

+SECTION I: INVITATION TO BID

Sealed bids for the purchase of new aircraft deicing equipment for the Presque Isle International Airport, subject to the conditions herein, will be received at the City Clerk's Office at City Hall, 12 Second Street, Presque Isle, Maine, 04769, until (2:30 PM) in the afternoon of Friday, April 21, 2023, at which time and place bids will be opened and read aloud. Any bids submitted after this time and date will not be accepted. These bids shall include all charges for freight, delivery, setup, and all incidentals required for a complete and ready-to-use system. Bids must be submitted in a sealed envelope, plainly marked "Presque Isle International Airport, Purchase of Aircraft Deicing Equipment – Deicing Truck, AIP Project No. 3-23-0039-XX-2023."

Specifications and contract documents may be examined at the Airport Director's Office, Presque Isle International Airport, 650 Airport Drive, Suite 11, Presque Isle, Maine 04769.

Hard copies of the specifications and contract documents may be obtained at the Airport Director's Office, Presque Isle International Airport, 650 Airport Drive, Suite 11, Presque Isle, Maine 04769, telephone (207) 764-2550 upon payment of twenty-five dollars (\$25.00) per set which is non-refundable. Partial documents or individual sections of the documents will not be distributed. Electronic copies of the specifications and contract documents may be obtained upon request at no charge by sending an email to scottw@flypresqueisle.com.

Bid security in the amount of at least five percent (5%) of the total bid must be submitted with the bid. The bid security may be either a certified check or a proposal guaranty bond executed by a surety company authorized to do business within the State of Maine. Bid security shall be made payable to the City of Presque Isle. Bids submitted without security will not be considered.

The bid security will be returned to all bidders except the two lowest responsible bidders within ten (10) calendar days after the date of the opening of bids. The remaining bid securities will be returned promptly after the City of Presque Isle and the selected bidder have executed the contract. If no award of contract is made, the remaining bid securities will be returned within one hundred twenty (120) calendar days after the date of the opening of the bids.

No delivery shall become due or be accepted unless a contract has been issued by the City of Presque Isle. Procurement of the equipment under this contract will be funded by federal grant under the Airport Improvement Program (AIP), with participation by the State of Maine and the City of Presque Isle. This contract will be subject to all applicable requirements of the U.S. Department of Transportation/Federal Aviation Administration. **All equipment shall be delivered within one hundred eighty (180) days from the award of contract. Failure to deliver in this timeframe will result in the assessment of liquidated damages in the amount of Four Hundred and Fifty dollars (\$450) per day.**

The selected bidder must comply with the Federal Fair Labor Standards Act (29 USC 201) and the Occupational Health and Safety Act of 1970 (20 CFR Part 1910).

The **City of Presque Isle**, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to

submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

The City of Presque Isle reserves the right to reject any and all bids, to waive technical or legal deficiencies and to accept any bid that it may deem to be in the best interest of the airport. No bidder may withdraw his bid for a period of ninety (90) calendar days following the actual bid opening.

By:

CITY OF PRESQUE ISLE

Scott Wardwell
Airport Director

SECTION II: INSTRUCTIONS TO BIDDERS

1. Each bidder shall include all requested equipment in his bid. Bids for the equipment may be accepted so long as a price is provided for the respective attachment as described in these specifications. **Partial bids will not be accepted.**
2. Proposals shall be typewritten or written in ink on the form attached. Officials of corporations shall designate their official title; partners or sole owners shall so state giving the names of all interested parties. All corrections or erasures shall be initialed by the person signing the bid. **The entire bid document shall be returned as a submission of the bid.**
3. Bidders shall not stipulate in their proposals any conditions not contained in the specifications except as provided for under paragraph 10 below. Any proposal which fails to comply with the literal letter of these instructions and the specifications may be rejected forthwith.
4. Requested descriptive material and manufacturer's literature shall be furnished with the bid.
5. Bid prices shall remain in effect until ninety (90) calendar days have passed since the time of the actual bid opening. No delivery shall become due or be accepted unless a contract has been issued by the City of Presque Isle. Acceptance of a contract will be provided within ninety (90) after the bid opening date.
6. The City of Presque Isle reserves the right to accept and reject any and all bids for due cause, to negotiate with any party, to waive informalities or defects in bids, to require test proving of proposed equipment by the airport's operators, to request and check references for similar equipment or to accept/reject such bids as it shall deem in the best interests of the Presque Isle International Airport.
7. Discounts for immediate payment or credit terms where offered will not be a factor in the determination of the lowest responsible bidder. Payment terms by the City of Presque Isle, will be cash less any applicable discounts to be paid within thirty (30) calendar days of delivery of the equipment and associated documentation by the successful bidder and formal acceptance by the City of Presque Isle.
8. The successful bidder shall indemnify and hold harmless the City of Presque Isle, against all claims for royalties, for patents, or suit for infringement thereon which may be involved in the manufacture or use of the equipment to be furnished.
9. All equipment shall remain the property of the seller until delivered to and accepted by the City of Presque Isle.
10. **Any deviations, variations or exceptions from the attached specifications must be listed in the Bid Proposal Form under the Exceptions to Bid Conditions and Specifications.** Optional equipment furnished by the dealer or manufacturer which is not described or required by these specifications but shall be provided with the equipment at no additional cost may be listed separately under a heading entitled "Optional Equipment."

11. The package entitled "Presque Isle International Airport, Purchase of Aircraft Deicing Equipment – Deicing Truck, AIP Project No. 3-23-0039-XX-2023" must be submitted with all applicable sections and appendices filled in and the bid security enclosed. All signatures within the submitted package must be original. It is recommended that all bidders make a copy of the package for their files. Pages to be completed and submitted with the bid are as follows:
 - a. Buy American Certification, pages 7 and 8.
 - b. Tax Delinquency and Felony Conviction Certification, pages 12 and 13
 - c. Bid Bond, pages 21 and 22.
 - d. Bid Proposal Form, pages 23 through 28.

