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	<p>EC Bid Solicitation No. /SAP No. – N° de la demande de soumissions EC / N° SAP 5000076973</p>	
	<p>Date of Bid solicitation (YYYY-MM-DD) – Date de la demande de soumissions (AAAA-MM-JJ) 2024-03-15</p>	
	<p>Bid Solicitation Closes (YEAR-MM-DD) - La demande de soumissions prend fin (AAAA-MM-JJ) at – à 15:00 on – le 2024-04-12</p>	<p>Time Zone – Fuseau horaire Eastern Daylight Time</p>
	<p>F.O.B – F.A.B</p>	
	<p>Address Enquiries to - Adresser toutes questions à Shawn Davis shawn.davis@ec.gc.ca</p>	
	<p>Telephone No. – N° de téléphone</p>	<p>Fax No. – N° de télécopieur</p>
	<p>Delivery Required (YEAR-MM-DD) – Livraison exigée (AAAA-MM-JJ) 2024-09-30</p>	
	<p>Destination - of Services / Destination des services Québec</p>	
	<p>Vendor/Firm Name and Address - Raison sociale et adresse du fournisseur/de l’entrepreneur</p>	
<p>Telephone No. – N° de téléphone</p>	<p>Fax No. – N° de télécopieur</p>	
<p>Name and title of person authorized to sign on behalf of Vendor/Firm: (type or print) /</p> <p>Nom et titre de la personne autorisée à signer au nom du fournisseur/de l’entrepreneur (taper ou écrire en caractères d’imprimerie)</p> <p>Signature Date</p>		



INVITATION TO TENDER

Site preparation for the installation of an Automated Radiosonde Launching System (ARLS) and an Automated Weather Station (AWS) at the Kuujjuak Upper Air Station in Kuujjuaq Quebec

TABLE OF CONTENTS

SPECIAL INSTRUCTIONS TO BIDDERS (SI)

- SI01 Bid Documents
- SI02 Enquiries during the Solicitation Period
- SI03 Mandatory Site Visit
- SI04 Revision of Bid
- SI05 Bid Results
- SI06 Insufficient Funding
- SI07 Bid Validity Period
- SI08 Bid Preparation Instructions
- SI09 Construction Documents
- SI10 Industrial Security Related Requirements
- SI11 Listing of Subcontractors and Suppliers
- SI12 Green Procurement
- SI13 Web Sites
- SI14 Comprehensive Land Claim Agreements

R2710T GENERAL INSTRUCTIONS - CONSTRUCTION SERVICES - BID SECURITY REQUIREMENTS (GI) (2022-01-28)

The following GI's are included by reference and are available at the following Web Site

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

- GI01 Integrity Provisions - Bid
- GI02 Completion of Bid
- GI03 Identity or Legal Capacity of the Bidder
- GI04 Applicable Taxes
- GI05 Capital Development and Redevelopment Charges
- GI06 Registry and Pre-qualification of Floating Plant
- GI07 Listing of Subcontractors and Suppliers
- GI08 Bid Security Requirements (Not Applicable)
- GI09 Submission of Bid
- GI10 Revision of Bid
- GI11 Rejection of Bid
- GI12 Bid Costs
- GI13 Procurement Business Number
- GI14 Compliance with Applicable Laws
- GI15 Approval of Alternative Materials
- GI16 Performance Evaluation
- GI17 Conflict of Interest-Unfair Advantage
- GI18 Code of Conduct for Procurement—bid

CONTRACT DOCUMENTS (CD)

SUPPLEMENTARY CONDITIONS (SC)

- SC01 Industrial Security Related Requirements, Documents Safeguarding
- SC02 Limitation of Liability
- SC03 Insurance Terms
- SC04 Asphalt Price Adjustment
- SC05 Elevator Maintenance Requirement



BID AND ACCEPTANCE FORM (BA)

- BA01 Identification
- BA02 Business Name and Address of Bidder
- BA03 The Offer
- BA04 Bid Validity Period
- BA05 Acceptance and Contract
- BA06 Construction Time
- BA07 Bid Security
- BA08 Signature

APPENDIX "1" INTEGRITY PROVISIONS

ANNEX "A" STATEMENT OF WORK (SoW)



SPECIAL INSTRUCTIONS TO BIDDERS (SI)

SI01 BID DOCUMENTS

1. The following are the Bid Documents:
 - a. Invitation to Tender - Page 1;
 - b. Special Instructions to Bidders;
 - c. General Instructions - Construction Services - Bid Security Requirements R2710T (2019-05-30)
 - d. Clauses & Conditions identified in "Contract Documents";
 - e. Drawings and Specifications;
 - f. Bid and Acceptance Form and related Appendix(s); and
 - g. Any amendment issued prior to solicitation closing.

