



**RETURN BIDS TO:**

**RETOURNER LES SOUMISSIONS À:**

Travaux publics et Services gouvernementaux  
Canada  
Place Bonaventure, portail Sud-Oue  
800, rue de La Gauchetière Ouest  
7e étage, suite 7300  
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**

<b>Title - Sujet</b> Heavy Machinery for Envrioment Can	
<b>Solicitation No. - N° de l'invitation</b> K2C94-200392/B	<b>Date</b> 2019-12-03
<b>Client Reference No. - N° de référence du client</b> K2C94-200392	
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$MTA-625-15547	
<b>File No. - N° de dossier</b> MTA-9-42152 (625)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin</b> <b>at - à 02:00 PM</b> <b>on - le 2020-01-13</b>	<b>Time Zone</b> <b>Fuseau horaire</b> Heure Normale du l'Est HNE
<b>F.O.B. - F.A.B.</b> Specified Herein - Précisé dans les présentes <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input checked="" type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Lavoie, Corine	<b>Buyer Id - Id de l'acheteur</b> mta625
<b>Telephone No. - N° de téléphone</b> (514) 207-4777 ( )	<b>FAX No. - N° de FAX</b> (514) 496-3822
<b>Destination - of Goods, Services, and Construction:</b> <b>Destination - des biens, services et construction:</b> MINISTERE DE L'ENVIRONNEMENT LA BIOSPHERE - Dominic Matte 160 CH.DU TOUR DE L ISLE MONTREAL Québec H3C4G8 Canada	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

**Vendor/Firm Name and Address**

**Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**

Travaux publics et Services gouvernementaux Canada  
Place Bonaventure, portail Sud-Oue  
800, rue de La Gauchetière Ouest  
7e étage, suite 7300  
Montréal  
Québec  
H5A 1L6

<b>Delivery Required - Livraison exigée</b> Voir Doc.	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address</b> <b>Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone</b> <b>Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm</b> <b>(type or print)</b> <b>Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

N° de l'invitation - Solicitation No.

K2C94-200392/B

N° de réf. du client - Client Ref. No.

K2C94-200392

N° de la modif - Amd. No.

File No. - N° du dossier

MTA-9-42152

Id de l'acheteur - Buyer ID

MTA625

N° CCC / CCC No./ N° VME - FMS

---

**This bid solicitation cancels and supersedes previous bid solicitation number K2C94-200392/A dated December 12, 2019 with a closing of January 13, 2020 at 14:00 EST. A debriefing or feedback session will be provided upon request to bidders/offerors/suppliers who bid on the previous solicitation.**

---

## TABLE OF CONTENTS

<b>TABLE OF CONTENTS.....</b>	<b>1</b>
<b>PART 1 - GENERAL INFORMATION .....</b>	<b>3</b>
1.1 SECURITY REQUIREMENTS.....	3
1.2 REQUIREMENT .....	3
1.3 COMPREHENSIVE LAND CLAIMS AGREEMENT(S) .....	3
1.4 DEBRIEFINGS .....	3
1.5 TRADE AGREEMENTS .....	3
1.6 EPOST CONNECT SERVICE.....	3
<b>PART 2 - BIDDER INSTRUCTIONS.....</b>	<b>3</b>
2.1 STANDARD INSTRUCTIONS, CLAUSES AND CONDITIONS .....	3
2.2 SUBMISSION OF BIDS.....	4
2.3 ENQUIRIES - BID SOLICITATION.....	4
2.4 APPLICABLE LAWS .....	4
<b>PART 3 - BID PREPARATION INSTRUCTIONS.....</b>	<b>5</b>
3.1 BID PREPARATION INSTRUCTIONS .....	5
<b>PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION .....</b>	<b>6</b>
4.1 EVALUATION PROCEDURES.....	6
4.2 BASIS OF SELECTION.....	7
<b>PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION .....</b>	<b>7</b>
5.1 CERTIFICATIONS REQUIRED WITH THE BID .....	7
5.2 CERTIFICATIONS PRECEDENT TO CONTRACT AWARD AND ADDITIONAL INFORMATION .....	7
<b>PART 6 - RESULTING CONTRACT CLAUSES .....</b>	<b>8</b>
6.1 SECURITY REQUIREMENTS.....	8
6.2 REQUIREMENT .....	8
6.3 STANDARD CLAUSES AND CONDITIONS .....	8
6.4 TERM OF CONTRACT .....	8
6.5 AUTHORITIES .....	9
6.6 PAYMENT .....	10
6.7 INVOICING INSTRUCTIONS.....	11
6.8 CERTIFICATIONS AND ADDITIONAL INFORMATION.....	11
6.9 APPLICABLE LAWS .....	11
6.10 PRIORITY OF DOCUMENTS.....	11
6.11 SACC <i>MANUAL</i> CLAUSES .....	11
<b>ANNEX "A" .....</b>	<b>12</b>
REQUIREMENT .....	12
<b>ANNEX "B" .....</b>	<b>66</b>
BASIS OF PAYMENT .....	66
<b>ANNEX "C" .....</b>	<b>67</b>
MANDATORY TECHNICAL SPECIFICATIONS TO BE DEMONSTRATED .....	67
<b>ANNEX "D" TO PART 3 OF THE BID SOLICITATION .....</b>	<b>69</b>
ELECTRONIC PAYMENT INSTRUMENTS .....	69
<b>ANNEX "E" .....</b>	<b>70</b>
COMPLETE LIST OF COMPANY BOARD OF DIRECTORS .....	70

N° de l'invitation - Sollicitation No.  
K2C94-200392/B  
N° de réf. du client - Client Ref. No.  
K2C94-200392

N° de la modif - Amd. No.  
File No. - N° du dossier  
MTA-9-42152

Id de l'acheteur - Buyer ID  
MTA625  
N° CCC / CCC No./ N° VME - FMS

---

## **PART 1 - GENERAL INFORMATION**

### **1.1 Security Requirements**

### **1.2 Requirement**

### **1.3 Comprehensive Land Claims Agreement(s)**

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

- Nunavut Land Claims Agreement

### **1.4 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.

### **1.5 Trade Agreements**

The requirement is subject to the provisions of the World Trade Organization Agreement on Government Procurement (WTO-AGP), the North American Free Trade Agreement (NAFTA), the Canada-European Union Comprehensive Economic and Trade Agreement (CETA), and the Canadian Free Trade Agreement (CFTA).

### **1.6 epost Connect service**

This bid solicitation allows bidders to use the epost Connect service provided by Canada Post Corporation to transmit their bid electronically. Bidders must refer to Part 2 entitled Bidder Instructions, and Part 3 entitled Bid Preparation Instructions, of the bid solicitation, for further information.

## **PART 2 - BIDDER INSTRUCTIONS**

### **2.1 Standard Instructions, Clauses and Conditions**

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

Bidders who submit a bid agree to be bound by the instructions, clauses and conditions of the bid solicitation and accept the clauses and conditions of the resulting contract.

The [2003](#) (2018-05-22) Standard Instructions - Goods or Services - Competitive Requirements, are incorporated by reference into and form part of the bid solicitation.

Subsection 5.4 of [2003](#), Standard Instructions - Goods or Services - Competitive Requirements, is amended as follows:

Delete: 60 days

Insert: 90 days

#### **2.1.1 SACC Manual Clauses**

[B1000T](#) (2014-06-26) Condition of Material – Bid

N° de l'invitation - Sollicitation No.  
K2C94-200392/B  
N° de réf. du client - Client Ref. No.  
K2C94-200392

N° de la modif - Amd. No.  
File No. - N° du dossier  
MTA-9-42152

Id de l'acheteur - Buyer ID  
MTA625  
N° CCC / CCC No./ N° VME - FMS

---

### 2.1.1 Meilleure date de livraison – soumission (à remplir par le soumissionnaire)

Bien que la livraison soit demandée pour le 31 mars 2020, la meilleure date de livraison qui peut être offerte est le \_\_\_\_\_.

### 2.2 Submission of Bids

Bids must be submitted only to Public Works and Government Services Canada (PWGSC) Bid Receiving Unit by the date, time and place indicated in the bid solicitation.

You must submit your offer, **by epost Connect, by mail, by facsimile or in person**, prior to the closing date and time:

#### a) By mail or in person, at the following address:

Public Services and Procurement Canada  
Acquisitions Directorate - Quebec Region  
800, rue de la Gauchetière Ouest, Portal South-west, Suite 7300  
Montréal, Quebec H5A 1L6

#### b) By facsimile, at the following number: (514) 496-3822

#### c) Bids may also be submitted using the epost Connect service as detailed in the Standard Instructions.

The following PWGSC Regional Bid Receiving Unit e-mail address is to be used for epost Connect services:

[TPSGC.RQReceptionSoumissions-QRSupplyTendersReception.PWGSC@tpsgc-pwgsc.gc.ca](mailto:TPSGC.RQReceptionSoumissions-QRSupplyTendersReception.PWGSC@tpsgc-pwgsc.gc.ca)

Note: Bids will not be accepted if emailed directly to this email address. This email address is to be used to open an epost Connect conversation, as detailed in Standard Instructions [2003](#), or to send bids through an epost Connect message if the bidder is using its own licensing agreement for epost Connect.

### 2.3 Enquiries - Bid Solicitation

All enquiries must be submitted in writing to the Contracting Authority no later than **10 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 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**

If the Bidder chooses to submit its bid electronically, Canada requests that the Bidder submits its bid in accordance with section 08 of the 2003 standard instructions. The epost Connect system has a limit of 1GB per single message posted and a limit of 20GB per conversation.

The bid must be gathered per section and separated as follows:

Section I: Technical Bid  
Section II: Financial Bid  
Section III: Certifications

If the Bidder chooses to submit its bid in hard copies, Canada requests that the Bidder submits its bid in separately bound sections as follows:

Section I: Technical Bid (2 hard copies)  
Section II: Financial Bid (1 hard copy)  
Section III: Certifications (1 hard copy)

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

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

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

Canada requests that bidders follow the format instructions described below in the preparation of hard copy of their bid:

- (a) use 8.5 x 11 inch (216 mm x 279 mm) paper;
- (b) use a numbering system that corresponds to the bid solicitation.

In April 2006, Canada issued a policy directing federal departments and agencies to take the necessary steps to incorporate environmental considerations into the procurement process [Policy on Green Procurement](https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573) (<https://www.tbs-sct.gc.ca/pol/doc-eng.aspx?id=32573>). To assist Canada in reaching its objectives, bidders should:

- 1) use 8.5 x 11 inch (216 mm x 279 mm) paper containing fibre certified as originating from a sustainably-managed forest and containing minimum 30% recycled content; and
- 2) use an environmentally-preferable format including black and white printing instead of colour printing, printing double sided/duplex, using staples or clips instead of cerlox, duotangs or binders.

#### **Section I: Technical Bid**

In their technical bid, Bidders should 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.

### 3.1.1 Electronic Payment of Invoices – Bid

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

If Annex “D” 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

### 3.1.3 SACC Manual Clauses

#### Section III: Certifications

Bidders must submit the certifications and additional information required under Part 5.

## PART 4 - EVALUATION PROCEDURES AND BASIS OF SELECTION

### 4.1 Evaluation Procedures

- (a) Bids will be assessed in accordance with the entire requirement of the bid solicitation including the technical and financial evaluation criteria.
- (b) An evaluation team composed of representatives of Canada will evaluate the bids.

#### 4.1.1 Technical Evaluation

##### 4.1.1.1 Mandatory Technical Criteria

It is mandatory to provide the technical / descriptive documents of the product that you are offering (eg. drawing, data sheet, sketch, etc.) or a description to allow its' technical evaluation. Failure to comply will render your bid non responsive.

You must demonstrate in your technical submission that your product is compliant with the **Mandatory technical specifications to be demonstrated** of Annex “C”.

*Note: The other Mandatory technical specifications of Annex “A” are not to be demonstrated but remain mandatory technical specifications to be met.*

Canada will evaluate only the documentation provided with a bidder's bid. Canada will not evaluate information such as references to Web site addresses where additional information can be found, or technical manuals or brochures not submitted with the bid.

#### 4.1.2 Financial Evaluation

Total financial evaluation: Sum of total prices of items A + B + C + D + E + F + G + H + J + K mentioned in Annex "B" – Basis of Payment.

##### Evaluation of Price-Bid:

1. Bidders must submit firm prices, customs duties and excise taxes included, and Applicable Taxes excluded.

N° de l'invitation - Solicitation No.  
K2C94-200392/B  
N° de réf. du client - Client Ref. No.  
K2C94-200392

N° de la modif - Amd. No.  
File No. - N° du dossier  
MTA-9-42152

Id de l'acheteur - Buyer ID  
MTA625  
N° CCC / CCC No./ N° VME - FMS

2. 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.
3. Bidders must provide prices Delivered Duty Paid (DDP) to Montreal, Quebec Incoterms 2010 for shipments from a commercial contractor. Bids will be assessed on an DDP basis.

#### **4.2 Basis of Selection**

SACC Manual Clause [A0031T](#) (2010-08-16), Basis of Selection - Mandatory Technical Criteria

### **PART 5 – CERTIFICATIONS AND ADDITIONAL INFORMATION**

Bidders must provide the required certifications and additional information to be awarded a contract.

