

#### National Defence

#### Défense nationale

National Defence Headquarters Ottawa, Ontario K1A 0K2 Quartier général de la Défense nationale Ottawa (Ontario) K1A 0K2

## REQUEST FOR PROPOSAL DEMANDE DE PROPOSITION

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

Director Services Contracting 4 (D Svcs C 4) Attention: Luc Maillet

By e-mail to:

DSvcsC4Contracting-

DCSvcs4Contrats@forces.gc.ca

#### Proposal To: National Defence 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 and services listed herein and on any attached sheets at the price(s) set out therefore.

#### Proposition à : Défense nationale 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 et services énumérés ici et sur toute feuille ci-annexée, au(x) prix indiqué(s).

#### **Comments - Commentaires**

## THIS DOCUMENT DOES NOT CONTAIN A SECURITY REQUIREMENT.

## Solicitation Closes – L'invitation prend fin

At: – à :

02:00 PM Eastern Standard Time (EST)

On: - le:

14 December 2017

Title – Titre	Solicitation No. – Nº de l'invitation
Ultra-Wideband Antenna Feeds	W6369-18-X014
Date of Solicitation - Date de l'invitation	on
29 November 2017	
Address Enquiries to: - Adresser toute	es questions à :
_	
Luc Maillet by e-mail to luc.maillet@fore	ces.gc.ca
-	
Telephone No. – Nº de téléphone	FAX No. – Nº de fax
relephone No. – N de telephone	raa no. – n' de lax
Telephone No. – N de telephone	FAA NO. – N de lax
	FAA No N ue iax
Destination	raa no. – n ue iax
	FAA No. – N ue iax
Destination	
Destination  Defence Research and Development Can	
Destination  Defence Research and Development Can Building 29	
Destination  Defence Research and Development Can Building 29 3701 Carling Ave.	
Destination  Defence Research and Development Can Building 29 3701 Carling Ave. Ottawa, ON	
Destination  Defence Research and Development Can Building 29 3701 Carling Ave. Ottawa, ON K1A 0Z4	

Instructions: Municipal taxes are not applicable. Unless otherwise specified herein all prices quoted must include all applicable Canadian customs duties, GST/HST, excise taxes and are to be delivered Delivery Duty Paid including all delivery charges to destination(s) as indicated. The amount of the Goods and Services Tax/Harmonized Sales Tax is to be shown as a separate item.

Instructions: Les taxes municipales ne s'appliquent pas. Sauf indication contraire, les prix indiqués doivent comprendre les droits de douane canadiens, la TPS/TVH et la taxe d'accise. Les biens doivent être livrés « rendu droits acquittés », tous frais de livraison compris, à la ou aux destinations indiquées. Le montant de la taxe sur les produits et services/taxe de vente harmonisée doit être indiqué séparément.

Delivery Required – Livraison exigée	Delivery Offered – Livraison proposée
31 March 2018	
Vendor Name and Address - Raison so	ciale et adresse du fournisseur
Name and title of person authorized to	sign on hehalf of yendor (type or
print) – Nom et titre de la personne aut	
(caractère d'imprimerie)	orisee a signer aa nom aa rourmssear
(caracter a imprimerie)	
Name - Nom	Title – Titre
Signature	Date



## **TABLE OF CONTENTS**

PART 1	1 - GENERAL INFORMATION	3
1.1 1.2 1.3 1.4	SECURITY REQUIREMENTS STATEMENT OF REQUIREMENT DEBRIEFINGS TRADE AGREEMENTS	3 3
PART 2	2 - BIDDER INSTRUCTIONS	3
2.1 2.2 2.3 2.4	STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS. SUBMISSION OF BIDS ENQUIRIES - BID SOLICITATION APPLICABLE LAWS	4 4
PART 3	3 - BID PREPARATION INSTRUCTIONS	4
3.1	BID PREPARATION INSTRUCTIONS	4
PART 4	4 - EVALUATION PROCEDURES AND BASIS OF SELECTION	6
4.1 4.2	EVALUATION PROCEDURES	
PART	5 – CERTIFICATIONS AND ADDITIONAL INFORMATION	7
5.1 5.2	CERTIFICATIONS REQUIREDCERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION	
PART 6	6 - RESULTING CONTRACT CLAUSES	8
	DEFENCE CONTRACT	
ANNEX	X A	12
	TEMENT OF REQUIREMENT	
ANNEX	ХВ	16
	CING TABLE	
ANNEX	X C TO PART 3 OF THE BID SOLICITATION	17
ELEC	CTRONIC PAYMENT INSTRUMENTS	17
ANNEX	X D TO PART 5 OF THE BID SOLICITATION	18
ADD	ITIONAL CERTIFICATIONS REQUIRED WITH THE BID	18

