Public Works and Government Services Canada | Travaux publics et Services gouvernementaux Canada

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SOLICITATION AMENDMENT
MODIFICATION DE L'INVITATION

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

Comments - Commentaires

Title - Sujet RUNWAY TRUCKS WITH SNOWBLOWER	
Solicitation No. - N° de l'invitation W8476-165361/A	**Amendment No. - N° modif.** 006
Client Reference No. - N° de référence du client W8476-165361	**Date** 2015-12-08
GETS Reference No. - N° de référence de SEAG PW-$$HP-924-67937	
File No. - N° de dossier hp912.W8476-165361	**CCC No./N° CCC - FMS No./N° VME**
Solicitation Closes - L'invitation prend fin **at - à 02:00 PM** **on - le 2016-01-06**	**Time Zone** **Fuseau horaire** Eastern Standard Time EST
F.O.B. - F.A.B. **Plant-Usine:** ☐ **Destination:** ☑ **Other-Autre:** ☐	
Address Enquiries to: - Adresser toutes questions à: Pearson, Neil	**Buyer Id - Id de l'acheteur** hp912
Telephone No. - N° de téléphone (783) 469-3312 ( )	**FAX No. - N° de FAX** (819) 953-2953
Destination - of Goods, Services, and Construction: **Destination - des biens, services et construction:**	

Vendor/Firm Name and Address
Raison sociale et adresse du fournisseur/de l'entrepreneur

Instructions: See Herein

Instructions: Voir aux présentes

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

Issuing Office - Bureau de distribution

Vehicles & Industrial Products Division
11 Laurier St./11, rue Laurier
7A2, Place du Portage, Phase III
Gatineau, Québec K1A 0S5

Canada

Amendment 006 is raised to amend the contracting authority and as a result of bidder's question, to replace the Product Description and the Technical Information Questionnaire.

1) At Part 6 – RESULTING CONTRACT CLAUSES

Delete: 6.4.1 Contracting Authority, in its entirety

Insert:

6.4.1 Contracting Authority

The Contracting Authority for the Contract is:
Name: Neil Pearson
Title: Procurement Specialist
Organization: Public Works and Government Services Canada - Acquisitions Branch
LEFT Directorate, HP Division,
7A2, Place du Portage, Phase 3, 11 Laurier Street, Gatineau Quebec,
K1A 0S5
Telephone: 783-469-3312
Facsimile: 819 953-2953
E-mail: Neil.Pearson@pwgsc-tpsgc.gc.ca

The Contracting Authority is responsible for the management of the Contract and any changes to the Contract must be authorized in writing by the Contracting Authority. The Contractor must not perform work in excess of or outside the scope of the Contract based on verbal or written requests or instructions from anybody other than the Contracting Authority

2) At Annex "B" - Purchase Description - 4X4, Chassis Mounted, Self-Propelled, Runway Snow Blower

Delete: Annex "B" - Purchase Description - 4X4, Chassis Mounted, Self-Propelled, Runway Snow Blower, in its entirety

Insert: Annex "B" - Purchase Description - 4X4, Chassis Mounted, Self-Propelled, Runway Snow Blower, Dated November 26, 2015, attached hereto.

3) At Appendix 1 - Technical Information Questionnaire - 4X4 Chassis Mounted Self-Propelled Runway Snow Blower, in its entirety

Delete: **Appendix 1 - Technical Information Questionnaire - 4X4 Chassis Mounted Self-Propelled Runway Snow Blower, in its entirety**

Insert: **Appendix 1 - Technical Information Questionnaire - 4X4 Chassis Mounted Self-Propelled Runway Snow Blower, Dated November 26, 2015, attached hereto.**

ALL OTHER TERMS AND CONDITIONS OF THIS SOLICITATION REMAIN UNCHANGED.

November 26, 2015

PURCHASE DESCRIPTION
FOR
4X4, Chassis Mounted, Self-Propelled, Runway Snow Blower

OPI DSVPM 5 – DAPVS 5
Issued on Authority of the Chief of the Defence Staff
Publiée avec l'autorisation du Chef d'état-major de la Défense

Canada

NOTICE

This documentation has been reviewed by the technical authority and does not contain controlled goods.

AVIS

Cette documentation a été révisée par l'autorité technique et ne contient pas de marchandises contrôlées.

PURCHASE DESCRIPTION
FOR
4X4 Chassis Mounted Self-Propelled Runway Snow Blower
ECC 167117

1. SCOPE

1.1 **Scope** - This purchase description covers a four wheel drive chassis mounted self-propelled, two-stage runway snow blower.

1.2 **Instructions** - The following instructions apply to this Purchase Description:

a) Requirements, which are identified by the word "***shall***", are mandatory. Deviations will not be permitted;

b) Requirements identified by "***shall***$^{(E)}$" are mandatory. The Technical Authority will consider substitutes/alternatives for acceptance as an equivalent;

c) Requirements identified with a "will" define actions to be performed by Canada and require no action/obligation on the Contractor's part;

d) Where "***shall***", "***shall***$^{(E)}$", or "will" are not used, the information provided is for guidance only;

e) In this document "provided" ***shall*** mean "provided and installed";

f) Where technical certification is required, a copy of the certification or an acceptable "proof of compliance" ***shall*** be provided;

g) Metric measurements are used to define the requirement. Other measurements are for reference only and may not be exact conversions; and

h) Dimensions stated as nominal ***shall*** be treated as approximate dimensions. Nominal dimensions reflect a method by which materials or products are generally identified for sale commercially, which may differ from the actual measured dimensions.

