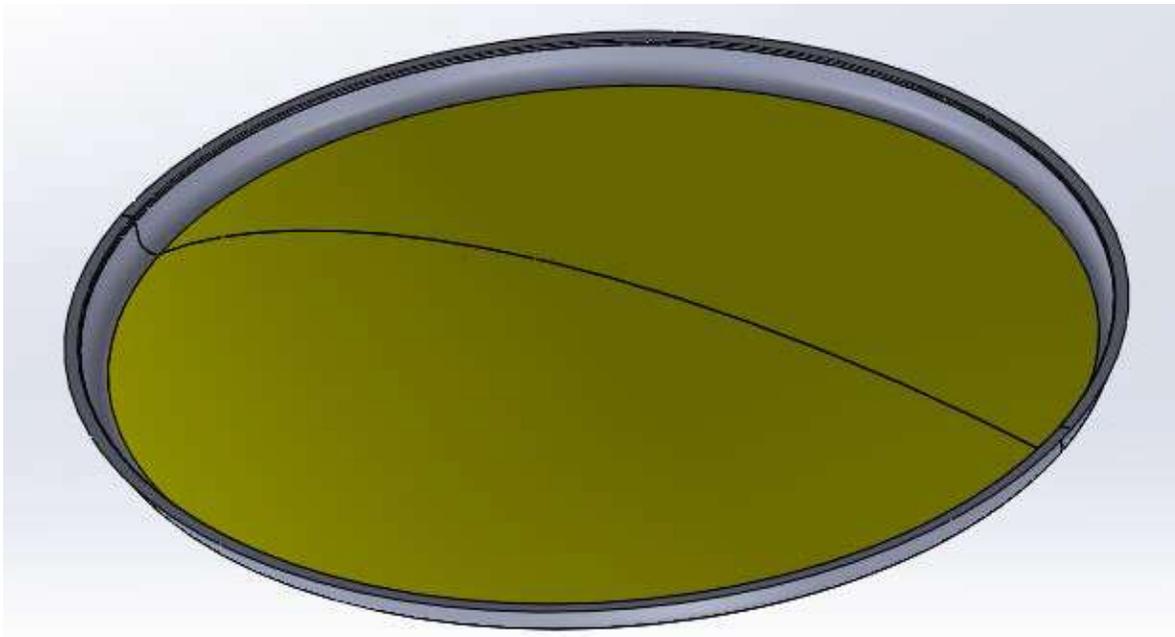
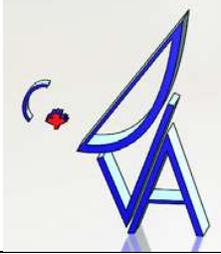


Figure 1: Mold surface file showing mold side (Convex surface).



The mold must incorporate a 3 point mounting system for interfacing with the floor or foundation and the ability to fine adjust the surface shape on commissioning.

The entire mold must be vacuum tight, therefore the joint between mold halves must include some means for providing a vacuum seal without compromising mold accuracy.

The mold must be designed keeping in mind the surface accuracy requirement of better than 80 microns RMS. This high accuracy requirement is only for the large curved elliptical surface, yellow surfaces in Figure 1. The outer radius, vertical rim and horizontal tooling flange can be fabricated to a lower accuracy of ± 1 mm.

2.3 NRC Supplied

First design iteration:

- A portable format CAD file which defines the molded surface shape.

Second design iteration (if required):

- Narrative and/or drawings or models explaining the suggested changes to the mold design.

2.4 Deliverables

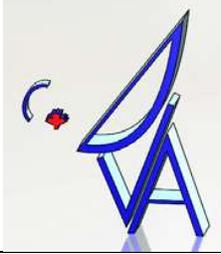
The contractor will deliver:

First design iteration:

- A report describing the design features and materials details of the mold.
- A 3D CAD file of the mold in a portable file format such as STEP or IGES.
- 2-D drawings showing the overall mold concept with primary dimensions.

Second design iteration (if required):

- Updated design report.
- Updated 3D CAD file.
- Updated 2-D drawings.



2.5 Schedule

The contractor will include in their proposal a provision for one iteration of the design based on feedback from the PID study.