## **PART 1 - GENERAL INFORMATION**

#### 1.1 Security Requirements

There is no security requirement associated with the requirement.

#### 1.2 Statement of Requirement

The requirement is detailed under Annex A.

## 1.3 Debriefings

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

#### 1.4 Trade Agreements

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

#### **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 <u>Standard Acquisition Clauses and Conditions Manual</u> (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 <u>2003</u> (2017-04-27) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation, with the following modifications:

Section 02, Procurement Business Number, is deleted in its entirety.

In section 05, Submission of bids, subsection 2.d is deleted in its entirety and replaced with the following:

d. send its bid only to the Department of National Defence organization receiving the bids as specified on page 1 of the bid solicitation;

In section 05, Submission of bids, subsection 4 is amended as follows:

Delete: 60 days

Insert: ninety (90) calendar days

Section 06, Late bids, is deleted in its entirety.

In section 07, Delayed bids, the text is deleted in its entirety and replaced with the following:

It is the Bidder's responsibility to ensure that its entire bid submission has been received. Misrouting or other electronic delivery issues outside of Canada's e-mail system and firewalls resulting in the late submission of bids are not acceptable reasons for the bid to be accepted.

In section 08, Transmission by facsimile, subsection 1 is deleted in its entirety.

In section 20, Further information, subsection 2 is deleted in its entirety.

#### 2.2 Submission of Bids

Unless otherwise specified in the bid solicitation or directed by the Contracting Authority, bids must be submitted to the Department of National Defence organization by electronic mail by the date and time indicated on page 1 of the bid solicitation.

Electronic Bid Submissions: Individual e-mails that may include certain scripts, formats, embedded macros and/or links, or those that exceed five (5) megabytes in size may be rejected by Canada's e-mail system and/or firewall(s) without notice to the Bidder or Contracting Authority. Larger bids may be submitted through more than one e-mail. Canada will confirm receipt of documents. It is the Bidder's responsibility to ensure that its entire bid submission has been received. Bidders should not assume that all documents have been received unless Canada confirms receipt of each document. Bidders are requested to allow sufficient time before the closing date and time when submitting their bids in the event that there are technical issues and resubmission is required. Canada will not accept any bids submitted after the closing date and time.

#### 2.3 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.

#### 2.4 Applicable Laws

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

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

#### **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 (one (1) soft copy submitted by e-mail)

Section II: Financial Bid (one (1) soft copy submitted by e-mail)

Section III: Certifications (one (1) soft copy submitted by e-mail)

Section IV: Additional Information (one (1) soft copy submitted by e-mail)

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

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) page size;
- (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 <a href="Policy on Green">Policy on Green</a>
<a href="Procurement">Procurement</a> (http://www.tpsgc-pwgsc.gc.ca/ecologisation-greening/achats-procurement/politique-policy-eng.html). To assist Canada in reaching its objectives, Bidders should use the environmentally-preferable format of black and white instead of colour.

#### Section II: 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

- (a) **Pricing:** Bidders must submit their financial bid in accordance with the Basis of Payment including Annex B, Pricing Table.
- (b) All Costs to be Included: The financial bid must include all costs for the requirement described in the bid solicitation for the entire Contract Period, including any option years. The identification of all necessary equipment, software, peripherals, cabling and components required to meet the requirements of the bid solicitation and the associated costs of these items is the sole responsibility of the Bidder.
- (c) **Blank Prices:** Bidders are requested to insert "\$0.00" for any item for which it does not intend to charge or for items that are already included in other prices set out in the tables. If the Bidder leaves any price blank, Canada will treat the price as "\$0.00" for evaluation purposes and may request that the Bidder confirm that the price is, in fact, \$0.00. No bidder will be permitted to add or change a price as part of this confirmation. Any bidder who does not confirm that the price for a blank item is \$0.00 will be declared non-responsive.