Submission of a bid constitutes acknowledgement that the Bidder has read and agrees to be bound by these documents.

2. General Instructions - Construction Services - Bid Security Requirements R2710T is incorporated by reference and is set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Services and Procurement Canada. The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

The General Instructions R2710T are modified as follows:

At GI10 (2010-01-11) Revision of bid

Delete: In its entirety.

Insert:

1. A bid submitted in accordance with these instructions may be revised provided the revision is received at the office designated for the receipt of bids, on or before the date and time set for the closing of the solicitation. The revision shall be on the Bidder's letterhead or bear a signature that identifies the Bidder.
2. A revision to a bid that includes unit prices must clearly identify the change(s) in the unit price(s) and the specific item(s) to which each change applies.

At GI13 (2019-05-30) Procurement Business Number

Delete: In its entirety.

At GI16 (2010-01-11) Performance evaluation

DELETE: 2.

SI02 ENQUIRIES DURING THE SOLICITATION PERIOD

1. Enquiries regarding this bid must be submitted in writing to the Contracting Authority named on the Invitation to Tender - Page 1 at shawn.davis@ec.gc.ca. Except for the approval of alternative materials as described in GI15 of R2710T, enquiries should be received no later than five (5) business days prior to the date set for solicitation closing to allow sufficient time to provide a response. Enquiries received after that time may result in an answer NOT being provided.
2. To ensure consistency and quality of the information provided to Bidders, ECCC will examine the content of the enquiry and will decide whether or not to issue an amendment.



3. All enquiries and other communications related to this bid sent throughout the solicitation period must be directed ONLY to the Contracting Authority named in paragraph 1. above. Failure to comply with this requirement may result in the bid being declared non-compliant.

SI03 MANDATORY SITE VISIT

Not Applicable

SI04 REVISION OF BID

A bid may be revised in accordance with GI10 of R2710T.

SI05 BID RESULTS

1. There will be no Public Opening for the purposes of this solicitation.
2. The responsive bid carrying the lowest price will be recommended for contract award.
3. Following solicitation closing, bid results may be obtained by contacting shawn.davis@ec.gc.ca

SI06 INSUFFICIENT FUNDING

In the event that the lowest compliant bid exceeds the amount of funding allocated for the Work, Canada in its sole discretion may

- a. cancel the solicitation; or
- b. obtain additional funding and award the Contract to the Bidder submitting the lowest compliant bid

SI07 BID VALIDITY PERIOD

1. Canada reserves the right to seek an extension to the bid validity period prescribed in BA04 of the Bid and Acceptance Form. Upon notification in writing from Canada, Bidders will have the option to either accept or reject the proposed extension.
2. If the extension referred to in paragraph 1. above is accepted, in writing, by all those who submitted bids, then Canada will continue immediately with the evaluation of the bids and its approvals processes.
3. If the extension referred to in paragraph 1. above is not accepted in writing by all those who submitted bids then Canada will, at its sole discretion, either
 - a. continue to evaluate the bids of those who have accepted the proposed extension and seek the necessary approvals; or
 - b. cancel the invitation to tender.
4. The provisions expressed herein do not in any manner limit Canada's rights in law or under GI11 of R2710T.

SI08 Bid Preparation Instructions

Note for electronic submission of bids:

In order to be considered, bids must be received no later than the date and time indicated on the cover page to herein as the "Closing Date." Bids received after the Closing Date will be considered non-



responsive and will not be considered for contract award. Bids submitted by email must be submitted ONLY to the following email address:

Email Address: soumissionsbids@ec.gc.ca

Attention: Shawn Davis

Solicitation Number: 5000076973

Bidders should ensure that their name, address, Closing Date of the solicitation and Solicitation Number are clearly indicated in the body of their email. Bids and supporting information may be submitted in either English or French.