Second design iteration, if required, to be completed through task authorization process outlined in the Contract.

Contract schedule is suggested, exact timing of milestones to be agreed upon with successful Bidder prior to contract award.

Milestone*	Estimated Date
Contract awarded	25 Oct 2019
Kick-off meeting	1 Nov 2019
NRC Deliverables to contractor	1 Nov 2019
*Mold Design 3D CAD file	6 Dec 2019
*Final Design Report	20 Dec 2019

All deliverables for the firm requirement must be received on or before December 31, 2019.

Status update meetings to be held via tele or video conference every 2 weeks.

ANNEX "B" - BASIS OF PAYMENT / SCHEDULE OF MILESTONES

Pricing is in Canadian Dollars, the Goods and Services Tax (GST) excluded. Pricing must be provided for 1. Firm Requirement and 2. Additional Labour (if required).

1. Firm Requirement:

Milestone No.	Description	% of total Bid Price	Firm Amount CAD \$	Estimated Due Dates (to be finalized at Contract award)
1	3D CAD file of the mold in a portable file format such as STEP or IGES	40%	\$ _____	2019-Dec-6
2	Final design report describing the design features and materials details of the mold, including 2-D drawings showing the overall mold concept with primary dimensions.	60%	\$ _____	2019-Dec-20
TOTAL FIRM REQUIREMENT			\$ _____	

2. Additional Labour (if required)

Labour for additional iteration of the design if requested by NRC through a fully authorized Task Authorization, shall be invoiced as per the following all-inclusive fixed hourly rate:

\$ _____ / hour * 40 hours (estimate for evaluation purposes only) = \$ _____.

TOTAL EVALUATED BID PRICE (GST Extra as applicable) = 1. FIRM REQUIREMENT + 2. ADDITIONAL LABOUR

Solicitation No. - N° de l'invitation
31034-191084/A
Client Ref. No. - N° de réf. du client
31034-191084

Amd. No. - N° de la modif.
File No. - N° du dossier
VIC-9-42104

Buyer ID - Id de l'acheteur
VIC 251
CCC No./N° CCC - FMS No./N° VME

ANNEX "C" - TASK AUTHORIZATION FORM PWGSC-TPSGC 572

Task Authorization Autorisation de tâche

Instruction for completing the form PWGSC - TPSGC 572 - Task Authorization
(Use form DND 626 for contracts for the Department of National Defence)

Instruction pour compléter le formulaire PWGSC - TPSGC 572 - Autorisation de tâche
(Utiliser le formulaire DND 626 pour les contrats pour le ministère de la Défense)

Contract Number

Enter the PWGSC contract number.

Numéro du contrat

Inscrire le numéro du contrat de TPSGC.

Contractor's Name and Address

Enter the applicable information

Nom et adresse de l'entrepreneur

Inscrire les informations pertinentes

Security Requirements

Enter the applicable requirements

Exigences relatives à la sécurité

Inscrire les exigences pertinentes

Total estimated cost of Task (Applicable taxes extra)

Enter the amount

Coût total estimatif de la tâche (Taxes applicables en sus)

Inscrire le montant

For revision only

Aux fins de révision seulement

TA Revision Number

Enter the revision number to the task, if applicable.

Numéro de la révision de l'AT

Inscrire le numéro de révision de la tâche, s'il y a lieu.

Total Estimated Cost of Task (Applicable taxes extra) before the revision

Enter the amount of the task indicated in the authorized TA or, if the task was previously revised, in the last TA revision.

Coût total estimatif de la tâche (Taxes applicables en sus) avant la révision

Inscrire le montant de la tâche indiquée dans l'AT autorisée ou, si la tâche a été révisée précédemment, dans la dernière révision de l'AT.

Increase or Decrease (Applicable taxes extra), as applicable

As applicable, enter the amount of the increase or decrease to the Total Estimated Cost of Task (Applicable taxes extra) before the revision.

Augmentation ou réduction (Taxes applicables en sus), s'il y a lieu

S'il y a lieu, inscrire le montant de l'augmentation ou de la réduction du Coût total estimatif de la tâche (Taxes applicables en sus) avant la révision.