## 3.1.1 Electronic Payment of Invoices – Bid

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

If Annex C, 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.

#### 3.1.2 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.

Buyer ID D Svcs C 4-2-5

#### Section IV: Additional Information

#### 3.1.3 Contractor's Representative

Name and coordinates of the person responsible for:

#### **General Enquiries**

ivame:		
Telephone:		
Facsimile:	<b>-</b>	
E-mail address:		
<b>Delivery Follow</b> Name:	-Up	
•	-Up 	
Name:	r-Up  	

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

You are reminded that this solicitation requires the compliance and/or completion of requirements attached as an annex and forming part of this document.

#### 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.

#### 4.1.1 Technical Evaluation

All bids must be completed in full and provide all of the information requested in the bid solicitation to enable full and complete evaluation.

#### 4.1.1.1 Mandatory Technical Criteria

The following mandatory requirements must be submitted with the bid for evaluation:

(a) Technical compliance herein.

#### 4.1.2 Financial Evaluation

The financial evaluation will be conducted by calculating the Evaluated Price in accordance with Annex B, Pricing Table.

## **Evaluation of Price - Bid**

The price of the bid will be evaluated in Canadian dollars, Applicable Taxes excluded, Delivery Duty Paid (DDP) Ottawa, Ontario, Incoterms 2010, Canadian customs duties and excise taxes included.

Unless the bid solicitation specifically requires bids to be submitted in Canadian currency, bids submitted in foreign currency will be converted to Canadian currency for evaluation purposes. The rate given by the Bank of Canada in effect on the bid solicitation closing date, or on another date specified in the bid solicitation, will be applied as a conversion factor to the bids submitted in foreign currency.

#### 4.2 Basis of Selection

SACC Manual Clause A0069T (2007-05-25), Basis of Selection

#### 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

Bidders must submit the following duly completed certifications.

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

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide, **if applicable**, the declaration form available on the <u>Forms for the Integrity Regime</u> website (http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html), to be given further consideration in the procurement process, but should mail it directly to the address specified on the form and should not include it with their bid submission by e-mail.

#### 5.1.2 Additional Certifications Required with the Bid

Refer to Annex D, Additional Certifications Required with the Bid.

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

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

#### 5.2.1 Integrity Provisions – Required Documentation

In accordance with the section titled Information to be provided when bidding, contracting or entering into a real procurement agreement of the <u>Ineligibility and Suspension Policy</u> (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 <a href="Employment and Social">Employment and Social</a> <a href="Development Canada">Development Canada (ESDC) - Labour's</a> 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.

#### 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 Requirement

The Contractor must provide the items detailed under the Statement of Requirement at Annex A.

#### 6.3 Standard Clauses and Conditions

All clauses and conditions identified in the Contract by number, date and title are set out in the <u>Standard Acquisition Clauses and Conditions Manual</u> (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

<u>2010A</u> (2016-04-04), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract, with the following modification:

In section 01, Interpretation, "Canada", "Crown", "Her Majesty" or "the Government",

Delete: Minister of Public Works and Government Services

Insert: Minister of National Defence

#### 6.4 Term of Contract

#### 6.4.1 Period of the Contract

The period of the Contract is from date of Contract to one (1) month after all deliverables have been received and accepted, inclusive.

#### 6.4.2 Delivery Date

All the deliverables must be received on or before 31 March 2018.

