



RETURN BIDS TO:

RETOURNER LES SOUMISSIONS À:

Travaux publics et Services gouvernementaux
Canada

Place Bonaventure, portail Sud-Est

800, rue de La Gauchetière Ouest

7 ième étage

Montréal

Québec

H5A 1L6

FAX pour soumissions: (514) 496-3822

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

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, portail Sud-Est

800, rue de La Gauchetière Ouest

7 ième étage

Montréal

Québec

H5A 1L6

| | |
|---|--|
| Title - Sujet composite cryogenic | |
| Solicitation No. - N° de l'invitation 9F064-150685/A | Date 2016-06-09 |
| Client Reference No. - N° de référence du client 9F064-15-0685 | |
| GETS Reference No. - N° de référence de SEAG PW-\$MTA-295-13893 | |
| File No. - N° de dossier MTA-5-38346 (295) | CCC No./N° CCC - FMS No./N° VME |
| Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2016-06-27 | Time Zone Fuseau horaire Heure Avancée de l'Est HAE |
| 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: Lahens, Fabiola | Buyer Id - Id de l'acheteur mta295 |
| Telephone No. - N° de téléphone (514) 496-5773 () | FAX No. - N° de FAX (514) 496-3822 |
| Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: AGENCE SPATIALE CANADIENNE 6767 ROUTE DE L AEROPORT DÉVELOPPEMENT DE L'INGÉNIERIE ST HUBERT Québec J3Y8Y9 Canada | |

Instructions: See Herein

Instructions: Voir aux présentes

| | |
|--|--|
| Delivery Required - Livraison exigée . | 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 *Statement of Work*

The Work to be performed is detailed under Article 6.2 of the resulting contract clauses

1.2 *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.

1.3 *Trade Agreements*

"The requirement is no subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), and the Agreement on Internal Trade (AIT)."

1.4 *Canadian Content*

"The requirement is subject to a preference for Canadian goods and/or services."

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>) 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.

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.

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 five (5) calendar days before the bid closing date. Enquiries received after that time may not be answered.

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

2.5 Applicable Laws

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

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 (4 hard copies)

Section II: Financial Bid (1 hard copies)

Section III: Certifications (1hard 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 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 explain and demonstrate how they propose to meet the requirements and how they will carry out the Work.

Section II: Financial Bid

Bidders must submit their financial bid in accordance with the Basis of Payment. The total amount of Applicable Taxes must be shown separately.

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 Point Rated Technical Criteria**

See Annex C "Point Rated Criteria"

4.1.2 Financial Evaluation

The maximum funding available for the Contract resulting from the bid solicitation is \$ 45 000.00 (Applicable Taxes extra). Bids valued in excess of this amount will be considered non-responsive. This disclosure does not commit Canada to pay the maximum funding available

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

See Annex B, Basis payment at point 1 "Firm Price"

4.2 Basis of Selection

Basis of Selection - Highest Rated Within Budget

To be declared responsive, a bid must:

1. comply with all the requirements of the bid solicitation;
2. meet all mandatory technical evaluation criteria; and
3. obtain the required minimum of 60% percent overall of the points for the technical evaluation criteria which are subject to point rating. The rating is performed on a scale of 100 points."

Bids not meeting (a) or (b) or (c) will be declared non responsive.. The responsive bid with the highest number of points will be recommended for award of a contract, provided that the total evaluated price does not exceed the budget available for this requirement.

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 and Additional Information

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

5.2.1 Integrity Provisions – Required Documentation

In accordance with the *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](http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969) website (http://www.esdc.gc.ca/en/jobs/workplace/human_rights/employment_equity/federal_contractor_program.page?&_ga=1.229006812.1158694905.1413548969).

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.

Canada will also have the right to terminate the Contract for default if a Contractor, or any member of the Contractor if the Contractor is a Joint Venture, appears on the "[FCP Limited Eligibility to Bid](#)" list during the period of the Contract.