1.3 **Definitions -** The following definitions apply to the interpretation of this Purchase Description:

a) "Technical Authority" - The government official responsible for technical content of this requirement.

b) "Equivalent" - A standard, means, or component type, which has been accepted by the Technical Authority as meeting the specified requirements for form, fit, function and performance.

c) "Vehicle" - refers to the carrier vehicle with all standard components and parts required to carry out all the functions stated in this Purchase Description.

d) "Vehicle/equipment" - refers to the completely manufactured carrier vehicle with all the snow blower application equipment standard components and parts required to carry out all the functions stated in this Purchase Description.

2. APPLICABLE DOCUMENTS - The following documents form part of this Purchase Description. The dates of issue are those in effect on the date of release of the RFP. Sources are as shown:

Advisory Circulars 300 Series – Aerodromes and Airports
Transport Canada
Government of Canada
330 Sparks Street
Ottawa, ON, K1A 0N5
https://www.tc.gc.ca/

Automotive (On-road) Diesel Fuel
CAN/CGSB Standard 3.517-2007
Standards Council of Canada
270 Albert Street, suite 200
Ottawa, ON K1P 6N7
Canada
https://www.scc.ca/en

Canadian Occupational Health and Safety Regulations (COHSR), 2015
http://laws.justice.gc.ca/eng/regulations/sor-86-304/index.html

SAE Handbook
Society of Automotive Engineers Inc.
400 Commonwealth Dr.,
Warrendale, PA, 15096
http://www.sae.org

Yearbook
Tire and Rim Association Inc.,
3200 West Market St.,
Akron, Ohio, 44321
http://www.us-tra.org/traHome.htm

3. REQUIREMENTS

3.1 Standard Design

a) **Latest Model** - The vehicle design ***shall*** be the manufacturer's latest model.

b) **Industry Acceptability** - The vehicle/equipment design ***shall*** have demonstrated industry acceptability by having been manufactured and sold commercially for at least 1 year, or be manufactured by a company that has at least 5 years' experience in design and manufacturing of a comparable type of equipment of equivalent or greater complexity.

c) **Engineering Certification** - The vehicle/equipment design ***shall*** have engineering certification available, upon demand, for this vehicle/equipment from the original manufacturers of major drive train components and major equipment systems and assemblies.

d) **Regulations** – The vehicle/equipment ***shall*** conform to all applicable laws, regulations and industrial standards governing manufacture, safety, noise levels and pollution in effect in Canada at the time of manufacture. International equivalent laws, regulation and industrial standards will be accepted only if certified for equivalency by a professional engineer.

e) **Published Ratings** - The vehicle/equipment ***shall*** have system and component capacities equivalent to published ratings (i.e. product or component brochures).

f) **Standard Components** - The vehicle/equipment ***shall*** include all standard components, equipment and accessories for the model offered, although they may not be specifically described in this Purchase Description.

3.2 Operating Conditions

3.2.1 **Weather** - The vehicle/equipment ***shall*** operate under the extremes of weather conditions found in Canada in temperatures ranging from -40 to 37° C (-40 to 99° F) and cold starting from -40° C with external aids.

3.2.2 **Terrain -** The vehicle/equipment ***shall*** be operable on concrete and asphalt surfaces. Terrain conditions ***shall*** include year round operations on rain, snow, hard packed snow and ice with up to 2.0% (percent) slope in all weather conditions.

3.3 Safety

3.3.1 **Noise Level** - The vehicle/equipment noise level ***shall*** meet the requirements of legislation relative to Canadian Occupational Health and Safety Regulations (COHSR) at the operator's station.

3.3.2 **Human Factors Engineering -** The vehicle/equipment, all systems and components ***shall*** comply with the most recent requirements of the applicable SAE standards and relevant sections of the COHSR and ***shall***:

a) Be designed for safety and ease of use by CAF users with anthropometric characteristic measurements ranging from 95th percentile male to 5th percentile female;

b) Have entry and exit points equipped with handles and steps sized and positioned to accommodate CAF users with anthropometric characteristic measurements ranging from 95th percentile male to 5th percentile female; and

c) Be equipped, with warning and instruction plates, non-slip walking surfaces and heat shields, for operator safety.

3.4 <u>Performance</u>

a) The vehicle/equipment ***shall*** reach a minimum transport speed of 50 km/h, required for moving the vehicle between work locations.

b) The vehicle/equipment ***shall*** maintain a minimum working speed of 40 km/h while maintaining maximum blower head capacity.

c) The snow blower ***shall*** have a minimum capacity of 4500 metric tons/hour (4960.4 short tons/hour).