#### 6.4.3 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: [additional details to be specified in the resulting contract]

Name: Luc Maillet

W6369-18-X014 D Svcs C 4-2-5

Title: Senior Procurement Officer, D Svcs C 4-2-5

Organization: Department of National Defence, Director Services Contracting 4 (D Svcs C 4)

Address:

E-mail address: <u>luc.maillet@forces.gc.ca</u>

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 Procurement Authority

The Procurement Authority for the Contract is: [to be specified in the resulting contract]

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

#### 6.5.3 Technical Authority

The Technical Authority for the Contract is: [to be specified in the resulting contract]

Name: [\_\_\_\_\_]
Title: [\_\_\_\_\_]
Organization: [\_\_\_\_\_]
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.

#### 6.5.4 Contractor's Representative

Name and coordinates of the person responsible for: to be specified in the resulting contract

Buyer ID

D Svcs C 4-2-5

**General Enquiries** 

Name:
Telephone:
Facsimile:
E-mail address:

**Delivery Follow-Up** 

Name:
Telephone:
Facsimile:
E-mail address:

#### 6.6 Payment

## 6.6.1 Basis of Payment

In consideration of the Contractor satisfactorily completing all of its obligations under the Contract, the Contractor will be paid firm unit prices, as specified in Annex B for a cost of \$\frac{1}{2}\text{to be specified in the resulting contract}\$. 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.

#### 6.6.2 Single Payment

SACC Manual clause H1000C (2008-05-12), Single Payment

#### 6.6.3 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s): [list below to be modified in the resulting contract as specified by the Contractor in its bid, if applicable]

- (a) Visa Acquisition Card;
- (b) MasterCard Acquisition Card;
- (c) Direct Deposit (Domestic and International);
- (d) Electronic Data Interchange (EDI);
- (e) Wire Transfer (International Only).

#### 6.7 Invoicing Instructions

- 6.7.1 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.
- 6.7.2 Invoices must be distributed as follows:

The original must be forwarded by e-mail to the Procurement Authority identified under the section entitled "Authorities" of the Contract for certification and payment, and the Contracting Authority identified under the section entitled "Authorities" of the Contract must be copied.

#### 6.8 Certifications and Additional Information

#### 6.8.1 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

Amd. No.

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.

#### 6.9 **Applicable Laws**

The Contract must be interpreted and governed, and the relations between the parties determined, by the laws in force in Ontario to be changed in the resulting contract to the Canadian province or territory as specified by the Contractor in its bid, if applicable].

#### 6.10 **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 2010A, (2016-04-04), General Conditions - Goods (Medium Complexity);
- (c) Annex A, Statement of Requirement;
- Annex B, Pricing Table: (d)
- the Contractor's bid dated [date to be specified in the resulting contract], as clarified on [date(s) to (e) be specified in the resulting contract, if applicable [OR] as amended on [date(s) to be specified in the resulting contract, if applicable].

#### 6.11 **Defence Contract**

SACC Manual clause A9006C (2012-07-16), Defence Contract

#### SACC Manual Clauses 6.12

```
SACC Manual clause B7500C (2006-06-16), Excess Goods
SACC Manual clause G1005C (2016-01-28), Insurance - No Specific Requirement
SACC Manual clause <a href="D9002C">D9002C</a> (2007-11-30), Incomplete Assemblies
```

#### 6.13 **Shipping Instructions**

#### 6.13.1 Shipping Instructions - Delivery at Destination

Goods must be consigned to the destination specified in the Contract and delivered:

Delivered Duty Paid (DDP) Ottawa, Ontario, Incoterms 2010 for shipments from a commercial contractor.

The Contractor will be responsible for all delivery charges, administration, costs and risk of transport and customs clearance, including the payment of customs duties and taxes.

#### 6.14 Office of the Procurement Ombudsman

The parties understand that the Procurement Ombudsman appointed pursuant to subsection 22.1(1) of the Department of Public Works and Government Services Act will, on request of a party, provide a proposal for an alternative dispute resolution process to resolve any dispute arising between the parties respecting the interpretation or application of a term or condition of this contract. The parties may consent to participate in the proposed alternative dispute resolution process and to bear the cost of such process. The Office of the Procurement Ombudsman may be contacted by telephone at 1-866-734-5169 or by email at opo-boa@opo-boa.gc.ca.