The total size of the email, including all attachments, must be less than 15 megabytes (MB). It is each Bidder's responsibility to ensure that the total size of the email does not exceed this limit.

Bids sent by fax will not be accepted.

It is important to note that emails systems can experience systematic delays and, at times, large attachments may cause systems to hold or delay transmission of emails. It is solely the Bidder's responsibility to ensure that the Contracting Authority receives a bid on time, in the mailbox that has been identified for bid receipt purposes. Date stamps for this form of transmission are not acceptable.

If there is a discrepancy between the wording of the soft copy and the hard copy, the wording of the hard copy will have priority over the wording of the soft copy.

SI09 CONSTRUCTION DOCUMENTS

The successful Contractor will be provided (**with 1 electronic copy**) of the sealed and signed drawings, the specifications and the amendments upon acceptance of the offer.

SI10 INDUSTRIAL SECURITY RELATED REQUIREMENTS

Not Applicable

SI11 LISTING OF SUBCONTRACTORS AND SUPPLIERS

Deleted

SI12 GREEN PROCUREMENT

To support the mandate and commitments of ECCC and the Government of Canada as a whole, Bidders that do business with ECCC are expected to have a Corporate Environmental Policy that addresses water conservation, greenhouse gas (GHG) reduction, waste reduction, air quality, and supports biodiversity and protection of wildlife.

SI13 WEB SITES

The connection to some of the Web sites in the solicitation documents is established by the use of hyperlinks. The following is a list of the addresses of the Web sites:

Treasury Board Appendix L, Acceptable Bonding Companies
<http://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=14494§ion=text#appl>

Buy and Sell
<https://www.achatsetventes-buyandsell.gc.ca>

Canadian economic sanctions



https://www.international.gc.ca/world-monde/international_relations-relations_internationales/sanctions/index.aspx?lang=eng

Bid Bond (form PWGSC-TPSGC 504)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/504.pdf>

Performance Bond (form PWGSC-TPSGC 505)

http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/505_eng.pdf

Labour and Material Payment Bond (form PWGSC-TPSGC 506)

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/documents/506.pdf>

Standard Acquisition Clauses and Conditions (SACC) Manual

<https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual/5/R>

PWGSC, Industrial Security Services

<http://ssi-iss.tpsgc-pwgsc.gc.ca/index-eng.html>

PWGSC, Code of Conduct and Certifications

<http://www.tpsgc-pwgsc.gc.ca/app-acq/cndt-cndct/contexte-context-eng.html>

Construction and Consultant Services Contract Administration Forms Real Property Contracting

<http://www.tpsgc-pwgsc.gc.ca/app-acq/forms/formulaires-forms-eng.html>

Declaration Form

<http://www.tpsgc-pwgsc.gc.ca/ci-if/formulaire-form-eng.html>

Trade agreements

<https://buyandsell.gc.ca/policy-and-guidelines/Policy-and-Legal-Framework/Trade-Agreements>

SI14 Comprehensive Land Claim Agreements

This procurement is subject to the following Comprehensive Land Claims Agreement(s):

- Nunavik Inuit Land Claims Agreement
- James Bay and Northern Quebec Agreement



CONTRACT DOCUMENTS (CD)

1. The following are the Contract Documents:
 - a. Contract Page when signed by Canada;
 - b. Duly completed Bid and Acceptance Form and any Appendices attached thereto;
 - c. Drawings and Specifications;
 - d. General Conditions and clauses

GC1	General Provisions – Construction Services	R2810D (2022-01-28);
GC2	Administration of the Contract	R2820D (2016-01-28);
GC3	Execution and Control of the Work	R2830D (2019-11-28);
GC4	Protective Measures	R2840D (2008-05-12);
GC5	Terms of Payment	R2850D (2019-11-28);
GC6	Delays and Changes in the Work	R2860D (2019-05-30);
GC7	Default, Suspension or Termination of Contract	R2870D (2018-06-21);
GC8	Dispute Resolution	R2880D (2019-11-28);
GC9	Contract Security	R2890D (2018-06-21);
GC10	Insurance	R2900D (2008-05-12);
GC11	Allowable Costs for Contract Changes Under GC 6.4.1	R2950D (2015-02-25);

 - e. Supplementary Conditions
 - f. Any amendment issued or any allowable bid revision received before the date and time set for solicitation closing;
 - g. Any amendment incorporated by mutual agreement between Canada and the Contractor before acceptance of the bid; and
 - h. Any amendment or variation of the contract documents that is made in accordance with the General Conditions.