3.4.1 **<u>Weights and Dimensions</u>**

a) **Gross Vehicle Weight Rating (GVWR)** – The Gross Vehicle Weight (GVW), while laden with the maximum payload, ***shall*** not exceed the vehicle's Gross Vehicle Weight Rating (GVWR).

b) **Gross Axle Weight Rating (GAWR)** – The Gross Axle Weights (GAWs), while laden with the maximum payload, ***shall*** not exceed the respective Gross Axle Weight Ratings (GAWRs).

c) The vehicle/equipment ***shall*** have a maximum overall height of 3.81 meters (12.5 feet) and a maximum overall width of 4.88 meters (16 feet).

3.5 <u>Vehicle</u> – The vehicle ***shall*** be a 4 wheel drive truck chassis or purpose-built chassis, equipped to operate the required runway snow blower.

3.5.1 **<u>Cab</u> -** The vehicle ***shall*** be equipped with a weatherproof cab.

a) The cab ***shall*** be equipped with:

i. An adjustable, padded, independent air suspension driver's seat, with a seat belt assembly, and a back rest. The driver's seat ***shall*** be position to provide the driver with full visibility of the snow blower head volute;

ii. A foldable passenger seat with lap belt;

iii. Cab floor and toe-board protection;

iv. An AM/FM stereo radio with an auxiliary port;

v. Interior rear-view mirrors;

vi. Windows, providing maximum all around visibility, including all the runway snow blower attachments;

vii. Manufacturer's standard tinted glass to reduce solar heating effects;

viii. Locks on cab door(s) capable of being opened independently from the exterior and interior of the cab. Locks ***shall*** be keyed alike;

ix. At a minimum, a main point of cab entry/exit, and one alternate emergency escape; and

x. Manufacturer's standard air heater and windshield defroster for the operating conditions specified in section 3.2.

b) The cab ***shall***[(E)] be equipped with:

i. Manufacturer's standard complete weatherproof enclosure for the operator, including lining and insulation;

ii. Dual electric, adjustable from inside the cab, heated outdoor side mirrors, for transport safety;

iii. Power operated windshield washer system and variable speed, intermittent windshield wipers, capable of clearing the windshield during driving operations, and where the wiper blades **do not** travel from a vertical centre windshield position to a horizontal position near the roof line;

iv. At least one LED interior light for the cab, including dome lights; and

v. Steps and grab handles on each side of the cab to provide easy and safe access in accordance with 3.3.2.

3.5.2 **Engine** – The vehicle engine ***shall*** be the manufacturer's standard liquid cooled and operate on diesel fuel to CAN/CGSB Standard 3.517-2007 ULS without detrimental effects on the engine. The engine ***shall*** be equipped with:

a) An air cleaning system for combustion air, to protect the engine and its components;

b) An air cleaner restriction indicator, visible to the operator;

c) A governor, to limit engine speed to the operating range recommended by the engine manufacturer;

d) A cooling system, to keep the engine temperature within the manufacturers recommended operating range when subject to the conditions specified in Paragraph 3.2;

e) A full flow oil filter with a spin-on or replaceable element;

f) An engine shutdown or de-rate system, for the occurrence of a critical malfunction, including a visual warning indicator visible from the operator position. An audible alarm is desirable;

g) A muffler or exhaust system located and/or shielded so that personnel will not contact a heated surface. If applicable, the exhaust system ***shall*** be equipped with weather guards or an effective device to prevent entry of rain into intake and exhaust stacks.

3.5.2.1 **Engine Cold Weather Aids** - Cold weather aids to enable the engine (operating with winter grade fuels/oils) to be started at temperatures down to -40° C ***shall*** be provided. External electrical power for engine and battery heaters ***shall***[(E)] be a single cover-protected plug accessible without lifting engine covers. The following ***shall*** be included:

a) A water separator/fuel filter incorporating an electrical heating system to preheat diesel fuel prior to starting. The heater ***shall*** be thermostatically controlled;

b) An in-line fuel heater. The heater ***shall***(E) be thermostatically controlled to prevent fuel temperature from rising above approximately 43° Celsius (110° Fahrenheit) and be a heat exchanger type connected to the cooling system;

c) A low temperature starting aid. The engine ***shall***(E) have glow plugs, intake air preheat system or any combination of the two;

d) 110-volt engine heater(s) with a capacity as recommended by the engine manufacturer or conforming to SAE Information Sheet J1310;

e) 110-volt battery heater(s) having wattage matched to battery size to prevent battery damage due to overheating; and

f) Housing the battery in an insulated battery box or heated cab.

3.5.3 **Fuel Tank(s)** – The vehicle ***shall*** be equipped with the manufacturer's standard fuel tank(s).

3.5.4 **Power Train** - The power train ***shall***:

a) Be the manufacturer's standard mechanical or hydrostatic drive.

b) If the drive is mechanical it ***shall*** have components with a rated torque capacity exceeding the maximum applied torque. If the drive is hydrostatic, the system ***shall*** be of sufficient capacity to handle the maximum load imposed on the system;

c) Be designed to supply power to all 4 wheels and allow them to follow surface irregularities;

3.5.5 **Transmission** - The vehicle ***shall*** be equipped with the manufacturer's standard fully automatic or hydrostatic continuous drive transmission which includes:

a) A transmission oil heater, if required to meet the operating conditions specified in Paragraph 3.2;

b) An oil cooler of a capacity approved by the transmission manufacturer for the service intended; and

c) A replaceable oil filter.

d) The transmission shift control clearly indicating which position the shift column is engaged in under all lighting conditions. The control system ***shall*** include a positive detent/lock in the neutral position to preclude inadvertent shifting from forward to reverse speeds through the neutral position in one continuous action.