The certifications provided by Bidders to Canada are subject to verification by Canada at all times. Unless specified otherwise, Canada will declare a bid non-responsive, or will declare a contractor in default if any certification made by the Bidder is found to be untrue whether made knowingly or unknowingly, during the bid evaluation period or during the contract period.

The Contracting Authority will have the right to ask for additional information to verify the Bidder's certifications. Failure to comply and to cooperate with any request or requirement imposed by the Contracting Authority will render the bid non-responsive or constitute a default under the Contract.

#### **5.1 Certifications Required with the Bid**

Bidders must submit the following duly completed certifications as part of their bid.

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

In accordance with the Integrity Provisions of the Standard Instructions, all bidders must provide with their bid, **if applicable**, the declaration form available on the [Forms for the Integrity Regime](http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html) website (<http://www.tpsgc-pwgsc.gc.ca/ci-if/declaration-eng.html>), to be given further consideration in the procurement process.

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

The certifications and additional information listed below should be submitted with the bid, but may be submitted afterwards. If any of these required certifications or additional information is not completed and submitted as requested, the Contracting Authority will inform the Bidder of a time frame within which to provide the information. Failure to provide the certifications or the additional information listed below within the time frame 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 property agreement of the [Ineligibility and Suspension Policy](http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html) (<http://www.tpsgc-pwgsc.gc.ca/ci-if/politique-policy-eng.html>), the Bidder must provide the required documentation, as applicable, to be given further consideration in the procurement process.

##### **5.2.2 Federal Contractors Program for Employment Equity - Bid Certification**

By submitting a bid, the Bidder certifies that the Bidder, and any of the Bidder's members if the Bidder is a Joint Venture, is not named on the Federal Contractors Program (FCP) for employment equity "FCP Limited Eligibility to Bid" list available at the bottom of the page of the [Employment and Social](#)

N° de l'invitation - Solicitation No.  
K2C94-200392/B  
N° de réf. du client - Client Ref. No.  
K2C94-200392

N° de la modif - Amd. No.  
File No. - N° du dossier  
MTA-9-42152

Id de l'acheteur - Buyer ID  
MTA625  
N° CCC / CCC No. / N° VME - FMS

---

[Development Canada \(ESDC\) - Labour's website \(https://www.canada.ca/en/employment-social-development/programs/employment-equity/federal-contractor-program.html#\)](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 Requirement**

### **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**

[2010A](#) (2018-06-21), General Conditions - Goods (Medium Complexity), apply to and form part of the Contract.

Section 09 of general conditions [2010A](#) (2018-06-21) is amended by replacing the period of 12 months by 24 months. All other provisions of the warranty section remain in effect.

### **6.4 Term of Contract**

#### **6.4.1 Period of the Contract**

The period of the Contract is for one year from the date of the contract.

#### **6.4.2 Delivery Date**

All the deliverables must be received on or before \_\_\_\_\_ (*will be completed at contract award*).

#### **6.4.3 Option to Extend the Contract**

The Contractor grants to Canada the irrevocable option to acquire the goods, services or both described at Annex "A" of the Contract under the same conditions and at the prices and/or rates stated in the Contract. The option may only be exercised by the Contracting Authority and will be evidenced, for administrative purposes only, through a contract amendment.

The Contracting Authority may exercise the option at any time before the expiry of the Contract by sending a written notice to the Contractor.

#### **6.4.4 Comprehensive Land Claims Agreement(s)**

The Contract is subject to the following Comprehensive Land Claims Agreement:

- Nunavut Land Claims Agreement

N° de l'invitation - Sollicitation No.  
K2C94-200392/B  
N° de réf. du client - Client Ref. No.  
K2C94-200392

N° de la modif - Amd. No.  
File No. - N° du dossier  
MTA-9-42152

Id de l'acheteur - Buyer ID  
MTA625  
N° CCC / CCC No./ N° VME - FMS

---

#### 6.4.5 Delivery Points

Delivery of the requirement will be made to the Montreal area, the port of Valleyfield (QC) or the port of Côte-Sainte-Catherine. The specific address will be confirmed with the Project Authority after contract award.

#### 6.5 Authorities

##### 6.5.1 Contracting Authority

The Contracting Authority for the Contract is:

Nom : Corine Lavoie  
Titre : Spécialiste de l'approvisionnement. p.i.  
Travaux publics et Services gouvernementaux Canada  
Direction générale des approvisionnements  
800 rue de la Gauchetière ouest, Bureau 7300  
Montréal (Québec), Canada, H5A 1L6

Téléphone : 514-207-4777  
Télécopieur : 514-496-3822  
Courriel : corine.lavoie@tpsgc-pwgsc.gc.ca  
Travaux publics et Services gouvernementaux Canada

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 *(Will be completed at contract award)*

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.

N° de l'invitation - Solicitation No.

K2C94-200392/B

N° de réf. du client - Client Ref. No.

K2C94-200392

N° de la modif - Amd. No.

File No. - N° du dossier

MTA-9-42152

Id de l'acheteur - Buyer ID

MTA625

N° CCC / CCC No./ N° VME - FMS

---

### 6.5.3 Contractor's Representative *(to be completed by the bidder)*

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

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 a firm price as specified in Annex "B" for a cost of \$ \_\_\_\_\_ (*will be filled at the time of contract award*). 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 Limitation of Price

SACC Manual clause [C6000C](#) (2017-08-17 Limitation of Price)

#### 6.6.3 Single Payment

SACC Manual clause [H1000C](#) (2008-05-12) Single Payment

#### 6.6.4 SACC Manual Clauses

[A2000C](#) (2006-06-16) Foreign Nationals (Canadian Contractor)

[A2001C](#) (2006-06-16) Foreign Nationals (Foreign Contractor)

[C2000C](#) (2007-11-30), Taxes - Foreign-based Contractor

#### 6.6.5 Electronic Payment of Invoices – Contract

The Contractor accepts to be paid using any of the following Electronic Payment Instrument(s):

- a. Visa Acquisition Card;
- b. MasterCard Acquisition Card;
- c. Direct Deposit (Domestic and International);
- d. Electronic Data Interchange (EDI);
- e. Wire Transfer (International Only);
- f. Large Value Transfer System (LVTS) (Over \$25M)

N° de l'invitation - Sollicitation No.  
K2C94-200392/B  
N° de réf. du client - Client Ref. No.  
K2C94-200392

N° de la modif - Amd. No.  
File No. - N° du dossier  
MTA-9-42152

Id de l'acheteur - Buyer ID  
MTA625  
N° CCC / CCC No./ N° VME - FMS

---

## 6.7 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.
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.

## 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 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 \_\_\_\_\_ (*to be completed by bidder*).

## 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, Requirement;
- (d) Annex 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)*)

## 6.11 SACC Manual Clauses

G1005C (2016-01-28) Insurance - No Specific Requirement

B9028C (2007-05-25) Access to Facilities and Equipment

B7500C (2006-06-16) Excess Goods

B1501C (2006-06-16) Electrical Equipment

## ANNEX "A"

### REQUIREMENT

#### 1. Background

1.1. The work includes supplying heavy machinery and providing training as outlined in the specifications attached to this call to tender. The machinery must be delivered in the Montreal area. Eureka's annual sea-lift typically departs from the port of Valleyfield (QC) or the port of Côte-Sainte-Catherine. Maritime transport from the port to Eureka will be assumed by ECCC.



Photo 1 – Aerial View of the weather station

1.2. The Eureka weather station is located on the north side of Slidre Fjord, at the northwestern tip of Fosheim Peninsula, Ellesmere Island. The location coordinates are 79°59'41" N and 85°48'48" W. An airstrip 1,5 km northwest of the site makes accessing it by air possible all year. The area is covered with ice for most of the year and therefore receives most of its bulk goods and supplies by annual airlift. The site includes the weather station and the structures in the surrounding area (the airstrip, Skull Point DND, Fort Eureka DND and AStrO Lab), all within a 15-kilometre radius.



Solicitation No. - N° de l'invitation  
K2C94-200392/A  
Client Ref. No. - N° de réf. du client  
K2C94-200392

Amd. No. - N° de la modif.  
File No. - N° du dossier  
MTA-9-42152

Buyer ID - Id de l'acheteur  
MAT625  
CCC No./N° CCC - FMS No./N° VME

---

# **Product #1**

## **Technical Specifications**

### **Wheel Loader**

Total loaded mass of 15,400 kg minimum

## Documentation and standards

Item	General Requirements	Standards and References (Latest Version)
CODE	National Safety Code	
ENGINE	Engine Power Test Code – Spark Ignition and Compression Ignition – Gross Power Rating	SAE J1995
ACCESS	Access Systems for Off-Road Machines	SAE J185
COLOUR	Manufacturer standard	
LOADER	Specifications Definitions – Loaders (A) Capacity Rating – Loader Bucket	SAE J732 SAE J742
PROTECTIVE STRUCTURE	Minimum Performance Criteria for Falling Object Protective Structure (Fops) (A)  Performance Criteria for Rollover Protective Structures (Rops) for Construction, Earthmoving, Forestry and Mining Machines	SAE J231 JAN 81  SAE J1040 MAY 94
PRIMER	Paint, epoxy-resin rust-preventive coat, two-container system	
NOISE	Sound Measurement – Earth Moving Machinery – Operator – Singular Type (A) (D)	SAE J1166
BRAKES	Brake Performance – Rubber-Tired Earthmoving Machines (A)	SAE J1473
EMBLEM	Slow-Moving Vehicle Identification Emblem	SCC Standard D198- M1977
QUICK ATTACHMENT	Quick attach system for the bucket loader	
AXLES	Axle application load rating for industrial wheel loaders and backhoe loaders	

<b>GENERAL</b>	
<b>1.</b>	<p><b>PURPOSE:</b></p> <p>These technical specifications detail Environment Canada's requirements for the supply of a new wheel loader with capacity for a total loaded mass of &gt; 15,400 kg.</p> <p>The equipment will be delivered with a 2.7-m<sup>3</sup> general-purpose bucket and a set of forks. The loader will also mount a detachable snow blower of an estimated weight of 5,250 kg. The equipment will be deployed in Eureka, Nunavut.</p> <p><b>IMPORTANT NOTE:</b></p> <ul style="list-style-type: none"> <li>• Prototype, demonstrator, reconditioned and used items will not be accepted.</li> </ul>
<b>2.</b>	<p><b>TECHNICAL DATA</b></p> <p>2.1 These specifications represent the minimum required from the supplier. All standard manufacturer equipment must be included with the equipment requested, whether or not it is in the specifications.</p> <p>2.2 The equipment will be used and stored in an Arctic climate. There may be a power supply for the equipment in the storage area. The bidder must ensure the equipment will operate in all conditions.</p> <p>2.3 The loader will be a new piece of equipment that has never been in service.</p> <p>Make: _____</p> <p>Model: _____</p> <p>Year: _____</p>
<b>3.</b>	<p><b>OPERATIONS</b></p> <p>3.1 Eureka operation site and airport maintenance</p> <p>3.2 Air freight handling</p> <p>3.3 Snow removal with bucket</p> <p>3.4 Snow blowing with detachable snow blower</p> <p>3.5 Operation in an Arctic climate</p>
<b>4.</b>	<p><b>SPECIFICATIONS</b></p> <p>4.1 Nominal capacity of the bucket: ≥2.7 m<sup>3</sup></p> <p>4.2 Dump clearance at pivot point 3,950 mm</p> <p>4.3 Overall height, ground to top of cab ≤ 3,500 mm</p> <p>4.4 Curb weight: ≥15,400 kg</p> <p>4.5 Breakout force of 117 kN minimum</p>

<b>5.</b>	<b>TIPPING LOAD</b>  5.1 Tipping capacity in a straight line of 11,500 kg minimum 5.2 Tipping capacity in full turning position of 9,700 kg minimum
<b>Loader and Chassis Frame</b>	
<b>6.</b>	<b>BODY</b>  6.1 Full-sized, front and back wraparound wings with front and back fender extension. The wings must not interfere with the opening of the access panels. They must be easy to remove. <b>6.2</b> The equipment must provide convenient access to the engine and cooling compartments through pivoting doors that are held in place with a lockable system.
<b>7.</b>	<b>LOADER ELEMENT</b>  7.1 Z-bar unloading with double-acting cylinders. 7.2 Single-lever hydraulic joystick control within the operator's reach to operate the boom and bucket with the F-N-R switch. 7.3 Additional lever to operate a third valve 7.4 Safety interlock for hydraulic control levers 7.5 Loader boom locking bar  <b>Equipped with the following systems:</b> 7.6 Tilt control with pilot circuit. Position: rackback, lock and dump. Automatic return to dig angle. 7.7 Lift control with pilot circuit. Position: lift, lock, lower and float down. Automatic adjustments between horizontal to maximum lift.
<b>8.</b>	<b>QUICK ATTACHMENT</b>  8.1 The wheel loader, bucket and forks must be equipped with a quick coupler that is compatible with the accessories at the Eureka site. Stiff fastener with side locking pins.   8.2 The quick coupler control installation must use an independent hydraulic system. The third function system must remain available for other equipment.