2. The documents identified by title, number and date above are incorporated by reference and are set out in the Standard Acquisition Clauses and Conditions (SACC) Manual, issued by Public Works and Government Services Canada (PWGSC). The SACC Manual is available on the PWGSC Web site: <https://buyandsell.gc.ca/policy-and-guidelines/standard-acquisition-clauses-and-conditions-manual>

3. The language of the contract documents is the language of the Bid and Acceptance Form submitted.



SUPPLEMENTARY CONDITIONS (SC)

SC01 INDUSTRIAL SECURITY RELATED REQUIREMENTS, DOCUMENT SAFEGUARDING

There is no document security requirement applicable to this Contract.

SC02 LIMITATION OF LIABILITY

GC1.6 of R2810D is deleted and replaced with the following:

GC1.6 Indemnification by the Contractor

1. The Contractor shall indemnify and save Canada harmless from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by Canada or in respect of claims by any third party, brought or prosecuted and in any manner based upon, arising out of, related to, occasioned by, or attributable to the activities of the Contractor in performing the Work, provided such claims are caused by the negligent or deliberate acts or omissions of the Contractor, or those for whom it is responsible at law.

The Contractor's obligation to indemnify Canada for losses related to first party liability shall be limited to:

- a. In respect to each loss for which insurance is to be provided pursuant to the insurance requirements of the Contract, the Commercial General Liability insurance limit for one occurrence as referred to in the insurance requirements of the Contract .
- b. In respect to losses for which insurance is not required to be provided in accordance with the insurance requirements of the Contract, the greater of the Contract Amount or \$5,000,000, but in no event shall the sum be greater than \$20,000,000.

The limitation of this obligation shall be exclusive of interest and all legal costs and shall not apply to any infringement of intellectual property rights or any breach of warranty obligations.

3. The Contractor's obligation to indemnify Canada for losses related to third party liability shall have no limitation and shall include the complete costs of defending any legal action by a third party. If requested by Canada, the Contractor shall defend Canada against any third party claims.
4. The Contractor shall pay all royalties and patent fees required for the performance of the Contract and, at the Contractor's expense, shall defend all claims, actions or proceedings against Canada charging or claiming that the Work or any part thereof provided or furnished by the Contractor to Canada infringes any patent, industrial design, copyright trademark, trade secret or other proprietary right enforceable in Canada.
5. Notice in writing of a claim shall be given within a reasonable time after the facts, upon which such claim is based, became known.

SC03 INSURANCE TERMS

1) Insurance Requirements

Commercial General Liability Insurance

1. The Contractor must obtain Commercial General Liability Insurance, and maintain it in force throughout the duration of the Contract, in an amount usual for a contract of this nature, but for not less than \$2,000,000 per accident or occurrence and in the annual aggregate.