1. Required Work: Complete sections A, B, C, and D, as required.

1. Travaux requis : Remplir les sections A, B, C et D, au besoin.

A. Task Description of the Work required:

A. Description de tâche des travaux requis :

Complete the following paragraphs, if applicable.
Paragraph (a) applies only if there is a revision to an authorized task.

Remplir les alinéas suivants, s'il y a lieu : L'alinéa (a) s'applique seulement s'il y a révision à une tâche autorisée.

(a) Reason for revision of TA, if applicable:
Include the reason for the revision; i.e. revised activities; delivery/completion dates; revised costs. Revisions to TAs must be in accordance with the conditions of the contract. See Supply Manual 3.35.1.50 or paragraph 6 of the Guide to Preparing and Administering Task Authorizations.

(a) Motif de la révision de l'AT, s'il y a lieu : Inclure le motif de la révision c.-à.-d., les activités révisées, les dates de livraison ou d'achèvement, les coûts révisés. Les révisions apportées aux AT doivent respecter les conditions du contrat. Voir l'article 3.35.1.50 du Guide des approvisionnements ou l'alinéa 6 du Guide sur la préparation et l'administration des autorisations de tâches.

(b) Details of the activities to be performed (include as an attachment, if applicable)

(b) Détails des activités à exécuter (joindre comme annexe, s'il y a lieu).

(c) Description of the deliverables to be submitted (include as an attachment, if applicable).

(c) Description des produits à livrer (joindre comme annexe, s'il y a lieu).

(d) Completion dates for the major activities and/or submission dates for the deliverables (include as an attachment, if applicable).

(d) Les dates d'achèvement des activités principales et (ou) les dates de livraison des produits (joindre comme annexe, s'il y a lieu).

B. Basis of Payment:

Insert the basis of payment or bases of payment that form part of the contract that are applicable to the task description of the work; e.g. firm lot price, limitation of expenditure, firm unit price

C. Cost of Task:**Insert Option 1 or 2:****Option 1:**

Total estimated cost of Task (Applicable taxes extra): Insert the applicable cost elements for the task determined in accordance with the contract basis of payment; e.g. Labour categories and rates, level of effort, Travel and living expenses, and other direct costs.

Option 2:

Total cost of Task (Applicable taxes extra): Insert the firm unit price in accordance with the contract basis of payment and the total estimated cost of the task.

D. Method of Payment

Insert the method(s) of payment determined in accordance with the contract that are applicable to the task; i.e. single payment, multiple payments, progress payments or milestone payments. For milestone payments, include a schedule of milestones.

B. Base de paiement :

Insérer la base ou les bases de paiement qui font partie du contrat qui sont applicables à la description du travail à exécuter : p. ex., prix de lot ferme, limitation des dépenses et prix unitaire ferme.

C. Coût de la tâche :**Insérer l'option 1 ou 2****Option 1 :**

Coût total estimatif de la tâche (Taxes applicables en sus) Insérer les éléments applicables du coût de la tâche établies conformément à la base de paiement du contrat. p. ex., les catégories de main d'œuvre, le niveau d'effort, les frais de déplacement et de séjour et autres coûts directs.

Option 2 :

Coût total de la tâche (Taxes applicables en sus) : Insérer le prix unitaire ferme conformément à la base de paiement du contrat et le coût estimatif de la tâche.

D. Méthode de paiement

Insérer la ou les méthode(s) de paiement établit conformément au contrat et qui sont applicable(s) à la tâche; c.-à.-d., paiement unique, paiements multiples, paiements progressifs ou paiements d'étape. Pour ces derniers, joindre un calendrier des étapes.

2. Authorization(s):

The client and/or PWGSC must authorize the task by signing the Task Authorization in accordance with the conditions of the contract. The applicable signatures and the date of the signatures is subject to the TA limits set in the contract. When the estimate of cost exceeds the client Task Authorization's limits, the task must be referred to PWGSC.

3. Contractor's Signature

The individual authorized to sign on behalf of the Contractor must sign and date the TA authorized by the client and/or PWGSC and provide the signed original and a copy as detailed in the contract.