<b>9.</b>	<b>CHASSIS ACCESSORIES</b>  9.1 Counterweights must come from the manufacturer of the loader, without external alterations or additions 9.2 Protective side and transmission panels 9.3 Pin-type rear coupler to tow equipment
<b>10.</b>	<b>COUNTERWEIGHTS</b>  10.1 Counterweights must come from the manufacturer of the loader, without external modifications or additions 10.2 With pin-type rear coupler to tow equipment
<b>11.</b>	<b>BUCKET</b>  11.1 General-purpose bucket with a hook and reversible bolt-on blade 11.2 Nominal capacity $\geq 2.7 \text{ m}^3$ 11.3 Bucket width $\geq 2,650 \text{ mm}$
<b>12.</b>	<b>FORK</b>  12.1 Fork with load backrest 12.2 Manually adjustable fork width 12.3 With side shift installed on the third valve 12.4 Fork lengths with a nominal length of 122 mm
<b>13.</b>	<b>PAINT</b>  13.1 Original paint from the manufacturer

<b>14.</b>	<p><b>AUTOMATIC GREASING SYSTEM</b></p> <p>14.1 Automatic centralized greasing using EP 2 grease.</p> <p>14.2 Brand: Lincoln Industrial (no substitutions), 94422 pump and SSVD valves.</p> <p>14.3 The greasing points must be connected to all grease fittings, which must be the originals installed during manufacturing, plus fittings added when the quick-attach and other equipment are installed.</p> <p>14.4 Indicate the greasing points that will not be greased by the system.</p> <p>14.5 All valves must be hydraulic and flexible, consist of at least three layers, and be able to withstand pressures of 3,000 psi minimum.</p> <p>14.6 The valves must be fully lubricated when the system powers up.</p> <p>14.7 The system must provide a visual or audible alert when a duct is clogged.</p> <p>14.8 The system must provide a visual or audible alert when the grease level in the tank is low.</p> <p>14.9 The tank must hold a minimum of 4 kg of lubricating grease.</p> <p>14.10 Each dispenser must be equipped with a fitting for manual feed.</p> <p>14.11 System installation must not affect the structural integrity of the equipment's components.</p>
<b>DRIVE SYSTEM</b>	
<b>15</b>	<p><b>ENGINE</b></p> <p>15.1 Diesel, six (6) cylinders, turbocharged</p> <p>15.2 Rated power of 165 hp minimum</p> <p>15.3 Original manufacturer drain cock for all liquids</p>
<b>16</b>	<p><b>COLD WEATHER STARTING SYSTEM</b></p> <p>16.1 Glow-plug system required</p> <p>16.2 One (1) ≥ 1,500-watt circulation immersion block heater for the cooling system</p> <p>16.3 One (1) ≥ 1,000-watt block heater for engine oil</p> <p>16.4 NEMA 5-15P connectors</p> <p>16.5 Connectors in metal receptacles with a cover and identification for the two connectors side by side</p>
<b>17</b>	<p><b>HIGH IDLE</b></p> <p>17.1 Electronic</p> <p>17.2 Operation with a switch mounted on the dash</p> <p>17.3 Raised idling speed of 800 to 1200 RPM</p>

<p><b>18</b></p>	<p><b>ENGINE LUBRICATION</b></p> <p>18.1 Synthetic oil, adapted to the Arctic climate          18.2 Replaceable filters          18.3 Oil cooled by a heat exchanger          18.4 Adaptor for engine oil sampling – The successful bidder must provide and install on the engine an adaptor for sampling oil, so that analyses can be conducted for maintenance services</p>
<p><b>19</b></p>	<p><b>AIR FILTER</b></p> <p>19.1 Dry          19.2 Two (2) elements: primary and secondary          19.3 Air filter restriction gauge required</p>
<p><b>20</b></p>	<p><b>FUEL FILTER</b></p> <p>20.1 With a water separator, priming pump and heating element</p>
<p><b>21</b></p>	<p><b>EXHAUST AND ANTIPOLLUTION SYSTEM</b></p> <p>21 Compliant with regulations in effect and engine manufacturer's standards          22 Vertical stack with an anti-exposure elbow</p>
<p><b>22</b></p>	<p><b>COOLING SYSTEM</b></p> <p>22.1 Standard manufacturer engine fan          22.2 Long-life ethylene glycol rated -55°</p>
<p><b>23</b></p>	<p><b>FUEL TANK</b></p> <p>23.1 Manufacturer's standard with locking gas gap          23.2 The tank capacity must enable a minimum of twelve (12) hours of operation</p>
<p><b>24</b></p>	<p><b>UREA TANK (IF REQUIRED)</b></p> <p>24.1 The tank capacity must correspond to the diesel tank's capacity          24.2 With an integrated heating system</p>
<p><b>25</b></p>	<p><b>TRANSMISSION</b></p> <p>25.1 Power-assist control box, and powershift OR hydrostatic countershaft with shift lever          25.2 Three (3) forward speeds, minimum          25.3 Three (3) reverse speeds, minimum</p>

	25.4 Single-lever gear selector 25.5 Automatic-shift mode 25.6 Quick-change downshift using the loader's joystick
<b>26</b>	<b>AXLES AND DIFFERENTIAL</b> 26.1 Fixed front axles
<b>27</b>	<b>AXLES AND DIFFERENTIAL</b> 27.1 Oscillating rear differential with a total rotation of 20° minimum
<b>28</b>	<b>DIFFERENTIALS</b> 28.1 Must have lockable front and rear differentials – They will be activated by a switch on the joystick without stopping the machine
<b>29</b>	<b>STEERING SYSTEM</b> 29.1 Articulated chassis frame 29.2 Equally spaced front and rear wheels 29.3 The steering system uses a load-sensing, variable displacement pump with two double-acting cylinders 29.4 Two (2) double-acting cylinders 29.5 Articulation angle: 80-degree arc (40 degrees in each direction) 29.6 Security system to lock the articulated frame
<b>30</b>	<b>BRAKES</b> 30.1 Four-wheel wet brakes 30.2 Mounted within sealed housing directly onto the differential 30.3 Hydraulically operated 30.4 Automatically adjusting 30.5 Braking system with one (1) or two (2) pedals – If it is a system with two (2) pedals, the first is dedicated to braking and the second disengages the transmission and applies the brakes 30.6 The hydraulic systems of front and rear brakes must operate independently and provide effective braking in the event of partial or total malfunction 30.7 Emergency assistance system to make it possible to stop the vehicle following loss of engine power
<b>31</b>	<b>PARKING BRAKE</b> 31.1 Emergency brake that works independently from the electronically activated service brakes

<b>32</b>	<p><b>WHEELS</b></p> <p>32.1 Four (4) painted steel rims of the same size          32.2 With a protective inflation valve cap</p>
<b>33</b>	<p><b>TIRES</b></p> <p>33.1 MICHELIN XSnowPlus L2 20,5 R25, or equivalent</p>

<b>Hydraulic System</b>
-------------------------

<b>34</b>	<p><b>HYDRAULIC SYSTEM</b></p> <p>34.1 Boom suspension system (ride control systems)          34.2 Double-ended output circuit located on the left side of the loader for the original manufacturer third function          34.3 Hydraulic filter for total oil flow          34.4 Hydraulic system oil cooler          34.5 Variable-cylinder, axial-piston pump, closed-centre pressure compensation system; load-detecting hydraulic pump; pump flow <math>\geq 170</math> l/min          34.6 Relief valve setting : <math>\geq 2,990</math> psi          34.7 Three-function hydraulic valve with lever control and auxiliary lever for third function          34.8 Hydraulic system to lock the quick-attach studs, including cab, duct and valve controls          34.9 Original manufacturer piping; installation by a party other than the manufacturer is not acceptable          34.10 Easy to program lift disengagement, lower and tilt functions</p>
<b>35</b>	<p><b>TANK</b></p> <p>35.51 Reservoir capacity: <math>\geq 90</math> l          35.52 Oil level indicator          35.53 Oil temperature control unit for storage; NEMA 5-15P-type connector in a metal case near the block heater's other connectors (water and oil).</p>

<b>Electrical System</b>
--------------------------

<b>36</b>	<p><b>ELECTRICAL SYSTEM</b></p> <p>36.1 Twenty-four (24) volts, grounded receptacle          36.2 Minimum of two (2) heavy-duty, maintenance-free batteries, totalling <math>\geq 1,900</math> cold cranking amps (CCA)          36.3 115-amp alternator minimum  <b>36.4</b> Easily accessible pole outside the battery housing in the event of battery overloading</p>
-----------	--

37	<b>SAFETY SWITCH</b>  37.1 One (1) identified 37.2 From the primary circuit located in an area that is protected from the elements 37.3 Lockable with a padlock
38	<b>SMART CHARGER</b>  38.1 One (1) smart charger with a minimum 10A capacity connected to the batteries 38.2 The charger must be accessible and mounted inside the engine cowlings 38.3 The power supply must be connected to a NEMA 5-15P-type connector with a cover 38.4 The connector must be clearly identified and located near the engine block heaters and cooling system
39	<b>REAR-VIEW CAMERA</b>  39.1 Installation of a rear-view camera for backing up; position to be determined with the supplier 39.2 Colour screen in the cab that activates as soon as the vehicle enters reverse
40	<b>WORK LAMPS</b>  40.1 Independently controlled groups of work lamps 40.1.1 Four (4) LED work lamps at the front top of the cab 40.1.2 Two (2) LED work lamps at the rear top of the cab
41	<b>STROBE LIGHTS</b>  41.1 The power supply for the strobe lights must be controlled by one (1) switch on the dash console 41.2 One (1) LED minibar-type light mounted on top of the cab visible from 360°
42	<b>LIGHTS AND SIGNAL LIGHTS</b>  42.1 All headlights and signal lights required according to the Canadian National Safety Code. 42.1.1 High beams 42.1.2 Turn signals 42.1.3 Break lights 42.1.4 Hazard warning lights 42.1.5 Parking lights 42.1.6 Licence plate lights 42.1.7 Reverse lights  42.2 One (1) slow-moving vehicle emblem (CSA Standard D198-M1977)

43	<p><b>BACKUP ALARM</b></p> <p>43.1 Standard manufacturer backup alarm</p> <p><b>43.2</b> Activated as soon as reverse is selected on the vehicle</p>
<b>Cab</b>	
44	<p><b>CAB</b></p> <p>44.1 Located at the rear of the loader's chassis</p> <p>44.2 Approved ROPS (rollover protective structures) and FOPS (falling object protection systems) cab</p> <p>44.3 Pressurized with filtration, low-level sound proofing and air conditioning</p> <p>44.4 Windows with panoramic view</p> <p>44.5 Tinted safety glass</p> <p>44.6 Two-speed and intermittent front and rear electric windshield wipers</p> <p>44.7 Front and rear electric windshield washers</p> <p>44.8 Insulated rubber floor mat</p> <p>44.9 Fabric-covered deluxe seat with pneumatic suspension, flip-up arm rests and lumbar support</p> <p>44.10 Retractable seat belt</p> <p>44.11 Pressurized heater to warm the entire cab</p> <p>44.12 Front window defroster</p> <p>44.13 Rear window defroster</p> <p>44.14 Heat register at the operator's feet</p> <p>44.15 Easy-to-replace cab air filter</p> <p>44.16 Sun visor for the front windshield</p> <p>44.17 Easily accessible emergency engine stop switch at ground level</p>
45	<p><b>DASH CONSOLE</b></p> <p><b>Analog or digital indicator:</b></p> <p>45.1 Fuel level</p> <p>45.2 Engine oil pressure</p> <p>45.3 Transmission oil temperature</p> <p>45.4 Engine coolant temperature</p> <p>45.5 Battery voltage</p> <p>45.6 Engine speed in rpm</p> <p>45.7 Engine hour meter – The hour meter is connected in a way that clocks only actual engine run time</p> <p><b>Indicator lights:</b></p> <p>45.8 Engine oil pressure</p> <p>45.9 Brake pressure</p>

	<p>45.10 Parking brake          45.11 Hydraulic oil temperature          45.12 Clogged transmission filter          45.13 Battery voltage          45.14 Clogged hydraulic oil filter          45.15 Antipollution system fault</p>
<b>46</b>	<p><b>ACCESSORIES</b></p> <p>46.1 Foot throttle          46.2 Adjustable steering column          46.3 Horn          46.4 Backup alarm – The speaker must be rear-facing and must not be obstructed          46.5 Turn signal switch          46.6 Switch to simultaneously activate the four (4) turn signals          46.7 One (1) interior rear-view mirror          46.8 Two (2) heated and electrically adjustable exterior rear-view mirrors          46.9 Ceiling light          46.10 One (1) AM/FM/USB/Bluetooth radio minimum          46.11 One (1) 24–12-V voltage converter, 10 amps          46.12 Prewiring to install a 12-volt radio transmitter with fuse and antennae on the cab</p>
<b>47</b>	<p><b>MEANS OF ACCESS</b></p> <p>47.1 SAE J185 compliant          47.2 In the cab, at the radiator pressure cap, at the fuel filler cap, at verification points          47.3 Travel on smooth surfaces must be made safer with the placement of self-adhesive anti-slip strips on top of the toolbox, batteries and fuel tank          47.4 Handrails and Grip Strut anti-slip steps placed ergonomically – The first must be mobile on rubber supports          47.5 Designed to withstand all operating conditions without deterioration          47.6 The three-point contact rule must be followed          47.7 No sharp edges</p>
<b>Documents, inspection, warranty and transportation</b>	
<b>48</b>	<p><b>DOCUMENTS</b></p> <p>48.1 Two (2) operations and maintenance manuals in English          48.2 Two (2) operations and maintenance manuals in French          48.3 Six (6) sets of keys          48.4 One (1) operations and maintenance manual, on a CD, in English          48.5 One (1) loader shop repair manual printed or on a CD, in English          48.6 All necessary diagnostics tools (software, interfaces and adaptors) to troubleshoot the equipment and its components</p>

<b>49</b>	<b>INSPECTION</b>  49.1 The equipment will be inspected and accepted by Environment Canada officials or representatives before delivery.
<b>50</b>	<b>TRAINING</b>  50.1 Provide two (2) training sessions for the equipment maintenance teams. Groups of 2 to 4 people. 50.2 Training will be planned with a 4 to 8 month interval, depending on availability of the maintenance relief teams. 50.3 The first training session must be provided in the Greater Montreal area with equipment. 50.4 The second training session must be provided at the Eureka site. All travel costs will be covered starting in Yellowknife.
<b>51</b>	<b>DELIVERY TERMS</b>  51.1 Delivery in the Montreal area (address to be confirmed). 51.2 Upon delivery, the equipment must be clean and operational. 51.3 Provide a complete set of filters (air, fuel, hydraulic oil and engine oil) for the vehicle.