2. The Commercial General Liability policy must include the following:
- a. Additional Insured: Canada is added as an additional insured, but only with respect to liability arising out of the Contractor's performance of the Contract. The interest of Canada should read as follows: Canada, as represented by Environment and Climate Change Canada.
 - b. Bodily Injury and Property Damage to third parties arising out of the operations of the Contractor.
 - c. Products and Completed Operations: Coverage for bodily injury or property damage arising out of goods or products manufactured, sold, handled, or distributed by the Contractor and/or arising out of operations that have been completed by the Contractor.
 - d. Personal Injury: While not limited to, the coverage must include Violation of Privacy, Libel and Slander, False Arrest, Detention or Imprisonment and Defamation of Character.
 - e. Cross Liability/Separation of Insureds: Without increasing the limit of liability, the policy must protect all insured parties to the full extent of coverage provided. Further, the policy must apply to each Insured in the same manner and to the same extent as if a separate policy had been issued to each.
 - f. Blanket Contractual Liability: The policy must, on a blanket basis or by specific reference to the Contract, extend to assumed liabilities with respect to contractual provisions.
 - g. Employees and, if applicable, Volunteers must be included as Additional Insured.
 - h. Employers' Liability (or confirmation that all employees are covered by Worker's compensation (WSIB) or similar program)
 - i. Broad Form Property Damage including Completed Operations: Expands the Property Damage coverage to include certain losses that would otherwise be excluded by the standard care, custody or control exclusion found in a standard policy.
 - j. Notice of Cancellation: The Contractor will provide the Contracting Authority thirty (30) days prior written notice of policy cancellation or any changes to the insurance policy.
 - k. If the policy is written on a claims-made basis, coverage must be in place for a period of at least 12 months after the completion or termination of the Contract.
 - l. Owners' or Contractors' Protective Liability: Covers the damages that the Contractor becomes legally obligated to pay arising out of the operations of a subcontractor.
 - m. Sudden and Accidental Pollution Liability¹ (minimum 120 hours): To protect the Contractor for liabilities arising from damages caused by accidental pollution incidents.

2) **Insurance Contracts**

- (a) The Contractor must, at the Contractor's expense, obtain and maintain insurance contracts in accordance with the requirements of the Certificate of Insurance. Coverage must be placed with an Insurer licensed to carry out business in Canada.



- (b) Compliance with the insurance requirements does not release the Contractor from or reduce its liability under the Contract. The Contractor is responsible for deciding if additional insurance coverage is necessary to fulfill its obligation under the Contract and to ensure compliance with any applicable law. Any additional insurance coverage is at the Contractor's expense, and for its own benefit and protection.

3) **Period of Insurance**

- (a) The policies required in the Certificate of Insurance must be in force from the date of contract award and be maintained throughout the duration of the Contract.
- (b) The Contractor must be responsible to provide and maintain coverage for Products/Completed Operations hazards on its Commercial General Liability insurance policy, for a period of six (6) years beyond the date of the Certificate of Substantial Performance.

4) **Proof of Insurance**

- (a) Before commencement of the Work, and no later than thirty (30) days after contract award, the Contractor must deposit with Canada a Certificate of Insurance.
- (b) Upon request by Canada, the Contractor must provide originals or certified true copies of all contracts of insurance maintained by the Contractor pursuant to the Certificate of Insurance.

5) **Insurance Proceeds**

In the event of a claim, the Contractor must, without delay, do such things and execute such documents as are necessary to effect payment of the proceeds.

6) **Deductible**

The payment of monies up to the deductible amount made in satisfaction of a claim must be borne by the Contractor.

SC04 ASPHALT CEMENT PRICE ADJUSTMENT

Not Applicable

SC05 ELEVATOR MAINTENANCE REQUIREMENT

Not Applicable



BID AND ACCEPTANCE FORM (BA)

BA01 IDENTIFICATION

Site preparation for the installation of an Automated Radiosonde Launching System (ARLS) and an Automated Weather Station (AWS) at the Kuujjuak Upper Air Station in Kuujjuaq Quebec.

BA02 LEGAL NAME AND ADDRESS OF BIDDER

Legal Name: _____

Operating Name (if any): _____

Address: _____

Telephone: _____ Fax: _____ E-mail: _____

BA03 THE OFFER

The Bidder offers to Canada to perform and complete the Work for the above named project in accordance with the Bid Documents for the Total Bid Amount of

\$ _____

excluding Applicable Tax(es) (amount in numbers).

BA04 BID VALIDITY PERIOD

The bid must not be withdrawn for a period of **120 days** following the date of solicitation closing.

BA05 ACCEPTANCE AND CONTRACT

Upon acceptance of the Bidder's offer by Canada, a binding Contract will be formed between Canada and the Bidder. The documents forming the Contract will be the Contract Documents identified in "Contract Documents (CD)" section.

BA06 CONSTRUCTION TIME

The Contractor must perform and complete the Work within 24 weeks from the date of notification of acceptance of the offer.