The Bidder must provide the Contracting Authority with a completed annex [Federal Contractors Program for Employment Equity - Certification](#), before contract award. If the Bidder is a Joint Venture, the Bidder must provide the Contracting Authority with a completed annex Federal Contractors Program for Employment Equity - Certification, for each member of the Joint Venture.

5.2.3 Additional Certifications Precedent to Contract Award

5.2.3.1 Canadian Content Certification

This procurement is conditionally limited to Canadian goods and Canadian services.

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

Failure to provide this certification completed with the bid will result in the goods and services offered being treated as non-Canadian goods and non-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](#).

For more information on how to determine the Canadian content for a mix of goods, a mix of services or a mix of goods and services, consult Annex 3.6.(9), Example 2, of the [Supply Manual](#).

5.2.3.1.1 SACC Manual clause [A3050T](#) (2014-11-27) Canadian Content Definition

PART 6 - RESULTING CONTRACT CLAUSES

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

6.1 Security Requirements

6.1.1 There is no security requirement applicable to the Contract.

6.2 Statement of Work

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

6.3 Standard Clauses and Conditions

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

6.3.1 General Conditions

[2010C](#) ([2016-04-04](#)), General Conditions - Services (Medium Complexity) apply to and form part of the Contract.

6.4 Term of Contract

6.4.1 Period of the Contract

The period of the Contract is from date of Contract to _____ inclusive

6.4.5 Delivery Points

Delivery of the requirement will be made to delivery point(s) specified at Annex "A" of the Contract.

6.5 Authorities

6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Name: Fabiola Lahens

Title: Procurement officer

Public Works and Government Services Canada

Directorate: Acquisitions

Address: 800 rue de la Gauchetière Ouest, Montréal (Québec), H5A 1L6

Telephone: 514-496-5773

Facsimile: (514) 496-3822

E-mail address: fabiola.lahens@tpasgc-pwgsc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform

work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority.

6.5.2 Project Authority

The Project Authority for the Contract is:

Name: _____

Title: _____

Organization: _____

Address: _____

Telephone: _____

Facsimile: _____

E-mail address: _____

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

6.5.3 Contractor's Representative

Name: _____

Title: _____

Organization: _____

Address: _____

Telephone: _____

Facsimile: _____

E-mail address: _____

6.6 Proactive Disclosure of Contracts with Former Public Servants

By providing information on its status, with respect to being a former public servant in receipt of a [Public Service Superannuation Act](#) (PSSA) pension, the Contractor has agreed that this information will be reported on departmental websites as part of the published proactive disclosure reports, in accordance with [Contracting Policy Notice: 2012-2](#) of the Treasury Board Secretariat of Canada.

6.7 Payment

6.7.1 Basis of Payment- Firm Price

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

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

6.7.2 Limitation of Price

SACC Manual clause C6000C (2011-05-16) Limitation of Price

6.7.3 Terms of Payment

SACC Manual clause H1001C (2008-05-12) Multiple Payments

6.8 Invoicing Instructions

1. The Contractor must submit invoices in accordance with the section entitled "Invoice Submission" of the general conditions. Invoices cannot be submitted until all work identified in the invoice is completed.

Each invoice must be supported by:

- a. a copy of time sheets to support the time claimed;
- b. a copy of the release document and any other documents as specified in the Contract;
- c. a copy of the invoices, receipts, vouchers for all direct expenses, and all travel and living expenses;
- d. a copy of the monthly progress report.

2. Invoices must be distributed as follows:

- a. The original and one (1) copy must be forwarded to the address shown on page 1 of the Contract for certification and payment.
OR
- a. The original and one (1) copy must be forwarded to the following address for certification and payment.
- b. One (1) copy must be forwarded to the Contracting Authority identified under the section entitled "Authorities" of the Contract.