Solicitation No. - N° de l'invitation  
K2C94-200392/A  
Client Ref. No. - N° de réf. du client  
K2C94-200392

Amd. No. - N° de la modif.  
File No. - N° du dossier  
MTA-9-42152

Buyer ID - Id de l'acheteur  
MAT625  
CCC No./N° CCC - FMS No./N° VME

---

# **Product #2**

## **Technical Specifications**

### **Grader**

Total loaded mass of 19,000 kg minimum

## Document and regulation

Item	General Requirements	Standards and References (Latest Version)
CODE	National Safety Code	
ENGINE	Engine Power Test Code – Spark Ignition and Compression Ignition – Gross Power Rating	SAE J1995
ACCESS	Access Systems for Off-Road Machines	SAE J185
COLOUR	Manufacturer standard	
PROTECTIVE STRUCTURE	Minimum Performance Criteria for Falling Object Protective Structure (Fops) (A)  Performance Criteria for Rollover Protective Structures (Rops) for Construction, Earthmoving, Forestry and Mining Machines	SAE J231 JAN 81  SAE J1040 MAY 94
PRIMER	Paint, epoxy-resin rust-preventive coat, two-container system	
NOISE	Sound Measurement – Earth Moving Machinery – Operator – Singular Type (A) (D)	SAE J1166
BRAKES	Brake Performance – Rubber-Tired Earthmoving Machines (A)	SAE J1473
EMBLEM	Slow-Moving Vehicle Identification Emblem	SCC Standard D198- M1977

<b>General</b>	
<b>1</b>	<p><b>PURPOSE:</b>            These technical specifications detail Environment Canada's requirements for the supply of a new grader with capacity for a total loaded mass of &gt; 19,000 kg.</p> <p>The equipment will be delivered with a 4,267-mm blade and associated wear blades. The equipment will be deployed in Eureka, Nunavut.</p> <p><b>IMPORTANT NOTE:</b></p> <ul style="list-style-type: none"> <li>• Prototype, demonstrator, reconditioned and used items will not be accepted.</li> </ul>
<b>2</b>	<p><b>TECHNICAL DATA</b></p> <p>2.1 These specifications represent the minimum required from the supplier. All standard equipment from the manufacturer must be included with the equipment requested, whether or not it is in the specifications.</p> <p>2.2 The equipment will be used and stored in an Arctic climate. There may be a power supply for the equipment in the storage area. The bidder must ensure the equipment will operate in all conditions.</p> <p>2.3 The grader will be a new piece of equipment that has never been in service.</p> <p>Make: _____            Model: _____            Year: _____</p>
<b>3</b>	<p><b>OPERATIONS</b></p> <p>3.1 Eureka operation site and airport maintenance            3.2 Snow removal and de-icing            3.3 Shaping gravel roads            3.4 Operation in an Arctic climate</p>
<b>4</b>	<p><b>SPECIFICATIONS</b></p> <p>4.1 Curb weight ≥ 19,200 kg</p>
<b>Grader</b>	
<b>5</b>	<p><b>BODY</b></p> <p>5.1 Full-sized, front and back wraparound wings with front and back fender extension. The wings must not interfere with the opening of the access panels. They must be easy to</p>

<b>General</b>	
	<p>remove.</p> <p>5.2 The equipment must provide convenient access to the engine and cooling compartments through pivoting doors that are held in place with a lockable system.</p>
<b>6</b>	<p><b>ARTICULATED FRAME</b></p> <p>6.1 Articulated behind the cab          6.2 Articulation of 20° minimum left or right          6.3 Turning radius of 7.8 m maximum</p>
<b>7</b>	<p><b>CIRCLE SUPPORT</b></p> <p>7.1 Side shift travel, from inside the cab          7.2 360° rotation          7.3 Safety valve for protection in the event of collision          7.4 Replaceable anti-friction bearing          7.5 Minimum diameter of 1,524 mm</p>
<b>8</b>	<p><b>MOLDBOARD</b></p> <p>8.1 4,267 mm (14 feet) long          8.2 686 mm (27 inches) high, minimum          8.3 Floating position, and independent left and right          8.4 Accumulator on the lift function of the blade and the hydraulic system          8.5 Hydraulically adjusted angle of attack          8.6 Hydraulically adjusted forward pitch          8.7 Hydraulic displacement of cylinders 510 mm minimum to the left and 660 mm minimum to the right          8.8 Right side cutting angle of 90° minimum – The moldboard must be in a completely vertical position with hydraulic functions          8.9 Fully operational with cab controls          8.10 The moldboard must be fully removable to facilitate wear blade replacement</p>
<b>9</b>	<p><b>COUNTERWEIGHTS</b></p> <p>9.1 Original counterweights from the manufacturer of the grader, without external alterations or additions          9.2 With pin-type rear coupler to tow equipment</p>
<b>10</b>	<p><b>PAINT</b></p> <p>10.1 Original paint from the manufacturer</p>

<b>General</b>	
<b>11</b>	<p><b>AUTOMATIC GREASING SYSTEM</b></p> <p>11.1 Automatic centralized greasing using EP 2 grease.</p> <p>11.2 Brand: Lincoln Industrial (no substitution), 94422 pump and SSVD valves.</p> <p>11.3 The greasing points must be connected to all grease fittings, which must be the originals installed during manufacturing, plus fittings added when the quick attach and other equipment are installed.</p> <p>11.4 Indicate the greasing points that will not be greased by the system.</p> <p>11.5 All valves must be hydraulic and flexible, consist of at least three layers, and be able to withstand pressures of 3,000 psi minimum.</p> <p>11.6 The valves must be fully lubricated when the system powers up.</p> <p>11.7 The system must provide a visual or audible alert when a duct is clogged.</p> <p>11.8 The system must provide a visual or audible alert when the grease level in the tank is low.</p> <p>11.9 The tank must hold a minimum of 4 kg of lubricating grease.</p> <p>11.10 Each dispenser must be equipped with a fitting for manual feed</p> <p>11.11 System installation must not affect the structural integrity of the equipment's components.</p>
<b>Drive System</b>	
<b>12</b>	<p><b>ENGINE</b></p> <p>12.1 Diesel, six (6) cylinders, turbocharged</p> <p>12.2 Variable power based on the transmission speed – Power up to 230 hp minimum in eighth forward speed</p> <p>12.3 Original manufacturer's drain cock for all liquids</p>
<b>13</b>	<p><b>COLD WEATHER STARTING SYSTEM</b></p> <p>13.2 Glow-plug system required</p> <p>13.3 One (1) ≥ 1,500-watt circulation immersion block heater for the cooling system</p> <p>13.4 One (1) ≥ 1,000-watt block heater for engine oil</p> <p>13.5 NEMA 5-15P connectors</p> <p>13.6 Connectors in metal receptacles with a cover and identification for the two connectors side by side</p>
<b>14</b>	<p><b>HIGH IDLE</b></p> <p>14.1 Electronic</p> <p>14.2 Operation with a switch mounted on the dash</p> <p>14.3 Raised idling speed of 800 to 1200 RPM</p>

<b>General</b>	
<b>15.</b>	<p><b>ENGINE LUBRICATION</b></p> <p>15.1 Synthetic oil, adapted to the Arctic climate            15.2 Replaceable filters            15.3 Oil cooled by a heat exchanger            15.4 Adaptor for engine oil sampling – The successful bidder must provide and install on the engine an adaptor for sampling oil, so that analyses can be conducted for maintenance services.</p>
<b>16.</b>	<p><b>AIR FILTER</b></p> <p>16.1 Dry            16.2 Two (2) elements: primary and secondary            16.3 Air filter restriction gauge required</p>
<b>17.</b>	<p><b>FUEL FILTER</b></p> <p>17.1 With a water separator, priming pump and heating element</p>
<b>18.</b>	<p><b>EXHAUST AND ANTIPOLLUTION SYSTEM</b></p> <p>18.1 Compliant with regulations in effect and engine manufacturer's standards            18.2 Vertical stack with an anti-exposure elbow</p>
<b>19.</b>	<p><b>COOLING SYSTEM</b></p> <p>19.1 Standard manufacturer engine fan            19.2 Long-life ethylene glycol rated -55 °C</p>
<b>20.</b>	<p><b>FUEL TANK</b></p> <p>20.1 Manufacturer's standard with locking gas gap            20.2 The tank capacity must enable a minimum of twelve (12) hours of operation</p>
<b>21.</b>	<p><b>UREA TANK (IF REQUIRED)</b></p> <p>21.1 The tank capacity must correspond to the diesel tank's capacity            21.2 With an integrated heating system</p>
<b>22.</b>	<p><b>TRANSMISSION</b></p> <p>22.1 Power-assist control box and powershift countershaft</p>

<b>General</b>	
	22.2 Eight (8) forward speeds minimum 22.3 Four (4) reverse speeds minimum 22.4 Protective plate 22.5 Power train compatible with the engine and transmission
<b>23.</b>	<b>FRONT AXLE</b>  23.1 Wheels that lean 18° minimum on each side 23.2 Oscillation of 32° minimum
<b>24.</b>	<b>REAR AXLE</b>  24.1 Tandem
<b>25.</b>	<b>DIFFERENTIAL</b>  25.1 Automatic or manual lock
<b>26.</b>	<b>STEERING SYSTEM</b>  26.1 Assisted 26.2 With secondary grader driving and braking control
<b>27.</b>	<b>BRAKES</b>  27.1 Four-wheel rear wet brakes 27.2 Sealed in pressurized oil 27.3 Emergency assistance system to make it possible to stop the vehicle following loss of engine power
<b>28.</b>	<b>PARKING BRAKE</b>  28.1 Emergency break that is independent from the electronically activated service brakes
<b>29.</b>	<b>WHEELS</b>  29.1 Six (6) painted steel rims of the same size 29.2 With a protective inflation valve cap
<b>30.</b>	<b>TIRES</b>  30.1 MICHELIN XSnowPlus L2 17.5R25, or equivalent 30.2 Filled with air only, without calcium and without air chambers

<b>Hydraulic System</b>	
<b>31.</b>	<p><b>HYDRAULIC SYSTEM</b></p> <p>31.1 Variable-cylinder axial-piston pump, closed-centre pressure compensation system</p>
<b>32.</b>	<p><b>TANK</b></p> <p>32.1 Reservoir capacity: ≥ 60 l</p> <p>32.2 Oil temperature control unit for storage; NEMA 5-15P-type connector in a metal case near the block heater's other connectors (water and oil).</p> <p>32.3 Oil level indicator</p>
<b>33.</b>	<p><b>CONTROL CONFIGURATION</b></p> <p>33.1 Simple or piano joystick controls</p> <p>33.2 Protected controls with hydraulic switch</p> <p>33.3 Steering wheel for driving</p>
<b>34.</b>	<p><b>AUXILIARY CIRCUIT</b></p> <p>34.1 Installation of an auxiliary circuit controlled from inside the cab</p> <p>34.2 Minimum of four hydraulic functions on independent standard manufacturer valves (8 connectors) at the rear, in addition to other standard manufacturer exits at the front and on the sides. Location:</p> <p>34.2.1 Rear</p> <p>34.2.2 Rear, right side</p> <p>34.2.3 Front exterior</p> <p>34.2.4 Front interior</p>
<b>Electrical System</b>	
<b>35</b>	<p><b>ELECTRICAL SYSTEM</b></p> <p>35.1 Twenty-four (24) volts, grounded receptacle</p> <p>35.2 Minimum of two (2) heavy-duty, maintenance-free batteries, totalling ≥ 1,900 cold cranking amps (CCA)</p> <p>35.3 115-amp alternator minimum</p> <p>35.4 Easily accessible pole outside the battery housing in the event of battery overloading</p>