3.5.6 **Axles** – Both the front and rear axles ***shall*** be equipped with:

a) Automatic or driver controlled differential lock; and

b) A suspension system, sufficient to support the extra load imposed by the runway snow blower.

3.5.7 **Braking System** – The vehicle ***shall*** be equipped with the manufacturer's standard braking system, including a parking brake.

3.5.8 **Steering System** – The steering system ***shall*** be front wheel, power assisted steering.

3.5.9 **Wheels (Rims and Tires)**

a) Tires and rims provided ***shall*** have their respective manufacturer's certification, that they are suitable and adequately sized for the application.

b) Tire size and ply ratings ***shall***$^{(E)}$ be in accordance with Tire and Rim Association Standards.

c) Tires ***shall*** be radial ply tires in all locations with a tread pattern compatible with the operating conditions specified in section 3.2;

d) For each size supplied on the vehicle, one full-sized spare tire assembly ***shall*** be delivered with each vehicle.

3.5.10 **Controls**

a) Controls ***shall*** be permanently marked to identify and show the function of each control lever or switch.

b) Controls ***shall***$^{(E)}$ have permanent markings/instructions in both English and French or international symbols as defined by SAE J1362.

c) Vehicle controls ***shall*** be in the cab, grouped for quick/convenient operation, and rotate with the driver's station.

d) Controls ***shall*** not restrict the operator's field of view.

f) Runway snow blower controls ***shall*** be in the cab, grouped for quick/convenient operation.

3.5.12 **Instruments**

a) Instruments ***shall*** be readily visible while seated at the operator's station;

b) Instruments ***shall***$^{(E)}$ be backlit with adjustable intensity to be visible in dim light;

c) Instruments ***shall*** include:

i. An ammeter, voltmeter or charging indicator light;

ii. An engine coolant temperature indicator;

iii. A hydraulic oil temperature indicator;

iv. An engine oil pressure indicator;

v. An hour-meter with numeric display, which accurately records accumulated engine running time up to at least 9,999 hours. The meter ***shall*** register only when the engine is running;

vi. A fuel level indicator;

vii. A speedometer (indicating kilometres);

viii. Snow blower instruments as stated in 3.6.7;

ix. An engine tachometer; and

x. Differential lock indicator.

3.5.13 **Hydraulic System**

a) If a hydraulic system is required, it ***shall*** be sized and complete with all components required for the operation of the hydraulic equipment specified, including pump(s), reservoir, reservoir drain plug, filters and control valves.

b) If required, the system ***shall*** have an oil cooler to maintain oil temperature within operating limits under specified conditions.

c) The filter elements ***shall***:

i. Be sized in accordance with the pump manufactures recommendations;

ii. Be accessible for removal and replacement; and

iii. Have change indictors.

d) The minimum hydraulic hose burst pressure ***shall*** be greater than two times the maximum operating pressure.

e) Hydraulic hoses ***shall*** be supported and secured in an orderly arrangement, and properly marked for identification.

f) The hydraulic oil reservoir ***shall*** have a readily visible oil level gauge or dipstick to check the hydraulic oil levels.

g) The hydraulic system ***shall*** include clearly marked test ports, at locations required for diagnostics or adjustment procedures.

h) A hydraulic pressure test gauge and applicable fittings/hoses ***shall*** be provided with each vehicle.

3.5.14 **Electrical and Lighting System**

a) The vehicle ***shall*** be equipped with the manufacturer's standard electrical system.

b) The system ***shall*** include wire identification (colour coded/function), weatherproof connectors, protective loom and secure fastening.

c) The system ***shall*** include heavy-duty maintenance free batteries, with a battery disconnect that is readily accessible to the operator.

d) Batteries ***shall*** be located in an accessible well protected location, including heat shielding, and proper hold-downs.

e) The electrical system ***shall*** include an alternator, sized to fit the component draw of all electrical load requirements.

f) The lighting system ***shall*** include LED or Halogen Headlights, LED tail lights, LED brake lights, and LED turn signals, recessed or otherwise protected from damage.

g) The vehicle ***shall*** be equipped with a minimum of two roof mounted LED work lights located at the front to provide visibility of the snow blower head in all positions.

h) The snow blower head ***shall*** be equipped with a minimum of two LED working lights located on the top portion of the blower head frame.

i) The chute ***shall*** be equipped with a minimum of one LED work light on the top.

i) The vehicle ***shall***$^{(E)}$ be equipped with minimum one roof mounted amber LED stroboscopic beacon light, mounted at the highest point, to allow for 360 degree visibility.

3.5.15 **Accessories**

a) **Tow Points/Hooks** – The vehicle ***shall*** be equipped with the manufacturers standard tow points/hooks on the front and rear of the vehicle.

b) **Licence Plate Holder** – The Vehicle ***shall*** be equipped with a licence plate holder with an LED light at the rear.