2. Autorisation(s) :

Le client et (ou) TPSGC doivent autoriser la tâche en signant l'autorisation de tâche conformément aux conditions du contrat. Les signatures et la date des signatures appropriées sont assujetties aux limites d'autorisation de tâche établies dans le contrat . Lorsque l'estimation du coût dépasse les limites d'autorisation de tâches du client, la tâche doit être renvoyée à TPSGC.

3. Signature de l'entrepreneur

La personne autorisée à signer au nom de l'entrepreneur doit signer et dater l'AT, autorisée par le client et (ou) TPSGC et soumettre l'original signé de l'autorisation et une copie tel que décrit au contrat.



Task Authorization Autorisation de tâche

Contract Number - Numéro du contrat

Contractor's Name and Address - Nom et l'adresse de l'entrepreneur	Task Authorization (TA) No. - N° de l'autorisation de tâche (AT)
	Title of the task, if applicable - Titre de la tâche, s'il y a lieu
	Total Estimated Cost of Task (Applicable taxes extra) Coût total estimatif de la tâche (Taxes applicables en sus) \$

Security Requirements: This task includes security requirements
Exigences relatives à la sécurité : Cette tâche comprend des exigences relatives à la sécurité

No - Non Yes - Oui If YES, refer to the Security Requirements Checklist (SRCL) included in the Contract
Si OUI, voir la Liste de vérification des exigences relative à la sécurité (LVERS) dans le contrat



For Revision only - Aux fins de révision seulement

TA Revision Number, if applicable Numéro de révision de l'AT, s'il y a lieu	Total Estimated Cost of Task (Applicable taxes extra) before the revision Coût total estimatif de la tâche (Taxes applicables en sus) avant la révision \$	Increase or Decrease (Applicable taxes extra), as applicable Augmentation ou réduction (Taxes applicables en sus), s'il y a lieu \$
--	--	---

Start of the Work for a TA : Work cannot commence until a TA has been authorized in accordance with the conditions of the contract.

Début des travaux pour l'AT : Les travaux ne peuvent pas commencer avant que l'AT soit autorisée conformément au contrat.

1. Required Work: - Travaux requis :

A. Task Description of the Work required - Description de tâche des travaux requis	See Attached - Ci-joint <input type="checkbox"/>
B. Basis of Payment - Base de paiement	See Attached - Ci-joint <input type="checkbox"/>
C. Cost of Task - Coût de la tâche	See Attached - Ci-joint <input type="checkbox"/>
D. Method of Payment - Méthode de paiement	See Attached - Ci-joint <input type="checkbox"/>



Contract Number - Numéro du contrat

2. Authorization(s) - Autorisation(s)

By signing this TA, the authorized client and (or) the PWGSC Contracting Authority certify(ies) that the content of this TA is in accordance with the conditions of the contract.

En apposant sa signature sur l'AT, le client autorisé et (ou) l'autorité contractante de TPSGC atteste(nt) que le contenu de cette AT respecte les conditions du contrat.

The client's authorization limit is identified in the contract. When the value of a TA and its revisions is in excess of this limit, the TA must be forwarded to the PWGSC Contracting Authority for authorization.

La limite d'autorisation du client est précisée dans le contrat. Lorsque la valeur de l'AT et ses révisions dépasse cette limite, l'AT doit être transmise à l'autorité contractante de TPSGC pour autorisation.

Name and title of authorized client - Nom et titre du client autorisé à signer

Signature

Date

PWGSC Contracting Authority - Autorité contractante de TPSGC

Signature

Date

3. Contractor's Signature - Signature de l'entrepreneur

Name and title of individual authorized - to sign for the Contractor
Nom et titre de la personne autorisée à signer au nom de l'entrepreneur

Signature

Date

ANNEX "D" – MANDATORY TECHNICAL EVALUATION CRITERIA

The bid must meet the mandatory technical criteria specified below. The Bidder must provide the necessary documentation to support compliance with this requirement.

Bids which fail to meet the mandatory technical criteria will be declared non-responsive. Each mandatory technical criterion should be addressed separately.