<b>General</b>	
<b>36</b>	<b>SAFETY SWITCH</b>  36.1 One (1) identified 36.2 From the primary circuit located in an area that is protected from the elements 36.3 Lockable with a padlock
<b>37</b>	<b>SMART CHARGER</b>  37.1 One (1) smart charger with a minimum 10A capacity connected to the batteries 37.2 The charger must be accessible and mounted inside the engine cowlings 37.3 The power supply must be connected to a NEMA 5-15P-type connector with a cover 37.4 The connector must be clearly identified and located near the engine block heaters and cooling system
<b>38</b>	<b>REAR-VIEW CAMERA</b>  38.1 Installation of a rear-view camera for backing up; position to be determined with the supplier 38.2 Colour screen in the cab that activates as soon as the vehicle enters reverse
<b>39</b>	<b>WORK LAMPS</b>  39.1 Independently controlled groups of work lamps 39.1.1 Four (4) LED work lamps at the front top of the cab 39.1.2 Two (2) LED work lamps at the end of the front chassis frame 39.1.3 Two (2) LED work lamps at the rear top of the cab 39.1.4 Two (2) LED work lamps for the table at the bottom of the cab
<b>40</b>	<b>STROBE LIGHTS</b>  40.1 The power supply for the strobe lights must be controlled by one (1) switch on the dash console 40.2 One (1) LED minibar-type light mounted on top of the cab visible from 360°
<b>41</b>	<b>LIGHTS AND SIGNAL LIGHTS</b>  41.1 All headlights and signal lights required according to the Canadian National Safety Code. 41.1.1 High beams 41.1.2 Turn signals 41.1.3 Break lights 41.1.4 Hazard warning lights

<b>General</b>	
	41.1.5 Parking lights 41.1.6 Licence plate lights 41.1.7 Reverse lights  41.2 One (1) slow-moving vehicle emblem (CSA Standard D198-M1977)
42	<b>BACKUP ALARM</b>  42.1 Standard manufacturer backup alarm 42.2 Activated as soon as reverse is selected on the vehicle
<b>Cab</b>	
43	<b>CAB</b>  43.1 Located at the rear of the grader's chassis 43.2 Approved ROPS (rollover protective structures) and FOPS (falling object protection systems) cab 43.3 Pressurized with filtration, low-level soundproofing and air conditioning 43.4 Windows with panoramic view 43.5 Tinted safety glass 43.6 Two-speed and intermittent front electric windshield wipers 43.7 Electric windshield washers 43.8 Insulated rubber floor mat 43.9 Fabric-covered deluxe seat with pneumatic suspension, flip-up arm rests and lumbar support 43.10 Retractable seat belt 43.11 Pressurized heater to warm the entire cab 43.12 Front window defroster with quick de-icing option 43.13 Rear window defroster 43.14 Heat register at the operator's feet 43.15 Easy-to-replace cab air filter 43.16 Sun visor for the front windshield 43.17 Easily accessible emergency engine stop switch at ground level
44	<b>DASH CONSOLE</b>  <b>Analog or digital indicator:</b> 44.1 Fuel level 44.2 Engine oil pressure 44.3 Transmission oil temperature 44.4 Engine coolant temperature 44.5 Battery voltage

<b>General</b>	
44.6 44.7	<p>Engine speed in rpm</p> <p>Engine hour meter – The hour meter is connected in a way that clocks only actual engine run time</p> <p><b>Indicator lights:</b></p> <p>44.8 Engine oil pressure</p> <p>44.9 Brake pressure</p> <p>44.10 Parking brake</p> <p>44.11 Hydraulic oil temperature</p> <p>44.12 Clogged transmission filter</p> <p>44.13 Battery voltage</p> <p>44.14 Clogged hydraulic oil filter</p> <p>44.15 Antipollution system fault</p>
45	<p><b>ACCESSORIES</b></p> <p>45.1 Hand and Foot throttle</p> <p>45.2 Horn</p> <p>45.3 Turn signal switch</p> <p>45.4 Switch to simultaneously activate the four (4) turn signals</p> <p>45.5 One (1) interior rear-view mirror</p> <p>45.6 Two (2) heated and electrically adjustable exterior rear-view mirrors</p> <p>45.7 Ceiling light</p> <p>45.8 One (1) AM/FM/USB/Bluetooth radio minimum</p> <p>45.9 One (1) 24–12-V voltage converter, 10 amps</p> <p>45.10 Prewiring to install a 12-volt radio transmitter with fuse and antennae on the cab</p>
46	<p><b>ACCESS</b></p> <p>46.1 SAE J185 compliant</p> <p>46.2 In the cab, at the radiator pressure cap, at the fuel filler cap, at verification points</p> <p>46.3 Travel on smooth surfaces must be made safer with the placement of self-adhesive anti-slip strips on top of the toolbox, batteries and fuel tank</p> <p>46.4 Handrails and Grip Strut anti-slip steps placed ergonomically</p> <p>46.5 The first must be mobile on rubber supports</p> <p>46.6 Designed to withstand all operating conditions without deterioration</p> <p>46.7 The three-point contact rule must be followed</p> <p>46.8 No sharp edges</p>
<b>Documents, inspection, warranty and transportation</b>	
47	<p><b>DOCUMENTS</b></p> <p>47.1 Two (2) operations and maintenance manuals in English</p>

<b>General</b>	
	47.2 Two (2) operations and maintenance manuals in French 47.3 Six (6) sets of keys 47.4 One (1) operations and maintenance manual on a CD in English 47.5 One (1) grader shop repair manual (printed or on a CD) in English 47.6 All necessary diagnostics tools (software, interfaces and adaptors) to troubleshoot the equipment and its components
<b>48</b>	<b>INSPECTION</b>  48.1 The equipment will be inspected and accepted by Environment Canada officials or representatives before delivery
<b>49</b>	<b>TRAINING</b>  49.1 Provide two (2) training sessions for the equipment maintenance teams. Groups of 2 to 6 people 49.2 Training will be planned with a 4 to 8 month interval, depending on availability of the maintenance relief teams 49.3 The first training session must be provided in the Greater Montreal area with equipment 49.4 The second training session must be provided at the Eureka site. All travel costs will be covered starting in Yellowknife.
<b>50</b>	<b>DELIVERY TERMS</b>  50.1 Delivery in the Montreal area (address to be confirmed) 50.2 Upon delivery, the equipment must be clean and operational 50.3 Provide a complete set of filters (air, fuel, hydraulic oil and engine oil) for the vehicle

Solicitation No. - N° de l'invitation  
K2C94-200392/A  
Client Ref. No. - N° de réf. du client  
K2C94-200392

Amd. No. - N° de la modif.  
File No. - N° du dossier  
MTA-9-42152

Buyer ID - Id de l'acheteur  
MAT625  
CCC No./N° CCC - FMS No./N° VME

---

## **Product #3**

### **Technical Specifications**

**Tow behind pneumatic tire compactor**  
Total loaded mass > 3,000 kg minimum

## Documentation and standards

Item	General Requirements	Standards and References (Most Recent Version)
COLOUR	Manufacturer standard	
PRIMER	Manufacturer's original paint	
FINISHING PAINT	Polyurethane enamel	

GENERAL	
1	<p><b>PURPOSE:</b>            These technical specifications detail Environment Canada's requirements for a tow behind pneumatic tire compactor with a minimum weight of 3,000 kg.</p> <p>The equipment will be towed by a grader or wheel loader. The equipment will be deployed in Eureka, Nunavut.</p> <p><b>IMPORTANT NOTE:</b></p> <ul style="list-style-type: none"> <li>• Prototype, demonstrator, reconditioned and used items will not be accepted.</li> </ul>
2	<p><b>TECHNICAL DATA</b></p> <p>2.1 These specifications represent the minimum required from the supplier. All standard manufacturer equipment must be included with the equipment requested, whether or not it is in the specifications.</p> <p>2.2 The equipment will be used and stored in an Arctic climate. There may be a power supply for the equipment in the storage area. The bidder must ensure the equipment will operate in all conditions.</p> <p>Make: _____            Model: _____            Year: _____</p>

<b>3</b>	<p><b>OPERATIONS</b></p> <p>3.1 Eureka airport maintenance          3.2 Compaction of gravel landing strip          3.3 Operation in an Arctic climate</p>
<b>4</b>	<p><b>SPECIFICATIONS</b></p> <p>4.1 Compactor with compaction wheels and additional <u>gravel or sand</u> ballasting          4.2 Minimum tread width &gt; 2,500 mm          4.3 Curb weight with ballasting &gt; 3 000 kg          4.4 Ground pressure per tire &gt; 50 kg/cm</p>
<b>Compactor and Chassis</b>	
<b>5</b>	<p><b>BODY</b></p> <p>5.1 Compactor made entirely of welded steel offering the possibility of adding ballast-type granular material  <b>5.2</b> Heavy-duty frame with steel C channel  <b>5.3</b> Chassis corners with structural reinforcement  <b>5.4</b> Lifting ring on every corner of the compactor</p>
<b>6</b>	<p><b>AXLES</b></p> <p>6.1 Oscillating axles          6.2 Solidly attached to the chassis          6.3 With a maintenance-free, replaceable kingpin steering arm          6.4 Solid bearings with additional dust protection  <b>6.5</b> Oscillating double-axle plate</p>
<b>7</b>	<p><b>FRONT TRAILER HITCH</b></p> <p>7.1 Manufacturer standard tow ring for the front of the compactor</p>
<b>8</b>	<p><b>REAR HITCH</b></p> <p>8.1 Hitch at the rear of the equipment to allow for more than one unit to be towed</p>
<b>9</b>	<p><b>BALLAST BOX</b></p> <p>9.1 Equipment ballasting capacity of &gt; 3.8 m<sup>3</sup>          9.2 Lowered centre of gravity          9.3 Drainage mechanism for the box</p>

<b>10</b>	<b>WHEELS</b>  10.1 Painted steel rims of the same size
<b>11</b>	<b>TIRES</b>  11.1 Compactor tires 11.2 Filled with foam for proper operation
<b>12</b>	<b>PAINT</b>  <u>Preparation:</u> 12.1 On all surfaces to be painted 12.2 Near-white abrasive blast cleaning 12.3 Degree of roughness of maximum 50 micrometres 12.4 Weld spatter must be removed  <u>Primer:</u> 12.5 Primer application  <u>Finishing:</u> 12.6 Finishing paint application in manufacturer standard colour  <u>Application:</u> 12.7 Using a spray gun 12.8 During sub-assembly 12.9 On all surfaces, except for plated and rubber components
<b>13</b>	<b>MARKER LIGHTS</b>  13.1 Amber marker light at every corner of the trailer 13.2 With guards to protect from impacts 13.3 With heavy-duty connectors attached at the front and rear hitches
<b>14</b>	<b>REFLECTIVE STRIP</b>  14.1 DOT C2 reflective strip attached to the very top perimeter of the chassis 14.2 Strip width: >50 mm

Solicitation No. - N° de l'invitation  
K2C94-200392/A  
Client Ref. No. - N° de réf. du client  
K2C94-200392

Amd. No. - N° de la modif.  
File No. - N° du dossier  
MTA-9-42152

Buyer ID - Id de l'acheteur  
MAT625  
CCC No./N° CCC - FMS No./N° VME

<b>Documents, Inspection, Warranty and Transportation</b>	
<b>15</b>	<b>DOCUMENTS</b>  15.1 Two (2) operations and maintenance manuals in English 15.2 Two (2) operations and maintenance manuals in French 15.3 One (1) loader shop repair manual (printed or on a CD) in English 15.4 All necessary diagnostics tools (software, interfaces and adaptor) to troubleshoot the equipment and its components
<b>16</b>	<b>INSPECTION</b>  16.1 The equipment will be inspected and accepted by Environment Canada officials or representatives before delivery.
<b>17</b>	<b>DELIVERY TERMS</b>  17.1 Delivery in the Montreal area (address to be confirmed) 17.2 Upon delivery, the equipment must be clean and operational

Solicitation No. - N° de l'invitation  
K2C94-200392/A  
Client Ref. No. - N° de réf. du client  
K2C94-200392

Amd. No. - N° de la modif.  
File No. - N° du dossier  
MTA-9-42152

Buyer ID - Id de l'acheteur  
MAT625  
CCC No./N° CCC - FMS No./N° VME

---

## **Product #4**

# **Technical Specifications**

### **Detachable snow blower**

Minimum Capacity of 3,000 tonnes/hour

Solicitation No. - N° de l'invitation  
K2C94-200392/A  
Client Ref. No. - N° de réf. du client  
K2C94-200392

Amd. No. - N° de la modif.  
File No. - N° du dossier  
MTA-9-42152

Buyer ID - Id de l'acheteur  
MAT625  
CCC No./N° CCC - FMS No./N° VME

---

## DOCUMENTS AND STANDARDS

Item	General Requirements	Standards and References (Latest Version)
COLOUR	Manufacturer standard	
PRIMER	Manufacturer's original paint	
FINISHING PAINT	Polyurethane enamel	
ENGINE	Engine Power Test Code – Spark Ignition and Compression Ignition – Gross Power Rating	SAE J1995
ELECTRICAL WIRES	Low-tension primary cable (A)	SAEJ1128
ACCESS	Access systems for off-road machines (D)	SAE J185