3.6 **Snow Blower** – The self-propelled snow blower ***shall*** be hydrostatically or mechanically driven. The blower ***shall***$^{(E)}$ be a two-stage, single ribbon auger type blower, equipped with a truck loading, spot casting chute. The blower ***shall*** be operated from the driver's station. All controls ***shall*** be within the drivers reach.

3.6.1 **Snow Blower Performance -** The blower ***shall*** have a minimum:

a) Capacity of 4500 metric tons (4960.4 short tons) per hour at a minimum casting distance of 30.5 metres (100') through a snow density of 600 kg/m^3;

b) Cutting width of 2.5 metres (98"); and

c) Cutting height of 1.5 metres (58").

3.6.2 **Snow Blower Engine** – The snow blower ***shall*** be powered from an engine separate from the vehicle engine. The engine ***shall*** be liquid cooled and operate on diesel fuel to CAN/CGSB Standard 3.517-2007 ULS without detrimental effects on the engine.

a) Horse power supplied by the engine ***shall*** allow for the full performance of the attached runway snow blower.

b) The engine ***shall*** be equipped with heavy duty industrial air cleaners with safety type elements, for combustion air, to protect the engine and its components.

c) The air cleaners ***shall*** be equipped with restriction indicators, visible to the operator.

d) The engine ***shall*** be equipped with:

i. A cooling system, to keep the engine temperature within the manufacturer's recommended operating range when subject to the conditions specified in Paragraph 3.2;

ii. A full flow oil filter with a spin-on or replaceable element;

iii. An engine shutdown or de-rate system, for the occurrence of a critical malfunction, including a visual warning indicator visible from the operator position. An audible alarm is desirable;

iv. All the cold weather aids as specified in 3.5.2.1.

v. A muffler or exhaust system located and/or shielded so that personnel will not contact a heated surface. If applicable, the exhaust system ***shall*** be equipped with weather guards or an effective device to prevent entry of rain into intake and exhaust stacks.

3.6.3 **Snow Blower Power Train –** The snow blower power train ***shall*** be the manufacturer's standard mechanical or hydrostatic drive. If the drive is mechanical it ***shall h***ave components with a rated torque capacity exceeding the maximum applied torque. If the drive is hydrostatic, the system ***shall*** be of sufficient capacity to handle the maximum load imposed on the system

3.6.4 **Snow Blower Head Auger:**

a) The auger ribbon ***shall*** be constructed of abrasion resistant steel.

b) The auger ***shall*** have removable ribbon flights.

3.6.5 **Snow Blower Impeller and Chute:**

a) The impeller ***shall*** have replaceable blades.

b) The impeller housing ***shall*** be constructed of abrasion resistant steel.

c) The casting chute ***shall*** be capable of truck loading, spot casting. The chute ***shall*** be hydraulically extendable to successfully load a dump truck with a minimum box height of 3.5 meters (11.4ft) from the ground.

d) The chute ***shall*** be hydraulically controlled and rotate a minimum of 270 degrees.

e) The impeller ***shall*** be capable of flat casting (from the horizontal) on one side to a minimum of 45 degrees on the other side. If the driver is seated to the left, then the flat cast ***shall*** be to the left. If the driver is seated at centre or to the right, then the flat cast ***shall*** be to the right.

f) The driver ***shall*** be able to instantly change the snow stream direction and elevation.

3.6.6 **Snow Blower Application Equipment** - The blower ***shall***[(E)] be equipped with:

a) Separate shear pin protection for all augers and the impeller;

b) Side cutter bars;

c) Full length, multi-section scraper blade on the front bottom edge of the blower frame;

d) Carbide skid shoes; and

e) Wheels to support the rear of the blower head, only if required, for axle loading conditions. If the blower is equipped with wheels, a spare wheel assembly ***shall*** be delivered with each vehicle.

3.6.7 **Snow Blower Instrument Panel** - The vehicle/equipment ***shall*** be equipped with an illuminated instrument panel, located in the cab, visible from the driver's seat, to provide complete information to the driver on the condition of the snow blower head engine and hydraulic system. At a minimum, the instruments ***shall*** include:

a) Voltmeter;

b) Oil pressure indicator;

c) Water temperature indicator;

d) Tachometer;

e) Hour-meter with numeric display, which accurately records accumulated engine running time up to at least 9,999 hours; and

f) Indicators for all snow blower functions.

3.6.8 **Snow Blower Controls** - The snow blower controls ***shall*** be grouped together and located in the cab. Controls ***shall***$^{(E)}$ have permanent markings/instructions in both English and French or international symbols as defined by SAE J1362.

3.7 Lubricants

a) The vehicle ***shall*** be delivered with the manufacturer's standard lubricants and hydraulic fluids.

b) Lubrication fittings ***shall***$^{(E)}$ conform to requirements of SAE Standard J534.

3.8 Paint

a) All paint ***shall*** be applied in accordance with the technical data provided by the product manufacturer.

b) As a minimum, the coating process ***shall*** yield a durable finish with a smooth appearance free of runs, sags, and orange peel.

c) The vehicle/equipment ***shall*** be painted with the manufacturer's standard commercial paint. The colour ***shall***$^{(E)}$ be Dupont Axalta 750206 E B Penn Dot Yellow suitable for operations on an airfield.