BA07 BID SECURITY

Not Applicable

BA08 SIGNATURE

Name and title of person authorized to sign on behalf of Bidder (Type or print)

Name & Title (*printed*):

Signature:

Date:



APPENDIX 1 - INTEGRITY PROVISIONS

Environnement et Changement climatique Canada a adopté le régime d'intégrité développé et mis en place par Services publics et Approvisionnement Canada. Les fournisseurs acceptent, en soumettant une proposition, de se conformer aux dispositions du régime d'intégrité et la Politique d'inadmissibilité et de suspension ainsi que le Code de conduite pour l'approvisionnement. / Environment and Climate Change Canada has endorsed the Integrity Regime developed and implemented by Public Services and Procurement Canada. By submitting a quote, Contractors agree to comply with the provisions of the Integrity Regime and Ineligibility and Suspension Policy as well as the Code of Conduct for Procurement.

Selon la Politique d'inadmissibilité et de suspension de TPSGC (maintenant SPAC), les renseignements suivants doivent être fournis lors d'une soumission ou de la passation d'un marché.² / In accordance with the PWGSC (now PSPC) Ineligibility and Suspension Policy, the following information is to be provided when bidding or contracting.²

* Informations obligatoires / Mandatory Information

*Dénomination complète de l'entreprise / Complete Legal Name of Company	
*Nom commercial / Operating Name	
*Adresse de l'entreprise / Company's address	*Type d'entreprise / Type of Ownership
	<input type="checkbox"/> Individuel / Individual <input type="checkbox"/> Corporation / Corporation <input type="checkbox"/> Coentreprise / Joint Venture
*Membres du conseil d'administration³ / Board of Directors³ (Ou mettre la liste en pièce-jointe / Or provide the list as an attachment)	
Prénom / First name	Nom / Last Name
Position (si applicable) / Position (if applicable)	

² **Liste des noms** : Tous les fournisseurs, peu importe leur situation au titre de la Politique, doivent présenter les renseignements ci-dessous au moment de prendre part à un processus d'approvisionnement:

- les fournisseurs constitués en personne morale, y compris ceux qui présentent une soumission à titre de coentreprise, doivent fournir la liste complète des noms de tous les administrateurs actuels ou, dans le cas d'une entreprise privée, des propriétaires de la société;
- les fournisseurs soumissionnant à titre d'entreprise à propriétaire unique, y compris ceux soumissionnant en tant que coentreprise, doivent fournir la liste complète des noms de tous les propriétaires;
- les fournisseurs soumissionnant à titre de société en nom collectif n'ont pas à soumettre une liste de noms.

List of names: All suppliers, regardless of their status under the Policy, must submit the following information when participating in a procurement process:

- suppliers that are corporate entities, including those bidding as joint ventures, must provide a complete list of the names of all current directors or, for a privately owned corporation, the names of the owners of the corporation;
- suppliers bidding as sole proprietors, including sole proprietors bidding as joint ventures, must provide a complete list of the names of all owners; or
- suppliers that are a partnership do not need to provide a list of names.

³ Conseil des gouverneurs / Board of Governors; Conseil de direction / Board of Managers; Conseil de régents / Board of Regents; Conseil de fiducie / Board of Trustees; Comité de réception / Board of Visitors



ANNEX A – STATEMENT OF WORK

1.0 Objective:

To engage the services of a contractor with the expertise and resources (i.e., personnel, labour, supervision, equipment, tools, materials, and supplies) to perform foundation, conduit, electrical, and fencing installation work required to prepare for the installation of an Automated Radiosonde Launching System (ARLS) and an Automated Weather Station (AWS) at the Kuujjuak Upper Air Station in Kuujjuaq Quebec.

2.0 BACKGROUND:

Environment and Climate Change Canada's (ECCC) Meteorological Services of Canada (MSC) is preparing to install an ARLS and an AWS used to release atmospheric monitoring balloons at the Kuujjuak Upper Air Station in Kuujjuak Quebec. These automated systems assist the department in obtaining more accurate and timely data. To complete this work, ECCC requires a gravel pad, a foundation, conduit installation, electrical work, and a perimeter fence.