#	Mandatory Technical Criterion	Bid Preparation Instructions	Meets? Y/N Comments
M1	The Bidder must demonstrate a minimum of ten (10) years of experience in the design and fabrication of molds for large composite structures.	The following information must, as a minimum, be provided: i. (mm/yyyy to mm/yyyy) ii. Description of experience	
M2	The Bidder must demonstrate having completed a minimum of three (3) projects in the last five (5) years where the Bidder designed and manufactured INVAR molds.	The following information <u>must</u> , as a minimum, be provided: i. Project Name ii. Name of Client Organization iii. Start and End Date of Project (mm/yyyy to mm/yyyy); and iv. Brief description of the scope of the project and the work performed. The following information <u>should</u> be provided: v. Name and contact information for the client.	
M3	The Bidder must demonstrate having completed a minimum of one (1) project where the Bidder designed and manufactured INVAR molds with a RMS (Root Mean Square) mold surface error of 80 microns or better.	The following information <u>must</u> , as a minimum, be provided: i. Project Name ii. Name of Client Organization iii. Start and End Date of Project (mm/yyyy to mm/yyyy); and iv. Brief description of the scope of the project and the work performed. The following information <u>should</u> be provided: v. Name and contact information for the client.	
M4	The Bidder must demonstrate having completed a minimum of three (3) projects where the Bidder designed and manufactured molds of six (6) metres or more in a single dimension.	The following information, <u>must</u> , as a minimum, be provided: i. Project Name ii. Name of Client iii. Start and End Date of Project (mm/yyyy to mm/yyyy); and	

Solicitation No. - N° de l'invitation
31034-191084/A
Client Ref. No. - N° de réf. du client
31034-191084

Amd. No. - N° de la modif.
File No. - N° du dossier
VIC-9-42104

Buyer ID - Id de l'acheteur
VIC 251
CCC No./N° CCC - FMS No./N° VME

		<p>iv. Brief description of the scope of the project and the work performed.</p> <p>The following information <u>should</u> be provided:</p> <p>v. Name and contact information for the client.</p>	
--	--	---	--

Bidders may reference the same project examples to address multiple criteria.

Solicitation No. - N° de l'invitation
31034-191084/A
Client Ref. No. - N° de réf. du client
31034-191084

Amd. No. - N° de la modif.
File No. - N° du dossier
VIC-9-42104

Buyer ID - Id de l'acheteur
VIC 251
CCC No./N° CCC - FMS No./N° VME

ANNEX "E" to PART 3 OF THE BID SOLICITATION - ELECTRONIC PAYMENT INSTRUMENTS

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)

Claim No.
N° de la demande

Contract Serial No.
N° de série du contrat

CERTIFICATE OF CONTRACTOR

ATTESTATION DE L'ENTREPRENEUR

I certify that:

- All authorizations required under the contract have been obtained. The claim is consistent with the progress of the work and is in accordance with the contract.
- Indirect costs have been paid for or accrued in the accounts.
- Direct materials and the subcontracted work have been received, accepted and either paid for or accrued in the accounts following receipt of invoice from supplier/subcontractor, and have been or will be used exclusively for the purpose of the contract.
- All direct labour costs have been paid for or accrued in the accounts and all such costs were incurred exclusively for the purpose of the contract;
- All other direct costs have been paid for or accrued in the accounts following receipt of applicable invoice or expense voucher and all such costs were incurred exclusively for the purpose of the contract; and
- No liens, encumbrances, charges or other claims exist against the work except those which may arise by operation of law such as a lien in the nature of an unpaid contractor's lien and in respect of which a progress payment and/or advance payment has been or will be made by Canada.

J'atteste que :

- Toutes les autorisations exigées en vertu du contrat ont été obtenues. La demande correspond à l'avancement des travaux et est conforme au contrat.
- Les coûts indirects ont été réglés ou portés aux livres.
- Les matières directes et les travaux de sous-traitance ont été reçus, et le tout a été accepté et payé, ou encore porté aux livres après réception de factures envoyées par le fournisseur ou le sous-traitant; ces matières et ces travaux ont été ou seront utilisés exclusivement aux fins du contrat.
- Tous les coûts de la main-d'oeuvre directe ont été réglés ou portés aux livres et tous ces coûts ont été engagés exclusivement aux fins du contrat.
- Tous les autres coûts indirects ont été réglés ou portés aux livres après réception des factures ou pièces justificatives pertinentes et tous ces coûts ont été engagés exclusivement aux fins du contrat.
- Il n'existe aucun privilège ni demande ou imputation à l'égard de ces travaux sauf ceux qui pourraient survenir par effet de la loi, notamment le privilège d'un entrepreneur non payé à l'égard duquel un paiement progressif et/ou un paiement anticipé a été ou sera effectué par le Canada.