## **ANNEX A**

#### STATEMENT OF REQUIREMENT

#### **PURCHASE REQUEST TOOL TRACKING NUMBER: 2016-11176**

**1. TITLE:** Ultra-wideband antenna feeds for parabolic reflector antennas

#### 2. BACKGROUND

Linear polarized ultra-wideband parabolic antenna feeds are required by DRDC Ottawa for its current reflector antennas used in RF/microwave free space radiation system. This document gives the specifications of these antenna feeds.

#### 3. ACRONYMS

CW Continuous wave dBil dB above isotopic linear

DRDC Defence Research and Development Canada

RF Radio frequency

SOR Statement of Requirement

TA Technical Authority

VSWR Voltage standing wave ratio

Greater than
Less than

#### 4. APPLICABLE DOCUMENTS & REFERENCES

None

#### 5. REQUIREMENTS

Two (2) wideband antenna feeds must provide the following capabilities.

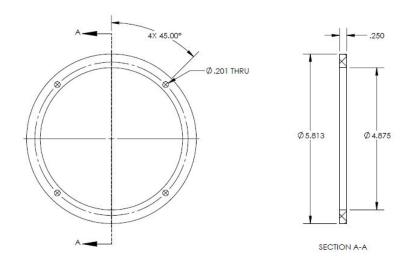
#### 5.1 Operation Frequency

One antenna feed must operate in Band-1 and the other in Band-2, as specified in the following table:

Band-1	Wide Band-1 includes frequencies from 1.5 to 18 GHz.
Band-2	Wide Band-2 includes frequencies from 18 to 40 GHz.

#### 5.2 Parabolic Antenna Wideband Feed Mount Structure

The proposed wideband feeds must have a mounting structure that is matched to our existing 2-ft, 3-ft and 4-ft reflector antenna feed mounting hole-positions, as shown in the following figure, with 4 #10-32 screws:



#### 5.3 Polarization

These parabolic wideband antenna feeds must provide a single-linear polarization field for the parabolic reflector antennas.

## 5.4 Antenna Feed Input Port Configurations

The input ports of wideband antenna feeds must be as follows:

- a. Type N female connector for the first feed band in section 5.1.
- b. Dual-ridged waveguide port with removable dual-ridged waveguide-to-2.4 mm female transition for the second feed band in section 5.1.

## 5.5 Performance

The Band-1 and Band-2 antenna feeds must meet the performance requirements given in the following tables, when they are used with 2-ft, 3-ft and 4-ft reflectors.

#### 5.5.1 For Frequency Wide Band-1

Frequency (GHz)	Gain (dBil)			
	2-ft-ant	3-ft-ant	4-ft-ant	
1.5	> 11	> 16	> 19	
18.0	> 30	> 35	> 38	

Frequency (GHz)	3-dB Beamwidth (degrees)		
	2-ft-ant 3-ft-ant 4-ft-ar		
1.5	< 25.5	< 17.0	< 12.8
18.0	< 2.6	< 1.6	< 1.2

Antenna	Side	On-Axis	VSWR			Can	Weight	
	Lobe Level	Cross Polarization	(at least)			handle CW	(lb.)	
	(dB)	(dB)	1.5-5	5-10	10-15	15-18	power	
			GHz	GHz	GHz	GHz	(watts)	
2-ft-ant	< 10.0	> 20	3:1	3.5:1	4:1	4.5:1	50	< 18
3-ft-ant	< 11.0	> 20	3:1	3.5:1	4:1	4.5:1	50	< 28
4-ft-ant	< 12.0	> 20	3:1	3.5:1	4:1	4.5:1	50	< 45

#### 5.5.2 For Frequency Wide Band-2

Frequency (GHz)	Gain (dBil)		
	2-ft-ant	3-ft-ant	4-ft-ant
18.0	> 33	> 38	> 41
40.0	> 40	> 45	> 48

Frequency (GHz)	3-dB Beamwidth (degrees)		
	2-ft-ant	4-ft-ant	
18.0	< 2.5	< 1.6	< 1.2
40.0	< 1.1	< 0.7	< 0.6