3.0 SCOPE

Foundation:

MSC requires services to supply a gravel pad and foundations for an ARLS (20'x 8' ISO shipping container). The shipping container will be pre-equipped with the necessary connection points and twist lock connectors.

Electrical and conduit:

MSC requires electrical services to supply a power feed from the Operations building to an ARLS. The ARLS will be pre-equipped with the necessary connection points and will require a termination for power with a provided plug (Hubble HBL430C12W). If suitable, the existing conduit from the Operations building may be used; this will require the removal of the existing abandoned cable and the installation of a conduit extension (6.5 m) from the end of the existing conduit run to the ARLS. If the existing conduit is damaged or otherwise unsuitable, it should be replaced as a single run from the Operations building to the ARLS (<30m). Electrical grounding for the ARLS and AWS is required per the manufacture's specifications.

MSC also requires electrical services to supply a communications cable from the Operations building to the ARLS. If suitable, the existing conduit from the Operations building may be used with the removal of the abandoned cable; this would require the installation of a junction box and conduit (6.5 m) from the end of the existing conduit run to extend to the ARLS. If the existing conduit is damaged or otherwise unsuitable, it should be replaced as a single run from the Operations building to the ARLS (<30m).

Fencing:

MSC requires fencing services to supply a gated, 6' chain link fence around the perimeter of the Kuujjuak Upper Air Station, Kuujjuak QC (~55m x 60m).



4.0 TASKS (Refer to Figures for location details)

Tasks outlined within this Statement of Work are dependent on the timing of those outlined within other Contracts. This may lead to delays between the requirements listed below. Please work with the Technical Authority to coordinate schedules and minimize delays. All work identified in this statement of work must be completed by 31 August 2024.

4.1. REQUIREMENTS

4.1.1 ARLS

The Contractor must complete the following tasks while abiding by section 4.2 General Details below:

- a. Construct a 10 x 15 meter, packed and leveled, gravel pad located as per Figures 2 and 8.
- b. Cast four (4) leveled, concrete foundation blocks, secured to bed rock, as per Figures 2 and 8 and Vaisala pre-install guide section 6.2 (4 x 0.6m x 0.6m x ~0.4m).
- c. Extend or replace existing conduits from operations building to ARLS as pictured in Figures 2 through 6, to accommodate:
 - a. power cable (supplied as part of contract).
 - b. cat6 ethernet cable (supplied as part of contract).
- d. Provide and lay the power cable: direct bury “teck” cable - minimum 25 Amp, **240** VAC feed from the Operations Building to the ARLS unit.
- e. Terminate Electrical feed within Operations building electrical panel with applicable circuit breaker capable of providing a minimum of 25 Amps at **240**Vac. Figures 3 and 4.
- f. Terminate Electrical cable at ARLS with Hubbell plug **HBL430C12W** provided with ARLS.
- g. Provide and lay communications cable: direct bury “teck” cable – CAT6 ethernet, from the Operations Building to the ARLS.
- h. Communications cable will not be terminated but left with sufficient slack for future installation (min 5m at each end).
- i. Ground ARLS according to Vaisala pre-install guide section 7.3 and/or local electrical codes.
- j. Cable and grounding to terminate at ARLS as per Figures 2, 8, and 9.

4.1.2 AWS

The Contractor must complete the following tasks while abiding by section 4.2 General Details below:

- a. Install conduit from ARLS to AWS (existing wind tower) as pictured in Figures 2 and 7. The conduit must meet the local electrical code,



as electrical wires will be run through the conduit after installation. The conduit must contain at least two (2) pull ropes outlined in the general details below.

- b. Provide grounding for AWS mast as per Figure 2 to local electrical code.