<b>GENERAL</b>	
<b>1.</b>	<p><b>PURPOSE:</b>            These technical specifications detail Environment Canada's requirements for the supply of a new detachable snow blower with a minimum capacity 3,000 tonnes per hour.</p> <p>The equipment will be attached to a wheel loader with a capacity of 2.7 m<sup>3</sup>. The equipment will be deployed in Eureka, Nunavut.</p> <p><b>IMPORTANT NOTE:</b></p> <ul style="list-style-type: none"> <li>• Prototype, demonstrator, reconditioned and used items will not be accepted.</li> </ul>
<b>2.</b>	<p><b>TECHNICAL DATA</b></p> <p>2.1 These specifications represent the minimum required from the supplier. All standard manufacturer equipment must be included with the equipment requested, whether or not it is in the specifications.</p> <p>2.2 The equipment will be used and stored in an Arctic climate. There may be a power supply for the equipment in the storage area. The bidder must ensure the equipment will operate in all conditions.</p> <p>2.3 The snow blower will be new for the current year.</p> <p>Make: _____            Model: _____            Year: _____</p>
<b>3.</b>	<p><b>OPERATIONS</b></p> <p>3.1 Eureka operation site and airport maintenance            3.2 Operation in an Arctic climate</p>
<b>CHASSIS</b>	
<b>4.</b>	<p><b>DESIGN</b></p> <p>4.1 Two-phase snow blower; two (2) auger feeds and one (1) impeller with five (5) blades minimum            4.2 Auxiliary engine mounted at the back of the impeller casing            4.3 Quick coupler compatible with the truck; model MD9R8/CL10R8 Model : Craig Manufacturing QKMC 721D T3042102</p>
<b>5.</b>	<p><b>FRAME</b></p> <p>5.1 Mechanical high-tensile steel            5.2 Reinforced construction and fully welded</p>

<b>6.</b>	<b>ENGINE COWLING</b>  6.1 The equipment must have a set of engine cowlings to protect components 6.2 It must be possible to remove the engine cowlings easily and they must not interfere with maintenance of the components 6.3 The cowlings must be solidly attached to avoid opening during operation 6.4 Impact resistant at very low temperatures 6.5 Made of steel or aluminum
<b>7.</b>	<b>BUCKET</b>  7.1 Working height: 1,448 mm (57 inches) minimum 7.2 Overall width: 2,794 mm (110 inches) minimum
<b>8.</b>	<b>STEERING VANES</b>  8.1 Steel, heavy-duty construction 8.2 Two (2), one on each side of the bucket 8.3 Width: 305 mm (12 inches) minimum 8.4 Height: 2,286 mm (90 inches) minimum, including the vane extension 8.5 Hydraulic steering from the equipment's dash
<b>9.</b>	<b>CHUTE</b>  9.1 High-strength steel; inside of the chute coated with chromium carbide, <b>no substitutions</b> 9.2 Hydraulically controlled rotation angle of 300 degrees minimum 9.3 Overall height from the ground less than 3,556 mm (140 inches) 9.4 Controlled protection distance from 5 to 40 feet minimum 9.5 Chute with greasable joints 9.6 Hydraulic tilt system to lower the chute for manual unclogging or storing
<b>10.</b>	<b>INFEED AUGER</b>  10.1 Two (2) 10.2 One-piece and interchangeable 10.3 With a welded ice hammer, <b>no substitutions</b> 10.4 Minimum diameter of 660 mm (26 inches)
<b>11.</b>	<b>DRUM</b>  11.1 High-resistance steel; inside of the drum coated with chromium carbide, <b>no substitutions</b> 11.2 Minimum diameter of 990 mm (39 inches) 11.3 Hydraulically controlled rotation to project snow through the chute or directly from the drum; minimum rotation of 90° to the right and 30° to the left

<p><b>12.</b></p>	<p><b>IMPELLER</b></p> <p>12.1 Five (5) blades minimum          12.2 Attached with bolts</p>
<p><b>13.</b></p>	<p><b>SKIDS</b></p> <p>13.1 Two (2) replaceable lateral skids (minimum) coated with a layer of chromium carbide or tungsten carbide          13.2 Five (5) replaceable inner skids (minimum) coated with a layer of chromium carbide or tungsten carbide</p>
<p><b>14.</b></p>	<p><b>BLADE</b></p> <p>14.1 Carbide-tipped blade, <b>no substitutions</b></p>
<p><b>15.</b></p>	<p><b>TOOLBOX</b></p> <p>15.1 Install a toolbox to store the security bolts required for replacement</p>
<p><b>16.</b></p>	<p><b>SHOVEL HOLDER</b></p> <p>16.1 Install a shovel holder          16.2 Shovel included</p>
<p><b>17.</b></p>	<p><b>ACCESS</b></p> <p>17.1 Install steps and handrails to access the chute during manual unclogging operations          17.2 Grip strut anti-slip step or equivalent</p>
<p><b>18.</b></p>	<p><b>LIFTING RINGS</b></p> <p>18.1 Provide lifting points to lift the equipment for maintenance and handling operations</p>
<p><b>19.</b></p>	<p><b>PAINT</b></p> <p>19.1 On interior and exterior surfaces. The engine, accessories, hydraulic valves and rubber parts are unpainted.          19.2 Preparation with sandblasting on all surfaces. Weld splatter must be removed          19.3 Primer compatible with the finishing paint with a minimum dry film thickness of 100 microns          19.4 Polyurethane finishing paint with a minimum dry film thickness of 65 microns in the standard manufacturer colour</p>

<b>20.</b>	<p><b>IDENTIFICATION</b></p> <p>20.1 Equipment greasing points must be clearly identified.          20.2 Warnings must be identified using stickers or another method.          20.3 Identification plates must be affixed to all equipment.          20.4 All manufacturer identification information must be written in English and French.</p>
<b>DRIVE SYSTEM</b>	
<b>21.</b>	<p><b>ENGINE</b></p> <p>21.1 Diesel, six (6) cylinders, turbocharged          21.2 Engine displacement capacity of 9 litres minimum          21.3 365 hp minimum</p> <p>Make: _____          Model: _____          Cylinder capacity: _____</p>
<b>22.</b>	<p><b>HIGH IDLE</b></p> <p>22.1 Electronic          22.2 Operation with a switch mounted on the dash          22.3 Raised idling speed of 800 to 1200 RPM</p>
<b>23.</b>	<p><b>ENGINE LUBRICATION</b></p> <p>23.1 Synthetic oil, adapted to the Arctic climate          23.2 Replaceable filters          23.3 Adaptor for engine oil sampling – The successful bidder must provide and install on the engine an adaptor for sampling oil, so that analyses can be conducted for maintenance services</p>
<b>24.</b>	<p><b>AIR FILTER</b></p> <p>24.1 Dry          24.2 Two (2) elements: primary and secondary          24.3 Installation inside the cowlings, protected from the elements          24.4 Air filter restriction gauge required</p>
<b>25.</b>	<p><b>FUEL FILTER</b></p> <p>25.1 With a water separator, priming pump and heating element</p>

<p><b>26.</b></p>	<p><b>EXHAUST AND ANTIPOLLUTION SYSTEM</b></p> <p>26.1 Compliant with regulations in effect and engine manufacturer's standards  26.2 Exhaust pipe with protection from exposure to the elements at the tip</p>
<p><b>27.</b></p>	<p><b>COOLING SYSTEM</b></p> <p>27.1 Standard manufacturer engine fan  27.2 Long-life ethylene glycol rated -55°C</p>
<p><b>28.</b></p>	<p><b>FUEL TANK</b></p> <p>28.1 Manufacturer's standard with locking gas cap  28.2 The tank capacity must enable a minimum of eight (8) hours of operation at full capacity; 300-litre minimum capacity</p>
<p><b>29.</b></p>	<p><b>UREA TANK (IF REQUIRED)</b></p> <p>29.1 The tank capacity must correspond to the diesel tank's capacity  29.2 With an integrated heating system</p>
<p><b>30.</b></p>	<p><b>DRIVE SYSTEM CLUTCH</b></p> <p>30.1 Hydraulic type with power assistance  30.2 Three (3) discs  30.3 Automatic adjustment of clutch discs  30.4 With system protection to prevent operating the clutch when the engine is running at higher speeds at 1,000 rpm</p>
<p><b>31.</b></p>	<p><b>DRIVE SYSTEM</b></p> <p>31.1 Roller drive chain in an oil bath  31.2 Adjustable chain tension  31.3 Shear bolts to protect the drive system, infeed auger and the impeller; bolts must be easily accessible and easy to replace</p>
<p><b>32.</b></p>	<p><b>COLD WEATHER STARTING SYSTEM</b></p> <p>32.1 Glow-plug system required  32.2 One (1) ≥1,500-watt circulation immersion block heater for the cooling system</p>

<b>ELECTRICAL SYSTEM</b>	
<b>33.</b>	<b>ELECTRICAL SYSTEM AND ALTERNATOR</b>  33.1 12-volt electrical system; circuits protected by breakers 33.2 One (1) alternator with a minimum capacity of 100 amperes
<b>34.</b>	<b>SAFETY SWITCH</b>  34.1 One (1) identified 34.2 From the primary circuit located in an area that is protected from the elements 34.3 Lockable with a padlock
<b>35.</b>	<b>BATTERIES</b>  35.1 Maintenance free 35.2 Two (2) batteries of 950 CCA minimum
<b>36.</b>	<b>SMART CHARGER</b>  36.1 One (1) smart charger with a minimum 10A capacity connected to the batteries 36.2 The charger must be accessible and mounted inside the engine cowlings 36.3 The power supply must be connected to a connector with a cover 36.4 The connector must be clearly identified and located near the engine block heaters and cooling system
<b>37.</b>	<b>WORK LAMPS</b>  37.1 Two (2) LED work lamps minimum installed on the chute 37.2 Two (2) LED work lamps minimum installed on the bucket 37.3 Work lamp controlled by an ON/OFF switch on the control box
<b>HYDRAULIC SYSTEM</b>	
<b>38.</b>	<b>HYDRAULIC PUMP</b>  38.1 Direct drive on the diesel engine 38.2 Adequate capacity to operate the components

<p><b>39.</b></p>	<p><b>COMPONENTS, VALVES AND FITTINGS</b></p> <p>39.1 All valves must withstand a minimum working pressure of 2,000 psi          39.2 Hydraulic valves with fittings must be the JIC type, no PIPE fittings or collars          39.3 Hydraulic valves with swivel fittings at each end          39.4 Rubber grommets for each sheet cross member</p>
<p><b>40.</b></p>	<p><b>FILTRATION</b></p> <p>40.1 10-micron filter installed on the tank return line          40.2 Replaceable cartridge type</p>
<p><b>41</b></p>	<p><b>HYDRAULIC CYLINDERS</b></p> <p>41.1 Hardened rod          41.2 Anticorrosion treated, nitrided rod or induction chromed rod          41.3 Maximum corrosion protection</p>
<p><b>CONTROLS</b></p>	
<p><b>42</b></p>	<p><b>SNOW BLOWER HOUSING CONTROLS</b></p> <p>42.1 Emergency stop switch          42.2 The wireless control box will be used to control the snow blower during maintenance operations</p>
<p><b>43</b></p>	<p><b>WIRELESS CONTROL BOX</b></p> <p>43.1 Wireless control with Bluetooth communications protocol          43.2 Main control by joystick          43.3 Installation with sturdy attachment onto the wheel loader with 12-volt power supply          43.4 Detachable mechanism for use with the equipment during maintenance          43.5 Control box with activation key</p> <p><b>Engine control:</b></p> <p>43.6 Start-up          43.7 Engine speed          43.8 Emergency stop</p> <p><b>Snow blower control:</b></p> <p>43.9 Clutch          43.10 Chute rotation          43.11 Chute angle          43.12 Drum rotation</p>

	<p>43.13 Steering vane control          43.14 Work lamps</p> <p><b>Indicators:</b></p> <p>43.15 Standard manufacturer engine indicator with the following information at a minimum:          tachometer, hour meter, oil pressure and engine temperature</p> <p>43.16 Hour meter          43.17 Fuel level          43.18 Urea tank level</p> <p><b>Indicator lights:</b></p> <p>43.19 During snow blower clutch operation          43.20 Oil pressure low          43.21 High cooling system temperature</p>
<b>DOCUMENTS, INSPECTION, WARRANTY AND TRANSPORTATION</b>	
<b>44</b>	<p><b>DOCUMENTS</b></p> <p>At the time of delivery, the supplier must provide:</p> <p>44.1 Operations manual in electronic format (French and English)          44.2 Maintenance manual in electronic format (French and English)          44.3 Six (6) sets of keys with wireless control          44.4 All necessary diagnostics tools (software, interfaces and adaptors) to troubleshoot the equipment and its components.</p>
<b>45</b>	<p><b>INSPECTION</b></p> <p>45.1 The equipment will be inspected and accepted by Environment Canada officials or representatives at the supplier's facilities prior to installation on the truck.</p>
<b>46</b>	<p><b>TRAINING</b></p> <p>46.1 Provide two (2) training sessions for the equipment maintenance teams. Groups of 2 to 6 people.          46.2 Training will be planned with a 4 to 8 month interval, depending on availability of the maintenance relief teams.          46.3 The first training session must be provided in the Greater Montreal area with equipment.          46.4 The second training session must be provided at the Eureka site. All travel costs will be covered starting in Yellowknife.</p>
<b>47</b>	<p><b>DELIVERY TERMS</b></p> <p>47.1 Delivery in the Montreal area (address to be confirmed)          47.2 Upon delivery, the equipment must be clean and operational          47.3 Provide a complete set of filters (air, fuel, hydraulic oil and engine oil) for the vehicle</p>