3.9 Identification, Instruction, and Warning Plates

a) International symbols and/or bilingual markings ***shall*** be provided for all identification, instructional, and warning labels.

b) The manufacturer's name, model number, model year, and manufacturer's serial number ***shall*** be permanently marked on the vehicle in a conspicuous and protected location.

4. INTEGRATED LOGISTIC SUPPORT (ILS)

4.1 **Vehicle Manuals** – All manuals required for the description, operation, maintenance and repair of the complete equipment, including sub-systems, ***shall*** be provided.

a) **Operator's Manuals** – Operator's Manuals ***shall*** be bilingual (English/French). The Operator's Manual ***shall*** include:

i. Instructions for the safe operation of the vehicle;

ii. Daily operator maintenance instructions/checks (including lubrication);

iii. Safety warnings: and

iv. Hand signals (as necessary).

b) **Parts Manuals** – The Parts Manuals ***shall*** be in English (bilingual is desirable). The Parts Manuals ***shall*** include:

i. Illustrations showing all components of the vehicle including equipment and accessories from other manufacturers that is supplied for the requirements of the contract. The illustrations ***shall*** have numbers for the itemization of the parts;

ii. A listing for all itemized manufacturer's parts showing the manufacturer's part number of the illustration, the part name and a brief description of the item; and

iii. Cross reference relating the manufacturer part number to the correct figure and item number.

iv. A representation of bilingual warning signs and identification labels delivered on the equipment.

c) **Maintenance (Shop Repair) Manuals** - The Maintenance (Shop Repair) Manual ***shall*** be bilingual (English/French). The Maintenance (Shop Repair) Manuals ***shall*** include:

i. A trouble shooting guide, showing the steps and tests required to determine the exact cause of a problem and an explanation of what steps would be required to correct a problem;

ii. A listing of the necessary tolerances, torque levels, fluid volumes required and a section listing any special tools (including item part numbers); and

iii. Information on the order of disassembly and assembly of the systems and components of the vehicle.

4.1.1 **Manual Delivery**

a) **To Technical Authority**

i. The contractor ***shall*** submit sample manuals to the Technical Authority (TA) for each equipment model and or sub-system for approval as specified above. Sample manuals will not be returned. The Crown will provide approval or comments on the manuals within 30 days.

ii. One (1) complete set of manuals (Operator's, Maintenance and Parts) in electronic format ***shall*** be delivered to the Technical Authority.

b) **With Vehicle**

i. One (1) complete set of manuals (Operator's, Maintenance and Parts) ***shall*** accompany each vehicle or equipment shipped to each location. The manuals ***shall*** be in paper and electronic format.

4.1.2 **Electronic Format** - Approved copies of the electronic format manuals ***shall*** be delivered with each vehicle on CD/DVD-ROM. CD/DVD-ROM ***shall not*** require installation, password and/or Internet connection to be accessed and ***shall*** be an unlocked PDF in a searchable format.

4.1.3 **Provisional Manuals -** In the event that approved manuals are not available at the time of delivery of the equipment, manuals marked "Provisional" ***shall*** be supplied with the equipment. The contractor ***shall*** deliver replacement approved manuals to all destinations where Provisional manuals were delivered.

4.1.4 **Manual Supplements -** The contractor ***shall*** supply manual supplements (Operator's, Maintenance and Parts) to support dealer-installed equipment not covered in the Vehicle Manuals. Manual supplements ***shall*** be provided to each destination in the same quantities and format as the Vehicle manuals.

4.1.5 **Translation and Reproduction Rights** - The Canadian Government ***shall*** reserve the right to translate and reproduce, for Government use only, all or any part of the publications supplied, including the training packages delivered against the contract agreement.

4.1.6 **Changes to manuals -** During the period of the Contract, changes to equipment, which affect the contents of manuals, ***shall*** be reflected in the revision of the electronic and paper version of the manuals. Changes to the manuals ***shall*** conform to the same format and presentation requirements as the original manuals. The revised electronic version of the manual ***shall*** be sent to the Technical Authority by the Contractor.

4.2 **Data Summary -** The contractor ***shall*** provide a bilingual Data Summary for each make/model/configuration of equipment by completing Technical Authority's template with data and a vehicle picture. The Contractor ***shall*** provide a Data Summary, if possible, before the shipment of the vehicle(s).

4.3 **Warranty Letter** - The contractor ***shall*** provide a bilingual Warranty Letter to the Technical Authority and with each vehicle delivered in the approved DND format. The TA will provide the contractor a template for the DND acceptable format of the warranty letter. The Warranty Letter ***shall*** include the following details:

a) A list of all Canadian designated warranty service providers that will honour the warranty for the equipment and attachments (if applicable) procured under this contract, including the contact person and phone number at each warranty service provider;

b) Additional warranty coverage of sub-systems and a copy of the bilingual warranty letter from each sub-system's Original Equipment Manufacturer (OEM);

c) Warranty period as negotiated in the contract; and

d) Contractor contact information, name and phone number, for warranty support.