6.9 Certifications and Additional Information**6.9.1 Compliance**

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

6.10 Applicable Laws

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

6.11 Priority of Documents

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

- (a) the Articles of Agreement;
- (b) the general conditions 2010C (2016-04-04);
- (c) Annex A, Statement of Work
- (d) Annexe B Basis of payment
- (e) 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))

N° de l'invitation - Solicitation No.
9F064-15-0685/A
N° de réf. du client - Client Ref. No.
9F064-15-0685

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

Id de l'acheteur - Buyer ID
mta295
N° CCC / CCC No./ N° VME - FMS

6.12 Insurance

SACC Manual clause A9006C (2016-01-28) Insurance

ANNEX A

STATEMENT OF WORK

1. Subject

1.1 Title

SPECIFICATIONS FOR THE ACQUISITION OF THE PRODUCTION OF SAMPLES OF 977-2/CARBON

1.2 Introduction

The Canadian Space Agency plans to acquire the service of production of samples of 977-2/carbon. These samples will be used to test the resistance to impacts at cryogenic temperature. The Canadian Space Agency is wondering how composites survive low speed impacts in a lunar environment. The samples and reports must be submitted no later than 16 weeks after the signature of the contract.

2. Mandatory Requirements

All requirements are mandatory.

2.1 Sample and Description of the Materials

- 2.1.1. Laminates and skins must be: plane weave woven epoxy 977-2 and medium or high modulus carbon fibres with a minimum thickness of 0.19 mm.
- 2.1.2. Honeycomb must be : Nomex with a thickness of half an inch, density between 2.7 and 3.3 lb /ft³, hexagonal cells. The honeycomb must not perforated asThe tests will not take place in vacuum.
- 2.1.3. Adhesive must be: FM 300-K or equivalent, meaning epoxy based and meeting the standard outgassing levels for TML (Total Mass Loss inferior to 1%) and CVCM (Collected Volatile Condensable Materials inferior to 0.1%). The equivalent must be recognized for its use in space and for its use at cryogenic temperatures.

2.2 Quantities to be delivered:

- Nomex: a 2 ft x 2 ft piece, or a maximum of 4 pieces of waste fabric representing an equivalent surface
-

| Laminates | Dimension* | Quantity |
|---------------------------|-------------|------------------------------------|
| [0] ₅ | 1" x 10" | 20 at 0° ¹ 20 at 90° |
| [45] ₅ | 1" x 10" | 40 at 0° ² |
| [45/0/0/45] _s | 1" x 10" | 20 at 0° |
| [0] ₅ | 12" x 12" | 2 |
| [45/0/0/45] _{2s} | 1/2" x 5.5" | 20 at 0° |
| [0] ₁₂ | 20" x 24" | 1 |

¹It's the longitudinal direction which must be at 0°. Here, the 0° direction corresponds to the string direction.

² In relation to the global reference point

| Sandwich | Dimension | Quantity |
|--|-----------|----------|
| [45/0/0/45/core (dir L) ¹ /45/0/0/45] | 26" x 26" | 10 |

*These are the dimensions of the panels once rectified

¹Longitudinal direction of the core in the same direction as the fibres at 0° of the layers at 0° (see image below)

Panels of different dimensions can be suggested for reasons of tooling, width of the roll, or other. The suggested dimensions must allow for cutting a minimum of a total of 230 samples of 4" x 6" size, the 6" corresponding to the direction of the layers at 0°. In both directions, an additional 2" must be added to take into account the cuts. The following dimensions are therefore obtained:

$L = 6'' \times n \text{ samples} + 2''$ (direction at 0°)