Solicitation No. - N° de l'invitation  
K2C94-200392/A  
Client Ref. No. - N° de réf. du client  
K2C94-200392

Amd. No. - N° de la modif.  
File No. - N° du dossier  
MTA-9-42152

Buyer ID - Id de l'acheteur  
MAT625  
CCC No./N° CCC - FMS No./N° VME

---

# **Product #5**

## **Technical Specifications**

### **Wheel Loader**

Total loaded mass of 11,500 kg minimum

## Documentation and standards

Item	General Requirements	Standards and References (Latest Version)
CODE	National Safety Code	
ENGINE	Engine Power Test Code – Spark Ignition and compression Ignition – Gross Power Rating	SAE J1995
ACCESS	Access Systems for Off-Road Machines	SAE J185
COLOUR	Manufacturer standard	
LOADER	Specification Definitions – Loaders (A) Capacity rating – Loader bucket	SAE J732 SAE J742
PROTECTIVE STRUCTURE	Minimum Performance Criteria for Falling Object Protective Structure (FOPS) (A)  Performance Criteria for Rollover Protective Structures (ROPS) for Construction Earthmoving, Forestry and Mining Machines	SAE J231 JAN 81  SAE J1040 MAY 94
PRIMER	Paint, epoxy-resin rust-preventive coat, two-container system	
NOISE	Sound Measurement – Earth Moving Machinery Operator – Singular Type (A) (D)	SAE J1166
BRAKES	Brake Performance – Rubber-tired Earthmoving Machines (A)	SAE J1473
EMBLEM	Slow-Moving Vehicle Identification Emblem	CSA Standard D198- M1977
QUICK ATTACHMENT	Quick attach system for the bucket loader	
AXLES	Axle application load rating for industrial wheel loaders and backhoe loaders	

<b>GENERAL</b>	
<b>1</b>	<p><b>PURPOSE:</b></p> <p>These technical specifications detail Environment Canada's requirements for the supply of a new wheel loader with capacity for a total loaded mass of &lt; 11,500 kg.</p> <p>The equipment will be delivered with a 1.7-m<sup>3</sup> general-purpose bucket, a high capacity bucket for snow removal, and a set of forks. The equipment will be deployed in Eureka, Nunavut.</p> <p><b>IMPORTANT NOTE:</b></p> <ul style="list-style-type: none"> <li>• Prototype, demonstrator, reconditioned and used items will not be accepted.</li> </ul>
<b>2</b>	<p><b>TECHNICAL DATA</b></p> <p>2.1 These specifications represent the minimum required from the supplier. All standard equipment from the manufacturer must be included with the equipment requested, whether or not it is in the specifications.</p> <p>2.2 The equipment will be used and stored in an arctic climate. There may be a power supply for the equipment in the storage area. The bidder must ensure the equipment will operate in all conditions.</p> <p>2.3 The loader will be a new piece of equipment that has never been in service.</p> <p>Make: _____          Model: _____          Year: _____</p>
<b>3</b>	<p><b>OPERATIONS</b></p> <p>3.1 Eureka operation site and airport maintenance.          3.2 Air freight handling.          3.3 Snow removal with bucket.          3.4 Operation in an arctic climate.</p>
<b>4</b>	<p><b>SPECIFICATIONS</b></p> <p>4.1 Nominal capacity of the bucket 1.7 m<sup>3</sup>.          4.2 Wheel base ≤ 2,760 mm.          4.3 Overall height, ground to top of cab ≤ 3,180 mm.          4.4 Curb weight ≤ 11,500 kg.</p>
<b>5</b>	<p><b>TIPPING LOAD</b></p> <p>5.1 Tipping capacity in a straight line of 6,700 kg minimum.          5.2 Tipping capacity in full turning position of 5,600 kg minimum.</p>

<b>LOADER AND CHASSIS</b>	
<b>6</b>	<p><b>BODY</b></p> <p>6.1 Full-sized, front and back wraparound wings with front and back fender extension. The wings must not interfere with the opening of the access panels. They must be easy to remove.</p> <p>6.2 The equipment must provide convenient access to the engine and cooling compartments through pivoting doors that are held in place with a lockable system.</p>
<b>7</b>	<p><b>LOADER ELEMENT</b></p> <p>7.1 Single-lever hydraulic joystick control within the operator's reach to operate the boom and bucket with the F-N-R switch.</p> <p>7.2 Additional lever to operate a third valve.</p> <p>7.3 Safety interlock for hydraulic control levers.</p> <p>7.4 Loader boom locking bar.</p> <p><b>Equipped with the following systems:</b></p> <p>7.5 Tilt control with pilot circuit. Position: rackback, lock and dump. Automatic return to dig angle.</p> <p>7.6 Lift control with pilot circuit. Position: lift, lock, lower and float down. Automatic adjustments between horizontal to maximum lift.</p> <p>7.7 Assisted horizontal lift for use of the forks.</p>
<b>8</b>	<p><b>QUICK ATTACHMENT</b></p> <p>8.1 The wheel loader, bucket and forks must be equipped with a quick coupler that is compatible with the accessories at the Eureka site. Model with side pin.</p> <p>8.2 The quick coupler control installation must use an independent hydraulic system. The third function system must remain available for other equipment.</p>
<b>9</b>	<p><b>CHASSIS ACCESSORIES</b></p> <p>9.1 Protective side and transmission panels.</p> <p>9.2 Pin-type rear coupler to tow equipment.</p>
<b>10</b>	<p><b>COUNTERWEIGHTS</b></p> <p>10.1 Counterweights must come from the manufacturer of the loader, without external modifications or additions.</p> <p>10.2 Pin-type rear coupler to tow equipment.</p>

11	<p><b>BUCKET</b></p> <p>11.1 General-purpose bucket with a hook and reversible bolt-on blade.          11.2 Nominal capacity 1.7 m<sup>3</sup>.          11.3 Maximum bucket width 2 600 mm.</p> <p>11.4 High-capacity snow removal bucket and reversible bolt-on blade.          11.5 Nominal capacity &gt; 3 m<sup>3</sup>.          11.6 Maximum width of 2 900 mm.</p>
12	<p><b>FORK</b></p> <p>12.1 Fork with backrest.          12.2 Manually adjustable fork width.          12.3 With side shift installed on the third valve.          12.4 Nominal fork length 122 mm.</p>
13	<p><b>PAINT</b></p> <p>13.1 Original paint from the manufacturer.</p>
14	<p><b>AUTOMATIC GREASING SYSTEM</b></p> <p>14.1 Automatic centralized greasing using EP 2 grease.          14.2 Brand: Lincoln Industrial (no substitutions), 94422 pump and SSVD valves.          14.3 The greasing points must be connected to all grease fittings, which must be the originals installed during manufacturing, plus fittings added when the quick attach and other equipment are installed.          14.4 Indicate the greasing points that will not be greased by the system.          14.5 All hoses must be hydraulic and flexible, consist of at least three layers, and be able to withstand a pressure of 3,000 PSI minimum.          14.6 The hoses must be fully lubricated when the system powers up.          14.7 The system must provide a visual or audible alert when a duct is clogged.          14.8 The system must provide a visual or audible alert when the grease level in the tank is low.          14.9 The tank must hold a minimum of 4 kg of lubricating grease.          14.10 Each dispenser must be equipped with a fitting for manual feed.          14.11 System installation must not affect the structural integrity of the equipment's components.</p>
<b>DRIVE SYSTEM</b>	
15	<p><b>ENGINE</b></p> <p>15.1 Diesel, four (4) cylinders, turbocharged.          15.2 110 hp minimum.          15.3 Original manufacturer's drain cock for all liquids.</p>

<b>16</b>	<b>COLD WEATHER STARTING SYSTEM</b>  16.1 Glow-plug system required. 16.2 One (1) ≥ 1,500-watt circulation immersion block heater for the cooling system. 16.3 One (1) ≥ 1,000-watt block heater for engine oil. 16.4 NEMA 5-15P connectors. 16.5 Connectors in metal receptacles with a cover and identification for the two connectors side by side.
<b>17</b>	<b>HIGH IDLE</b>  17.1 Electronic. 17.2 Operation with a switch mounted on the dash. 17.3 Raised idling speed 800 to 1,200 RPM.
<b>18</b>	<b>ENGINE LUBRICATION</b>  18.1 Synthetic oil, adapted to the arctic climate. 18.2 Replaceable filters. 18.3 Oil cooled by a heat exchanger. 18.4 Adaptor for engine oil sampling – The successful bidder must provide and install on the engine an oil sampling adaptor, so that analyses can be conducted for maintenance services.
<b>19</b>	<b>AIR FILTER</b>  19.1 Dry. 19.2 Two (2) elements: primary and secondary. 19.3 Air filter restriction gauge required.
<b>20</b>	<b>FUEL FILTER</b>  20.1 With a water separator, priming pump and heating element.
<b>21</b>	<b>EXHAUST AND ANTIPOLLUTION SYSTEM</b>  21.1 Compliant with regulations in effect and engine manufacturer's standards. 21.2 Vertical stack with an anti-exposure elbow.
<b>22</b>	<b>COOLING SYSTEM</b>  22.1 Standard manufacturer engine fan. 22.2 Long-life ethylene glycol rated -55 °C.

23	<p><b>FUEL TANK</b></p> <p>23.1 Manufacturer's standard with locking gas cap.  23.2 The tank capacity must enable a minimum of twelve (12) hours of operation.</p>
24	<p><b>UREA TANK (IF REQUIRED)</b></p> <p>24.1 The tank capacity must correspond to the Diesel tank's capacity.  24.2 With an integrated heating system.</p>
25	<p><b>TRANSMISSION</b></p> <p>25.1 Power-assist control box and countershaft power shift OR hydrostatic countershaft with shift lever.  25.2 Three (3) forward speeds minimum.  25.3 Three (3) reverse speeds minimum.  25.4 Single-lever gear selector.  25.5 Automatic shift mode.  25.6 Quick-change downshift using the loader's joystick.</p>
26	<p><b>AXLES AND DIFFERENTIAL</b></p> <p>26.1 Fixed front axles.</p>
27	<p><b>AXLES AND DIFFERENTIAL</b></p> <p>27.1 Oscillating rear differential with a total rotation of 20° minimum.</p>
28	<p><b>DIFFERENTIALS</b></p> <p>28.1 Must have lockable front and rear differentials. They will be activated by a switch on the joystick without stopping the machine.</p>
29	<p><b>STEERING SYSTEM</b></p> <p>29.1 Articulated chassis frame.  29.2 Equally spaced front and rear wheels.  29.3 The steering system uses a load-sensing variable displacement pump with two double-acting cylinders  29.4 Two (2) double-acting cylinders.  29.5 Articulation angle: 80-degree arc (40 degrees in each direction).  29.6 Security system to lock the articulated frame.</p>

30	<p><b>BRAKES</b></p> <p>30.1 Four-wheel wet brakes.</p> <p>30.2 Mounted within sealed housing directly onto the differential.</p> <p>30.3 Hydraulically operated.</p> <p>30.4 Automatically adjusting.</p> <p>30.5 Braking system with one (1) or two (2) pedals. If it is a system with two (2) pedals, the first is dedicated to braking, and the second disengages the transmission and applies the brakes.</p> <p>30.6 The hydraulic systems of the front and rear brakes must operate independently and provide effective braking in the event of partial or total malfunction.</p> <p>30.7 Emergency assistance system to make it possible to stop the vehicle following loss of engine power.</p>
31	<p><b>PARKING BRAKE</b></p> <p>31.1 Emergency brake that works independently from the electronically activated service brakes.</p>
32	<p><b>WHEELS</b></p> <p>32.1 Four (4) painted steel rims of the same size.</p> <p>32.2 With a protective inflation valve cap.</p>
33	<p><b>TIRES</b></p> <p>33.1 MICHELIN XSnowPlus L2 17.5 R25, or accepted equivalent.</p>
<b>HYDRAULIC SYSTEM</b>	
34	<p><b>HYDRAULIC SYSTEM</b></p> <p>34.1 Boom suspension system (ride control systems).</p> <p>34.2 Double-ended output circuit located on the left side of the loader from the original manufacturer for the third function.</p> <p>34.3 Hydraulic filter for total oil flow.</p> <p>34.4 Hydraulic system oil cooler.</p> <p>34.5 Variable-cylinder axial-piston pump, closed-centre pressure compensation system; load-detecting hydraulic pump; pump flow <math>\geq</math> 120 l/min.</p> <p>34.6 Relief valve setting: <math>\geq</math> 2,990 psi.</p> <p>34.7 Three-function hydraulic valve with lever control and auxiliary lever for third function.</p> <p>34.8 Hydraulic system to lock the quick-attach studs, including cab, duct and valve controls.</p> <p>34.9 Original manufacturer piping – installation performed by parties other than the manufacturer are not acceptable.</p> <p>34.10 Easy to program lift disengagement, lower and tilt functions.</p>