Antenna	Side	On-Axis	VSWR	Can handle CW power when	Weight
	Lobe	Cross	(at least)	configured with dual-ridged	(lb.)
	Level	Polarization		waveguide input	
	(dB)	(dB)		(watts)	
2-ft-ant	< 12.0	> 25	2.5:1	100	< 18
3-ft-ant	< 13.0	> 25	2.5:1	100	< 28
4-ft-ant	< 14.0	> 25	2.5:1	100	< 45

#### 6. **DELIVERABLES**

- 6.1 The design of wideband antenna feed mounting structure, feed waveguide port and feed connector location, and wideband antenna feed outlines for Wide Bands 1 and 2. The format must be in Standard ACIS Text (SAT) for solid model. This deliverable must be on a DVD.
- 6.2 All hardware for two (2) wideband antenna feeds as described in section 5
- Return loss versus frequency measured data for each wideband antenna feed in its respective frequency band. The format must be in comma-separated values (CSV).

#### 7. DATE OF DELIVERY

- 7.1 Within four (4) weeks of contract award, delivery of outline drawings of wideband antenna feed required in section 6.1
- 7.2 Delivery of all other deliverables no later than 31 March 2018

#### 8. LANGUAGE OF WORK

English

#### 9. **DELIVERY LOCATION**

Defence Research and Development Canada – Ottawa Research Centre

Amd. No.

Building 29

3701 Carling Ave.

Ottawa, ON

K1A 0Z4

Canada

#### 10. **TRAVEL**

Not required

#### 11. **MEETINGS**

Not required

#### **12. GOVERNMENT SUPPLIED MATERIAL (GSM)**

None

#### **13**. **GOVERNMENT FURNISHED EQUIPMENT (GFE)**

None

#### 14. **SPECIAL CONSIDERATIONS**

None

## **ANNEX B**

## **PRICING TABLE**

[Note: The Bidder must provide all of the pricing requested in the following table in accordance with article 6.6.1, Basis of Payment.]

Item	Description	Firm All- Inclusive Unit Price
	Antenna Feed – Band-1	
1	Design/outline (deliverable 6.1)	\$[]
2	All hardware (deliverable 6.2)	\$[]
3	Measured data (deliverable 6.3)	\$[]
	Subtotal Antenna Feed – Band-1	<b>\$</b> []
	Antenna Feed – Band-2	
4	Design/outline (deliverable 6.1)	\$[]
5	All hardware (deliverable 6.2)	\$[]
6	Measured data (deliverable 6.3)	\$[]
	Subtotal Antenna Feed – Band-2	<b>\$</b> []
	Total Antenna Feed – Band-1 + Antenna Feed – Band-2 [Evaluated Price]	\$[]
	Applicable Taxes	\$[]
	Total	\$[ ]

# ANNEX C TO PART 3 OF THE BID SOLICITATION ELECTRONIC PAYMENT INSTRUMENTS

The Bidder accepts	any of the following	Electronic Payment	Instrument(s):

Amd. No.

(	) VISA Acquisition Card;
(	) MasterCard Acquisition Card;
(	) Direct Deposit (Domestic and International);
(	) Electronic Data Interchange (EDI);
(	) Wire Transfer (International Only).

Amd. No. Buyer ID  $D \ Sves \ C \ 4-2-5$ 

W6369-18-X014 D Svcs C 4-2-5

# ANNEX D TO PART 5 OF THE BID SOLICITATION ADDITIONAL CERTIFICATIONS REQUIRED WITH THE BID

## 1. Technical Compliance

#	Requirements	Initial or Check Box to Confirm Compliance
1	Statement of Requirement 5.1	
2	Statement of Requirement 5.2	
3	Statement of Requirement 5.3	
4	Statement of Requirement 5.4	
5	Statement of Requirement 5.5.1	
6	Statement of Requirement 5.5.2	

6	Statement of Requirement 5.5.2						
The Bidder certifies that all goods proposed conform, and will continue to conform throughout the period of the Contract, to the requirements detailed under Annex A listed above.							
Bidde	er's authorized representative signature Date		_				