Contractor 's Signature - Signature de l'entrepreneur

Check the box if the claim is being made with respect to advance payment provisions included in the basis of payment of the contract.

This claim, or a portion of this claim, is for an advance payment.

I certify that:

- The funds received will be used solely for the purpose of the contract and attached is a complete description of the purpose to which the advance payment will be applied.
- The amount of the payment is established in accordance with the conditions of the contract.
- The contractor is not in default of its obligations under the contract.
- The payment is related to an identifiable part of the contractual work.

Title - Titre

Date (YYYY-MM-DD / AAAA-MM-JJ)

Cocher la case si la demande est faite en rapport avec les dispositions relatives aux paiements anticipés qui se trouvent dans la base de paiement du contrat.

Cette demande, ou une partie de cette demande, est pour un paiement anticipé.

J'atteste que :

- Les fonds reçus ne serviront uniquement qu'aux fins du contrat; ci-joint est une description complète des fins auxquelles le paiement anticipé sera utilisé.
- Le montant du paiement est établi conformément aux conditions du contrat.
- L'entrepreneur n'a pas manqué à ses obligations en vertu du contrat.
- Le paiement porte sur une partie identifiable des travaux précisés dans le contrat.

Contractor 's Signature - Signature de l'entrepreneur

CERTIFICATES OF DEPARTMENTAL REPRESENTATIVES

Scientific/Project/Inspection Authority: I certify that the work meets the quality standards required under the contract, and its progress is in accordance with the conditions of the contract.

Inspection Authority (all other contracts): I certify that the quality of the work performed is in accordance with the standards required under the contract.

Title - Titre

Date (YYYY-MM-DD / AAAA-MM-JJ)

ATTESTATIONS DES REPRÉSENTANTS DU MINISTÈRE

Autorité scientifique ou responsable du projet / de l'inspection : J'atteste que les travaux sont conformes aux normes de qualité exigées en vertu du contrat et que leur avancement est conforme aux conditions du contrat.

Responsable de l'inspection (tous les autres contrats) : J'atteste que la qualité des travaux exécutés est conforme aux normes exigées en vertu du contrat.

Signature of Scientific / Project / Inspection Authority
Signature de l'autorité scientifique ou responsable du projet / de l'inspection

Date (YYYY-MM-DD / AAAA-MM-JJ)

PWGSC Contracting Authority: I certify that, to the best of my knowledge, the claim is consistent with the progress of the work and is in accordance with the contract. This claim, however, may be subject to further verification and any necessary adjustment before final settlement.

Autorité contractante de TPSGC : J'atteste, au meilleur de ma connaissance, que la demande correspond à l'avancement des travaux et est conforme au contrat. Toutefois, cette demande pourrait faire l'objet d'une autre vérification et de tout rajustement nécessaire avant le règlement final.

Contracting Authority Signature de l'autorité contractante

Client's Authorized Signing Officer - (must sign the interim claim): I certify that the claim is in accordance with the contract.

Title - Titre

Date (YYYY-MM-DD / AAAA-MM-JJ)

Signataire autorisé du client - (doit signer la demande provisoire) : J'atteste que la demande est conforme au contrat.

Client Signature du client

Client's Authorized Signing Officer - (must sign the final claim): I certify that all goods have been received and all services have been rendered, that the work has been properly performed and that the claim is in accordance with the contract.

Title - Titre

Date (YYYY-MM-DD / AAAA-MM-JJ)

Signataire autorisé du client - (doit signer la demande finale) : J'atteste que tous les biens ont été reçus, que tous les services ont été rendus, que tous les travaux ont été exécutés convenablement, et que la demande est conforme au contrat.

Client Signature du client

Title - Titre

Date (YYYY-MM-DD / AAAA-MM-JJ)