4.4 **Photographs** – Photographs ***shall*** be submitted in electronic format. The photographs ***shall*** be in color, taken against a plain background, and in digital JPEG format with a minimum 10 megapixel resolution. At a minimum, the photographs ***shall*** be:

a) One left front three-quarter view of a completed unit; and

b) One right rear three-quarter view of a completed unit.

4.4.1 **Dimensioned Drawing** - One side and front view sketch showing the dimensions ***shall*** be provided. Brochure sketches are acceptable.

4.5 **Special Tools List -** The contractor ***shall*** provide an itemized list of specific special tools required for the servicing and repair of the vehicle or equipment procured under this contract. These tools ***shall*** also be listed in the Maintenance Manual. The list ***shall*** include the following information:

a) Item name;

b) Manufacturer's part number (OEM);

c) Quantity recommended per delivery location;

d) Contractor's part number;

e) Unit price; and

f) Unit of issue.

4.6 **Preventive Maintenance Replacement Parts Kit List (PMRPKL)** - The contractor ***shall*** provide a list detailing the parts that are required to perform preventive maintenance to the system for a period of 12 months. Components such as filters, belts, hoses, and fuses ***shall*** be included. The PMRPKL ***shall***$^{(E)}$ be delivered to the Technical Authority, electronically in Microsoft Excel. The Preventive Maintenance Replacement Parts Kit List ***shall*** include the following information:

a) Item name;

b) Contractor's part number

c) Manufacturer's part number;

d) Manufacturer's NATO Supply code (NCAGE) or name and address;

e) NSN (NATO Stock Number) (if known);

f) Quantity per equipment;

g) Quantity recommended;

h) Unit price; and

i) Unit of issue.

4.6.1 **Initial Parts Kit** – One Initial Parts Kit ***shall*** be delivered with each vehicle. Each kit ***shall*** include a complete set of filters and filter elements from the Original Equipment Manufacturer (OEM) required in the first 12 months of service.

4.7 Recommended Spare Parts List – The Contractor ***shall*** provide, to the Technical Authority, a list detailing the spare parts deemed necessary to maintain the vehicle for a period of 12 months exclusive of any warranty period, for each configuration. For each part listed, the following elements ***shall*** be included:

a) Part description;

b) Original Equipment Manufacturer;

c) Original Equipment Manufacturer Part Number;

d) Suggested quantity; and

e) Unit cost.

4.8 Cataloguing Information – The contractor ***shall*** provide the Technical Authority, upon request, the information necessary to catalogue the parts for the vehicle/equipment. Cataloguing Information ***shall***:

a) Include the NSN of the part, if known. If the NSN is provided no other supporting technical data need be provided for that item; and

b) Include technical information, which ***shall*** be sufficient to allow DND to identify, classify and fully describe the part(s) to a NATO standard. This could include specifications, standards, drawings, or catalogues with brief description(s) of relevant dimensional, material, mechanical, electrical and physical/ performance characteristics. Drawings will not be sent to other suppliers for production.

NOTE: Drawings sent to the Technical Authority will remain the property of the contractor.

NOTE: This may require meetings between DND and the contractor to obtain and validate information.

4.9 Safety Recalls and Servicing Data - Safety recalls, and manufacturer's technical service bulletins, or equivalent ***shall*** be provided to the technical authority and the final delivery locations on a continuing basis, throughout the life expectancy of the vehicle or for no less than 10 years.

4.10 Training

4.10.1 **Training - Maintenance Personnel -** The Contractor ***shall*** provide a maintenance/repair training course. The course ***shall*** be given at the delivery destination. Training in French ***shall*** be offered for locations in Quebec. It ***shall*** have a minimum duration of one (1) day to provide training of up to eight (8) maintenance personnel and ***shall*** have the final dates arranged with the Life Cycle Material Manager (LCMM). The course ***shall*** have a syllabus or course outline and schedule available for review seven (7) days prior to the course commencement date. After completion of the course, the Contractor ***shall*** have a "PROOF OF MAINTAINER TRAINING" certificate signed by a Crown Representative for the destination. The Technical Authority ***shall*** supply this document in an electronic format. The following items ***shall*** be included in the curriculum:

a) Operator's training detailed in 4.10.2 (b) below;

b) Operation and maintenance safety precautions;

c) Preventive maintenance including servicing schedules (10 % of classroom time);

d) Trouble shooting, testing, and adjustments (70 % of classroom time); and

e) Special tools and test equipment.

4.10.2 **Training - Operators** - The Contractor ***shall*** provide an operator training course. The course ***shall*** be given at the delivery destination. Training in French ***shall*** be offered for locations in Quebec. It ***shall*** have minimum duration of one (1) day to provide training for up to six (6) DND operators and ***shall*** have the final dates arranged with the Life Cycle Material Manager (LCMM). The course ***shall*** have a syllabus or course outline and schedule available for review seven (7) days prior to the course commencement date. After completion of the course the Contractor ***shall*** have a "**PROOF OF OPERATOR TRAINING**" certificate signed by a Crown Representative for the destination. The Technical Authority ***shall*** supply this document in an electronic format. The following items ***shall*** be included in the curriculum:

a) Safety precautions to be observed while operating and servicing the vehicle;

b) Vehicle/equipment operating characteristics;

c) Vehicle/equipment operating procedures;

d) Pre-operating and pre-shutdown procedures;

e) Daily/weekly operator servicing procedures; and

f) A minimum of two (2) hours practical operating experience, per operator.