$W = 4'' \times m \text{ samples} + 2''$

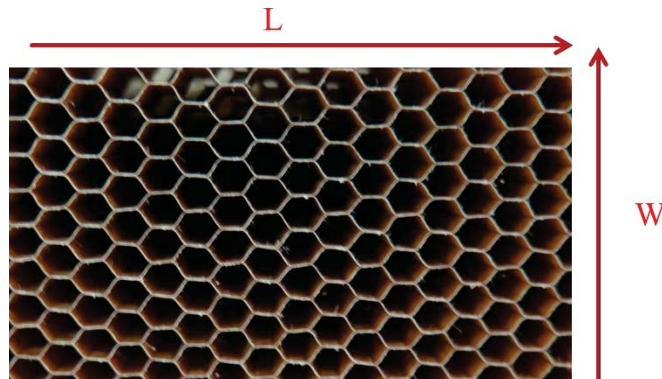
(see the figure below for the definitions of L and W)

Where n and m correspond to the number of samples in each direction ($n \times m$ = number of samples in a panel).

As an indication, in a panel of 26" x 26", 24 samples of 4" x 6" can be cut.

There must not be any overlapping in the manufacturing of the skins and laminates.

The directions must be indicated on the sandwich panels, and the laminates at 0° and 90° must be conspicuous (packed separately or identified)



2.3 Reports

The contractor must provide the manufacturing procedure to the Canadian Space Agency before the starting the manufacturing. The procedure must include the curing cycle, the tooling and equipment, as well as the method used for cutting the samples to their final sizes. The contractor must wait for the approval of the selected materials, the curing cycle and the cutting procedure before starting the manufacturing of the samples. The Canadian Space Agency will share its comments or give its approval within two business days of receipt of the procedure, which can be transmitted electronically. If the contractor receives comments from the Canadian Space Agency, the contractor will have a period of two working days to present a modified procedure that responds to all the comments issued by the Canadian Space Agency.

The contractor must provide a final report that include a report on the curing cycle used for the manufacturing of each set of samples, the thickness of each set of samples, the tooling and equipment, as well as the method, used to cut the samples to their final sizes.

Language of the reports: the reports must be written in French or in English.

The reports must be submitted as a pdf electronic file.

2.4 Deliverables

| Milestone | Title | Description of the Deliverables | Schedule of Deliveries |
|-----------|--|---|---|
| 1 | Procedure | Report on the curing cycle suggested, as well as the tooling, equipment, and the method recommended for cutting the samples to their final dimensions. Presentation of the type of carbon fibre chosen as well as all the other materials used. | 1 week after the awarding of the contract. Delivery address: Marie-Josée Potvin Canadian Space Agency 6767 route de l'Aéroport, Saint-Hubert, Québec, J3Y 8Y9. |
| 2 | Approval of the procedure by the Canadian Space Agency | The contractor must wait for the approval of the selected materials, the curing cycle, and the cutting procedure before starting the manufacturing of the samples. | |
| 3 | Samples | All the samples of Nomex, laminates, and sandwich panels as defined in Section 2 "Mandatory Requirements" | 15 weeks after the approval of the procedure. Delivery address: Marie-Josée Potvin Canadian Space Agency 6767 route de l'Aéroport, Saint-Hubert, Québec, J3Y 8Y9. |

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N° CCC / CCC No./ N° VME - FMS

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| 4 | Final report | Report on the curing cycle used for the manufacturing of each set of samples, the thickness of each set of samples, the tooling and equipment, as well as the method used for cutting the samples to their final sizes. | 16 weeks after the approval of the procedure. Delivery address: Marie-Josée Potvin Canadian Space Agency 6767 route de l'Aéroport, Saint-Hubert, Québec, J3Y 8Y9. |
|---|--------------|---|---|

ANNEX B

BASIS FOR PAYMENT

1. Firm Price

| Step | DESCRIPTION | Firm Price, all included (GST /HST not included) \$ CAN |
|------|--|---|
| 1 | Firm price for the execution of work described in Annex A – Statement of Work. | \$ _____ (to be completed by the bidder) |