4.2 GENERAL DETAILS

- a. 2" (50mm) PVC conduit will be used.
- b. Two (2) pull wires (min) will be available in each conduit to allow for cable installation.
- c. All cables and conduits must be buried as per regulatory codes.
- d. All conduit, electrical wires, cable, grounding equipment, materials and labour will be supplied by the Contractor under this contract unless otherwise noted.
- e. Electrical cable to be provided under this contract that is supplying the ARLS must be "Teck" type.
- f. Screened sand must be supplied and installed, above and below cables if soil conditions necessitate it. Size of the screened sand or small gravel must be determined by local electrical code.
- g. Increased cable protection across roadway as dictated by the local electrical code is required to prevent routine heavy machinery traffic on gravel roadway from damaging cables.
- h. When trenching across roadway, trenches must occur perpendicular to road.
- i. Marking tape must be installed, as required, to clearly identify buried cables.
- j. A minimum separation distance of 12 inches is required between all communications and power cables.
- k. Final installation must provide adequate clearance between buried cables and utility services to allow for servicing and maintenance of utilities.
- l. All conduit joints must be sealed and ends capped (if unused) to prevent water ingress.
- m. All open trenches must be appropriately identified / marked to prevent motor vehicle accidents or injury to personnel.
- n. The final installation must meet all Provincial/Territorial regulatory codes and safety requirements.
- o. The Contractor is responsible for all service locates.
- p. ARLS and AWS must be grounded according to local electrical code and as conditions require. (grounding ring, grounding rod, buried plate/mesh, etc.).
- q. All panel breakers, conduits and/or feeds to be clearly identified and marked.
- r. The final installation must meet all Provincial/Territorial regulatory codes and safety requirements.
- s. Any excavated fill must be removed and disposed of as per local regulations.
- t. The construction area is to be cleaned of all construction material and debris upon completion.
- u. No burial or onsite disposal of construction material or debris is permitted.



- v. All groundwork must be restored to its original condition.
- w. The Contractor is responsible for all applicable permits and inspections.
- x. The Contractor is responsible for co-ordination with Electrical Service Provider for connection to Electrical service, if applicable.

5.0 DELIVERABLES

The Contractor must supply the Technical Authority with the following:

- a. A Schedule detailing estimated construction timeline.
- b. Specifications for all supplied materials (including part numbers).
- c. Sketch of proposed trenching layout (after all site locates completed).

6.0 WORK LOCATION

Work will take place at the Kuujjuak Upper Air Station in Kuujjuak Quebec.

Kuujjuak Upper Air Station:

58°109213"N, -68°41'41"W

861 rue Naalawik, C.P 39 Kuujjuaq, Quebec J0M 1C0

1.14 KM N of the Kuujjuak Airport terminal

7.0 OFFICIAL LANGUAGES

All correspondence with the Technical Authority must be completed in either English or French.

8.0 TRAVEL

Travel will not be paid for under this contract. All travel to and from the location of work is the responsibility of the Contractor.

9.0 GOVERNMENT SUPPLIED MATERIAL

All materials required to complete the work outlined below are the responsibility of the Contractor except for the following:

ARLS with electrical panel and Hubble plug



10.0 FIGURES



Figure 1. Airport to Kuujuaq Upper Air Station



Figure 2. Kuujjuaq Upper Air Station

Operations Building - center

ARLS proposed site location (green rectangle)

Existing conduit (dark green line).

New conduit extensions OPS to ARLS (orange lines)

New conduit AWS (existing 10m wind tower) to ARLS (orange lines)

Proposed ARLS gravel pad location (10 X 15m) (black rectangle)

Proposed new fence (red lines)

Proposed new gate position (orange rectangle)



Figure 3 and 4.

Electrical panel, located inside the Operations building.

Panel is installed on the inside of an exterior wall.

Two conduits run from this panel to the ARLS.



Figure 5.

Conduit that runs along the ground from Operations to proposed ARLS site.

Cable condition is unknown.

Both cables to be removed and replaced: power feed and communications



Figure 6

Proposed ARLS site (near helium packs) and existing conduit



Figure 7

Existing Wind tower (center with yellow guy guards)



Figure 8

Example installation (Inukjuak Upper Air, QC) of foundation, pad, and electrical conduit

NOTE – footings should extend beyond sea can by at least 175mm in all directions



Figure 9

Example installation (Vernon Upper Air, BC) of ARLS electrical connection and ground bar

List of Attachments, Drawings, Technical Specifications:

ARLS Pre-Installation Guide

- 5000076973_ARLS_Pre-InstallationGuide_EN

Hubbel Connector Specifications

- 5000076973_ARLS_Spec_EN
- 5000076973_ARLS-SALR_Install_EN-FR