4.10.3 **Training Materials** – Training materials ***shall*** be provided in French for locations in Quebec. For all training provided by the Contractor, for each attendee, the Contractor ***shall*** provide training syllabi, which ***shall*** include, at least:

a) A list of topics to be covered;

b) An approximate timetable showing when topics are scheduled to be covered and how much time is scheduled for each topic;

c) Lists any reference material; and

d) Make available any reference material used.

TECHNICAL INFORMATION QUESTIONNAIRE
FOR
4X4 Chassis Mounted Self-Propelled Runway Snow Blower
ECC 167117

NOTICE

This documentation has been reviewed by the technical authority and does not contain controlled goods.

AVIS

Cette documentation a été révisée par l'autorité technique et ne contient pas de marchandises contrôlées.

This questionnaire identifies technical information, which should be provided for evaluation of the configuration(s) of the vehicle(s) offered.

Where the specification paragraphs below indicate "Proof of Compliance", the "Proof of Compliance" ***shall*** be provided for each performance requirement/specification.

Bidders should identify the requested information and indicate the document name/title and page number where the Proof of Compliance can be found.

Definitions for ***Equivalents*** and ***Proof of Compliance*** are found at the end of this document.

CONTRACTOR INFORMATION

Contractor Name _____

Proposal Date _____

Substitutes/Alternatives

Are any equipment substitutes/alternatives offered as ***Equivalent***? YES ☐ NO ☐

If yes, please identify all equipment substitutes/alternatives offered as ***Equivalents*** below and indicate where in the proposal related information can be found:

_____.

_____.

_____.

_____.

_____.

_____.

_____.

TECHNICAL INFORMATION QUESTIONNAIRE
FOR
4X4 Chassis Mounted Self-Propelled Runway Snow Blower
ECC 167117

Proposed Make _____ - **Model** _____

PURCHASE DESCRIPTION PARAGRAPHS

3.1 Standard Design – *Industry Acceptability*

b) The Bidder ***shall*** provide client information to demonstrate industry acceptability and/or experience as specified in the purchase description.

Client information ***shall*** include:
- Client name and location
- Year completed
- List of make(s)/model(s).

Client information can be found in: Document: _____. Page: ___.

3.4 Performance – *Proof of Compliance*

Provide proof of compliance for the following:

a) A minimum transport speed of 50 km/h

b) A minimum working speed of 40 km/h at maximum blower capacity

Performance information can be found in: Document: _____ - Page: ___.

3.4.1 **Weight and Dimensions - *Proof of Compliance***

Provide proof of compliance for the following:

b) GAWR:

Front axle weight (fully loaded)

GAWR (front)

Rear axle weight (fully loaded)

GAWR (rear)

c) Vehicle/equipment overall height and width

Weight and dimensions information can be found in: Document: _____ Page: ___.

3.5 Vehicle – *Proof of Compliance*

Provide proof of compliance for this requirement.

Vehicle information can be found in: Document: _____ Page: ___.

3.5.4 **Power Train** – ***Proof of Compliance***

Provide proof of compliance for the following:

a) Power train

Power train information can be found in: Document: _____ Page: ___.

3.5.5 **Transmission** – ***Proof of Compliance***

Provide proof of compliance for this requirement.

Transmission information can be found in: Document: _____ Page: ___.

3.6 Snow Blower – *Proof of Compliance*

Provide proof of compliance for this requirement.

Snow blower proof of compliance can be found in: Document: _____ Page: ___.

3.6.1 **Snow Blower Performance** – ***Proof of Compliance***

Provide proof of compliance for the following:

a) Capacity, casting distance and snow density

b) Cutting width

c) Cutting height

Snow blower performance information can be found in: Document: _____ Page: ___.

3.6.5 **Snow Blower Impeller and Chute** – ***Proof of Compliance***

Provide proof of compliance for the following:

c) Casting chute height

d) Chute rotation

e) Impellor casting capability on the right and on the left

Snow blower impellor and chute information can be found in: Document: _____ Page: ___.

DEFINITIONS

1.1 **"Proof of Compliance"** - An unaltered document, such as a brochure and/or technical literature and/or a third party test report provided by a nationally and/or internationally recognized testing facility and/or a report generated by a nationally and/or internationally recognized third party software. The document ***shall*** provide detailed information on each performance requirement and/or specification. Where a document submitted as Proof of Compliance does not cover all the performance requirements and/or specifications or when no such document is available or when modifications to the original equipment or customization are required to achieve the performance requirements and/or specifications, a Certificate of Attestation (as a separate document) signed by a senior representative of the Original Equipment Manufacturer (OEM) detailing the modifications and how they meet the performance requirements and/or specifications ***shall*** be provided. The certificate ***shall*** detail all performance requirements and/or specifications required to substantiate compliance. One certificate can be provided for one or all performance requirements and/or specifications.

1.2 **"Equivalent"** - A standard, means, or component type, which has been accepted by the Technical Authority as meeting the specified requirements for form, fit, function and performance.