2. Multiple Payment Calendar

| Steps | Title | Description of the deliverables | Delivery Date | Price |
|-------|-----------|--|---|--|
| 1 | Procedure | Report on the suggested curing cycle, as well as the tooling, equipment, and suggested cutting method to cut the samples to their final dimensions. Presentation of the selected carbon fibers, as well as all other materials as defined in Section 2 of Annex A « Mandatory Requirements » | _____ At the latest, one week after the signature of the contract. | _____ (25% of the firm price as described in 1) |
| 2 | Samples | All the samples of Nomex, laminates, and sandwich panels as defined in Section 2 of Annex A « Mandatory Requirements » | _____ At the latest, 15 weeks after the approval of the procedure | _____ (50% of the firm price as described in 1) |

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| | | | | |
|-----------------------------|--------------|--|--|--|
| 3 | Final Report | Report on the curing cycle used for the manufacturing of each set of samples, the thickness of each set of samples, the tooling and equipment, as well as the method used for cutting the samples to their final sizes as defined in Section 2 of Annex A « Mandatory Requirements » | _____ At the latest, 16 weeks after the approval of the procedure | _____ \$(25% of the firm price as described in 1) |
| TOTAL PRICE (GST/HST extra) | | | _____ | \$ _____ |

ANNEX C

EVALUATION CRITERIA

1. Point-Rated Criteria

Tenders will be evaluated and scored according to the point-rated criteria presented in this part.

| Criteria | Title and Description | Maximum score |
|----------|--|---------------|
| R1. | <u>Obtaining Materials:</u> <i>Provide a tender demonstrating that all materials will be received within a time period allowing a delivery of the deliverables of this call for tenders in a timely manner, or provide an inventory of the materials already in the possession of the contractor as well as their expiration dates, and demonstrate that the materials are present in sufficient quantity to ensure delivery of the deliverables of the resulting contract.</i> | 25 |
| | <u>Timetable:</u> <i>Provide the timetable in terms of weeks from the signing of the contract. 20 points out of 25 will be awarded to a contractor delivering the deliverables in 16 weeks. An additional point will be granted per week less than the timetable up to a maximum of 5 points (delivery in 11 weeks rather than 16 weeks).</i> | 25 |
| R2. | | |
| | <u>Project of a Similar Scope:</u> <i>Demonstrate that the contractor has already worked with epoxy 977-2, that he has already worked with epoxy-based adhesives for use in a cryogenic environment and that he has already fabricated honeycomb panels with Nomex as the core over the past five years.</i> | 50 |
| | | |
| | Maximum overall score for the point-rated criteria | 100 |
| | Minimum score for each criterion for a bid to be considered admissible | 60 % |

2. Evaluation Criteria

For a bid to be considered admissible, it must obtain a minimum score of 60% for the point-rated criteria.

R1. Obtaining Materials

This criterion is used to determine if the required materials will be available in a timely manner to ensure the delivery of the products.

| <i>Terms of Reference</i> | <i>Score level</i> |
|---------------------------|--|
| 0 | The bidder has not indicated the strategy for the acquisition of the 977-2/carbon, Nomex and adhesives within a period of 11 weeks. The potential suppliers and the products covered are not clearly identified for at least one of the three classes of materials. |
| 6.25 points | The bidder has indicated his acquisition strategy for the 977-2/carbon, Nomex and adhesives within a time period of 11 weeks, but the potential suppliers and the products concerned are not clearly identified for the three classes of materials. |
| 12.5 points | The bidder has indicated his strategy for the acquisition of the 977-2/carbon, Nomex and adhesives within a period of 11 weeks. The potential suppliers and the products covered are clearly identified for the three classes of materials. |
| 18.75 points | The bidder has appended the bids of his suppliers indicating a delivery time of less than 11 weeks for the 977-2/carbon, or has demonstrated that he already has the 977-2/carbon in store in sufficient quantity and that it has not exceeded the expiration date. In addition, the bidder has indicated his strategy for the acquisition of Nomex and adhesives within a period of 11 weeks. The potential suppliers are clearly identified for the Nomex and the adhesives. |
| 25 points | The bidder has appended the bids of his suppliers indicating a delivery time of less than 11 weeks for the Nomex, the 977-2/carbon and for the adhesives, or has demonstrated that he already has the materials in store in sufficient quantity and that it has not exceeded the expiration date. |