<b>35</b>	<p><b>TANK</b></p> <p>35.1 Reservoir capacity ≥ 70 l.          35.2 Oil level indicator.          35.3 Oil temperature control unit for storage; NEMA 5-15P-type connector in a metal case near the block heater's other connectors (water and oil).</p>
<b>ELECTRICAL SYSTEM</b>	
<b>36</b>	<p><b>ELECTRICAL SYSTEM</b></p> <p>36.1 Twenty-four (24) volts, grounded receptacle.          36.2 Minimum of two (2) heavy-duty, maintenance-free batteries, totalling ≥ 1,900 cold cranking amps (CCA).          36.3 115-amp alternator minimum.          36.4 Easily accessible pole outside the battery housing in the event of battery overloading.</p>
<b>37</b>	<p><b>SAFETY SWITCH</b></p> <p>37.1 One (1) identified.          37.2 From the primary circuit located in an area that is protected from the elements.          37.3 Lockable with a padlock.</p>
<b>38</b>	<p><b>SMART CHARGER</b></p> <p>38.1 One (1) smart charger with a minimum 10A capacity connected to the batteries.          38.2 The charger must be accessible and mounted inside the engine cowlings.          38.3 The power supply must be connected to a NEMA 5-15P-type connector with a cover.          38.4 The connector must be clearly identified and located near the engine block heaters and cooling system.</p>
<b>39</b>	<p><b>REAR-VIEW CAMERA</b></p> <p>39.1 Installation of a rear-view camera for backing up; position to be determined with the supplier.          39.2 Colour screen in the cab that activates as soon as the vehicle enters reverse.</p>
<b>40</b>	<p><b>WORK LAMPS</b></p> <p>40.1 Independently controlled groups of work lamps.          40.1.1 Four (4) LED work lamps at the front top of the cab.          40.1.2 Two (2) LED work lamps at the rear top of the cab.</p>

<b>41</b>	<p><b>STROBE LIGHTS</b></p> <p>41.1 The power supply for the strobe lights must be controlled by one (1) switch on the dash console</p> <p>41.2 One (1) LED minibar-type light mounted on top of the cab visible from 360°.</p>
<b>42</b>	<p><b>LIGHTS AND SIGNAL LIGHTS</b></p> <p>42.1 All headlights and signal lights required according to the Canadian National Safety Code.</p> <p>42.1.1 High beams</p> <p>42.1.2 Turn signals</p> <p>42.1.3 Brake lights</p> <p>42.1.4 Hazard warning lights</p> <p>42.1.5 Parking lights</p> <p>42.1.6 Licence plate lights</p> <p>42.1.7 Reverse lights</p> <p>42.2 One (1) slow-moving vehicle emblem (CSA Standard D198-M1977)</p>
<b>43</b>	<p><b>BACKUP ALARM</b></p> <p>43.1 Standard manufacturer backup alarm.</p> <p>43.2 Activated as soon as reverse is selected on the vehicle.</p>
<b>CAB</b>	
<b>44</b>	<p><b>CAB</b></p> <p>44.1 Located at the rear of the loader's chassis.</p> <p>44.2 Approved ROPS (rollover protective structures) and FOPS (falling object protection systems) cab.</p> <p>44.3 Pressurized with filtration, low-level soundproofing and air conditioning.</p> <p>44.4 Windows with panoramic view.</p> <p>44.5 Tinted safety glass.</p> <p>44.6 Two-speed and intermittent front and rear electric windshield wipers.</p> <p>44.7 Front and rear electric windshield washers.</p> <p>44.8 Insulated rubber floor mat.</p> <p>44.9 Fabric-covered deluxe seat with pneumatic suspension, flip-up arm rests and lumbar support.</p> <p>44.10 Retractable seat belt.</p> <p>44.11 Pressurized heater to warm the entire cab.</p> <p>44.12 Front window defroster.</p> <p>44.13 Rear window defroster.</p>

	<p>44.14 Heat register at the operator's feet.          44.15 Easy-to-replace cab air filter.          44.16 Sun visor for the front windshield.          44.17 Easily accessible emergency engine stop switch at ground level.</p>
45	<p><b>DASH CONSOLE</b></p> <p><b>Analog or digital indicator:</b></p> <p>45.1 Fuel level.          45.2 Engine oil pressure.          45.3 Transmission oil temperature.          45.4 Engine coolant temperature.          45.5 Battery voltage.          45.6 Engine speed in rpm.          45.7 Engine hour meter – The hour meter is connected in a way that clocks only actual engine run time.</p> <p><b>Indicator lights:</b></p> <p>45.8 Engine oil pressure.          45.9 Brake pressure.          45.10 Parking brake.          45.11 Hydraulic oil temperature.          45.12 Clogged transmission filter.          45.13 Battery voltage.          45.14 Clogged hydraulic oil filter.          45.15 Antipollution system fault.</p>
46	<p><b>ACCESSORIES</b></p> <p>46.1 Foot throttle.          46.2 Adjustable steering column.          46.3 Horn.          46.4 Backup alarm – The speaker must be rear-facing and must not be obstructed.          46.5 Turn signal switch.          46.6 Switch to simultaneously activate the four (4) turn signals.          46.7 One (1) interior rear-view mirror.          46.8 Two (2) heated and electrically adjustable exterior rear-view mirrors.          46.9 Ceiling light.          46.10 One (1) AM/FM/USB/Bluetooth radio minimum.          46.11 One (1) 24–12-V voltage converter, 10 amps.          46.12 Pre-wiring to install a 12-volt radio transmitter with fuse and antennae on the cab.</p>

<b>47</b>	<p><b>MEANS OF ACCESS</b></p> <p>47.1 SAE J185 compliant.</p> <p>47.2 In the cab, at the radiator pressure cap, at the fuel filler cap, at verification points.</p> <p>47.3 Travel on smooth surfaces must be made safer with the placement of self-adhesive anti-slip strips on top of the toolbox, batteries and fuel tank.</p> <p>47.4 Handrails and Grip Strut anti-slip steps placed ergonomically – The first must be mobile on rubber supports.</p> <p>47.5 Designed to withstand all operating conditions without deterioration.</p> <p>47.6 The three-point contact rule must be followed.</p> <p>47.7 No sharp edges.</p>
<b>DOCUMENTS, INSPECTION, WARRANTY AND TRANSPORTATION</b>	
<b>48</b>	<p><b>DOCUMENTS</b></p> <p>48.1 Two (2) operations and maintenance manuals in English.</p> <p>48.2 Two (2) operations and maintenance manuals in French.</p> <p>48.3 Six (6) sets of keys.</p> <p>48.4 One (1) operations and maintenance manual on a CD in English.</p> <p>48.5 One (1) loader shop repair manual (printed or on a CD) in English.</p> <p>48.6 All necessary diagnostics tools (software, interfaces and adaptor) to troubleshoot the equipment and its components.</p>
<b>49</b>	<p><b>INSPECTION</b></p> <p>49.1 The equipment will be inspected and accepted by Environment Canada officials or its representatives before delivery.</p>
<b>50</b>	<p><b>TRAINING</b></p> <p>50.1 Provide two (2) training sessions for the equipment maintenance teams. Groups of 2 to 4 people.</p> <p>50.2 Training will be planned at an interval of 4 to 8 months, depending on availability of the maintenance relief teams.</p> <p>50.3 The first training session must be provided in the Greater Montreal area with equipment.</p> <p>50.4 The second training session must be provided at the Eureka site. All travel costs will be covered starting in Yellowknife.</p>
<b>51</b>	<p><b>DELIVERY TERMS</b></p> <p>51.1 Delivery in the Montreal area (address to be confirmed).</p> <p>51.2 Upon delivery, the equipment must be clean and operational.</p> <p>51.3 Provide a complete set of filters (air, fuel, hydraulic oil and engine oil) for the vehicle.</p>

**ANNEX "B"**

**BASIS OF PAYMENT**

Article	Description	Quantity	Unit Price	Total Price
<b>A</b>	Wheel Loader of 15 400 kg as described in the Technical Specifications of Product #1 of Annex "A" - Requirement	<b>1</b>	_____ \$	_____ \$
<b>B</b>	Detachable snow blower as described in the Technical Specifications of Product #4 of Annex "A" - Requirement	<b>1</b>	_____ \$	_____ \$
<b>C</b>	Wheel Loader of 11 500 kg as described in the Technical Specifications of Product #5 of Annex "A" - Requirement	<b>1</b>	_____ \$	_____ \$
<b>D</b>	Training	<b>1</b>	_____ \$	_____ \$
<b>E</b>	Transport & delivery fees	<b>1</b>	_____ \$	_____ \$
<b>F</b>	Extended warranty as per 6.3.1 of the Request for Proposal	<b>1</b>	_____ \$	_____ \$
	<b>TOTAL ( A + B + C + D + E + F )</b>			_____ \$

**OPTIONAL GOODS AND/OR SERVICES**

Article	Description	Quantity	Unit Price	Total Price
<b>G</b>	Grader as described in the Technical Specifications of Product #2 of Annex "A" - Requirement	<b>1</b>	_____ \$	_____ \$
<b>H</b>	Tow behind pneumatic tire compactor as described in the Technical Specifications of Product #3 of Annex "A" - Requirement	<b>1</b>	_____ \$	_____ \$
<b>I</b>	Training	<b>1</b>	_____ \$	_____ \$
<b>J</b>	Transport & delivery fees	<b>1</b>	_____ \$	_____ \$
<b>K</b>	Extended warranty as per 6.3.1 of the Request for Proposal	<b>1</b>	_____ \$	_____ \$
	<b>TOTAL ( G + H + I + J + K )</b>			_____ \$

**ANNEX "C"**

**MANDATORY TECHNICAL SPECIFICATIONS TO BE DEMONSTRATED**

It is mandatory to provide the technical / descriptive documents of the product that you are offering (eg. drawing, data sheet, sketch, etc.) or a description to allow it's technical evaluation. Failure to comply will render your bid non responsive.

Canada will evaluate only the documentation provided with a bidder's bid. Canada will not evaluate information such as references to Web site addresses where additional information can be found, or technical manuals or brochures not submitted with the bid.

No.	Mandatory technical Specifications	Reference : Please specify where can be found these items within your technical/descriptive documents and/or technical literature/notes. (Page and/or Section)
<b>Product #1 - Wheel Loader - Total loaded mass of 15,400 kg minimum</b>		
4.4	Curb weight: ≥15,400 kg	Page /Section: _____
5.1	Tipping capacity in a straight line of 11,500 kg minimum	Page /Section: _____
5.2	Tipping capacity in full turning position of 9,700 kg minimum	Page /Section: _____
15.2	Rated power of 165 hp minimum	Page /Section: _____
<b>Product #2 - Grader</b>		
4.1	Curb weight ≥ 19,200 kg	Page /Section: _____
6.1	Articulated frame behind the cab	Page /Section: _____
12.2	Engine variable power based on the transmission speed – Power up to 230 hp minimum in eighth forward speed.	Page /Section: _____
<b>Product #3 - Tow behind pneumatic tire compactor</b>		
4.2	Minimum tread width > 2,500 mm	Page /Section: _____
4.2	Curb weight with ballasting > 3 000 kg	Page /Section: _____
4.4	Ground pressure per tire > 50 kg/cm	Page /Section: _____
<b>Product #4 - Detachable snow blower</b>		
1.1	Minimum capacity 3,000 tons per hour.	Page /Section: _____
10.3	Infeed auger with a welded ice hammer, no substitutions	Page /Section: _____

Solicitation No. - N° de l'invitation  
K2C94-200392/A  
Client Ref. No. - N° de réf. du client  
K2C94-200392

Amd. No. - N° de la modif.  
File No. - N° du dossier  
MTA-9-42152

Buyer ID - Id de l'acheteur  
MAT625  
CCC No./N° CCC - FMS No./N° VME

10.4	Infeed auger, minimum diameter of 660 mm (26 inches)	Page /Section: _____
21.3	Engine of 365 hp minimum	Page /Section: _____
<b>Product #5 - Wheel Loader - Total loaded mass of 11,500 kg minimum</b>		
4.2	Wheel base $\leq$ 2,760 mm.	Page /Section: _____
4.3	Overall height, ground to top of cab $\leq$ 3,180 mm.	Page /Section: _____
4.4	Curb weight $\leq$ 11,500 kg.	Page /Section: _____
5.1	Tipping capacity in a straight line of 6,700 kg minimum.	Page /Section: _____
5.2	Tipping capacity in full turning position of 5,600 kg minimum.	Page /Section: _____

Solicitation No. - N° de l'invitation  
K2C94-200392/A  
Client Ref. No. - N° de réf. du client  
K2C94-200392

Amd. No. - N° de la modif.  
File No. - N° du dossier  
MTA-9-42152

Buyer ID - Id de l'acheteur  
MAT625  
CCC No./N° CCC - FMS No./N° VME

---

## **ANNEX "D" to PART 3 OF THE BID SOLICITATION**

### **ELECTRONIC PAYMENT INSTRUMENTS**

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

- VISA Acquisition Card;
- MasterCard Acquisition Card;
- Direct Deposit (Domestic and International);
- Electronic Data Interchange (EDI);
- Wire Transfer (International Only);
- Large Value Transfer System (LVTS) (Over \$25M)