R1. Timetable

This criterion is used to assess whether the products will be delivered in a timely manner.

| <i>Terms of Reference</i> | <i>Score level</i> |
|---------------------------|--|
| <i>0</i> | The bidder has not appended a timetable that can be used to predict a delivery within 16 weeks or less. |
| <i>5 points</i> | The bidder has appended a timetable that cannot be used to predict a delivery in 16 weeks or less. Not all three of the time periods for the acquisition of materials, manufacturing, and deliveries are specified. |
| <i>10 points</i> | The bidder has appended a timetable that clearly presents the time periods for the acquisition of materials, manufacturing, and delivery enabling a delivery in 16 weeks or less. However, the availability of the equipment used and the personnel required for the fabrication is not confirmed. Additional points are granted for a delivery in less than 16 weeks. |
| <i>15 points</i> | The bidder has appended a timetable that clearly presents the time periods for the acquisition of materials, manufacturing, and delivery enabling a delivery in 16 weeks or less. The availability of the equipment used and the personnel necessary for the fabrication is confirmed, but the bidder has not submitted the list of presses and other heavy equipment used in the fabrication, as well as the list of technical personnel involved in the fabrication. Additional points are granted for a delivery in less than 16 weeks. |
| <i>20 points</i> | The bidder has appended a timetable that clearly presents the time periods for the acquisition of materiel, manufacturing, and delivery enabling a delivery in 16 weeks or less. The availability of the equipment used and the personnel required for the fabrication is confirmed. The bidder has submitted the list of presses and other heavy equipment used in the fabrication, as well as the list of technical personnel involved in the fabrication. Additional points are awarded for a delivery in less than 16 weeks. |

R2. Project of a Similar Scope

This criterion is used to confirm that the bidder has delivered laminates and sandwich panels in the last 5 years.

| <i>Terms of Reference</i> | <i>Score level</i> |
|---------------------------|---|
| 0 | The bidder has not completed a project in the last 5 years where he has used epoxy/carbon, or he has not yet manufactured honeycomb panels. The products delivered are not clearly described or the date of delivery of these products is not indicated. The adhesives and the type of epoxy/carbon used in these projects are not clearly identified, as well as the types of materials used as skins and as a core for the sandwich. |
| 12.5 points | The bidder has completed a project in the last 5 years where he has used epoxy/carbon and has demonstrated that he has already manufactured honeycomb panels. The products delivered are clearly described and the date of delivery of these products is indicated. The adhesives and the type of epoxy/carbon used in this project are clearly identified, as well as the types of materials used as skins and as a core for the sandwich. |
| 25 points | The bidder has completed a project in the last 5 years where he has used epoxy/carbon and has demonstrated that he has already manufactured honeycomb panels with Nomex as the core. The products delivered are clearly described and the date of delivery of these products is indicated. The adhesives and the type of epoxy/carbon used in this project are clearly identified, as well as the type of materials used as skins for the sandwich. |
| 37.5 points | The bidder has completed a project in the last 5 years where he has used 977-2/carbon and has demonstrated that he has already manufactured honeycomb panels with Nomex as the core. The products delivered are clearly described and the date of delivery of these products is indicated. The adhesives used in this project are clearly identified, as well as the type of materials used as skins for the sandwich. |
| 50 points | The bidder has completed a project in the last 5 years where he has used 977-2/carbon, epoxy-based adhesives that can be used in a cryogenic environment and has demonstrated that he has already manufactured honeycomb panels with Nomex as the core. The products delivered are clearly described and the date of delivery of these products is indicated. |