12. Questions relating to this Invitation to Bid may be directed to:

Scott Wardwell, Airport Director
Presque Isle International Airport
650 Airport Drive, Suite 11
Presque Isle, ME 04769
Telephone: (207) 764-2550

13. **Selection Criteria:** The award will be provided to the bidder whose bid represents the best overall value to the airport in the opinion of the City of Presque Isle. The primary criteria to be used for the comparison of bids shall be the Base Bid price of the vehicle (deicing truck) without additive Items. Secondary criteria to be considered will include equipment service schedules, delivery schedule, service and parts availability, and previous dealer experience (if any).

SECTION III: CONTRACT AGREEMENT

CONTRACT AGREEMENT

KNOW ALL PERSONS BY THESE PRESENTS of this agreement entered into this _____ day of _____, 2023, by and between City of Presque Isle, Maine, a body politic and corporate, hereinafter referred to as the "Owner", and _____ hereinafter referred to as the "Vendor".

W I T N E S S E T H

WHEREAS, the Owner did advertise by bid for:

Airport Improvements to Include:

**Purchase of Aircraft Deicing Equipment –
Deicing Truck**

for the

**Presque Isle International Airport
Presque Isle, Maine**

A.I.P. Project No. 3-23-0039-XX-2023

WHEREAS, the Vendor did under date of _____ submit a bid for such work; and

WHEREAS, after due consideration of all the bids, the Owner did award the Contract to the Vendor.

NOW THEREFORE, in consideration of the mutual promises made by each party to the other, the parties covenant and agree as follows:

1. The Vendor will furnish all snow removal equipment in compliance with the specifications (herein referred to as "Contract Documents") of which this Agreement is a part.

All equipment shall be supplied in strict conformance with the provisions of this Agreement, the Invitation to Bid, Instruction to Bidders, Required Federal Provisions, Notice to Bidders, Bid Bond, the Vendor's Proposal, General Specifications, and Technical Specifications which are attached hereto and shall be considered a part of this Agreement.

The restatement in this Contract of any of the terms of said Contract Documents and Standard Specifications shall not be deemed to waive any terms not so restated.

2. All equipment shall be delivered within one hundred eighty days from the award of contract. Failure to deliver within one hundred eighty (180) days from the award of the contract will result in the assessment of liquidated damages in the amount of Four Hundred and Fifty Dollars (\$450) per day.

3. A standard warranty shall be provided for the equipment.

4. It is agreed that the equipment in the "Schedule of Prices" in the Vendor's Proposal section of the Contract Documents will be used as the basis for determining the amount due under this Contract Agreement. The amount due under this Agreement so determined is _____
_____ (\$ _____), hereinafter referred to as the Contract Price.

IN WITNESS WHEREOF, the said City of Presque Isle, Maine, has caused this Contract to be signed and sealed in its corporate name by its City Manager, respectively, being duly authorized, and _____

_____ has caused this Contract to be signed and sealed in its corporate name by _____, its _____, being duly authorized, the day and year first written above at _____.

OWNER: City of Presque Isle, Maine

By: _____

Name: Mr. Martin Puckett

Title: City Manager

VENDOR: _____

By: _____

Name: _____

Title: _____

(SEAL)

SECTION IV: REQUIRED FEDERAL PROVISIONS

BUY AMERICAN CERTIFICATION

The Contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP-funded projects are produced in the United States, unless the FAA has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

A bidder or offeror must submit the appropriate Buy America certification (below) with all bids or offers on AIP funded projects. Bids or offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive.

Certificate of Buy American Compliance for Manufactured Products (Non-building construction projects, equipment acquisition projects)

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (✓) or the letter "X".

- Bidder or offeror hereby certifies that it will comply with 49 USC § 50101 by:
- a) Only installing steel and manufactured products produced in the United States, or;
 - b) Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing, or;
 - c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing US domestic product
3. To furnish US domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

- The bidder or offeror hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:
1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that support the type of waiver being requested.

2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

Required Documentation

Type 3 Waiver - The cost of the item components and subcomponents produced in the United States is more that 60% of the cost of all components and subcomponents of the “item”. The required documentation for a type 3 waiver is:

- a) Listing of all product components and subcomponents that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety)
- b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
- c) Percentage of non-domestic component and subcomponent cost as compared to total “item” component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a type 4 of waiver is:

- a) Detailed cost information for total project using US domestic product
- b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Date

Signature

Company Name

Title

GENERAL CIVIL RIGHTS PROVISIONS

The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

Compliance with Nondiscrimination Requirements

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. **Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the **Title VI List of Pertinent Nondiscrimination Statutes and Authorities**, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.
3. **Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.
4. **Information and Reports:** The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. **Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
 - a. Withholding payments to the contractor under the contract until the contractor complies; and/or
 - b. Cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

Title VI List of Pertinent Nondiscrimination Authorities

(Source: Appendix E of Appendix 4 of FAA Order 1400.11, Nondiscrimination in Federally-Assisted Programs at the Federal Aviation Administration)

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq.*, 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 *et seq.*), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 *et seq.*), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms “programs or activities” to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
- The Federal Aviation Administration’s Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs and activities (20 U.S.C. 1681 *et seq.*).

ACCESS TO RECORDS AND REPORTS

The Contractor shall maintain an acceptable cost accounting system. The Contractor agrees to provide the Sponsor, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

BREACH OF CONTRACT TERMS

Any violation or breach of terms of this contract on the part of the contractor or their subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

CLEAN AIR AND WATER POLLUTION CONTROL

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 USC § 740-7671q) and the Federal Water Pollution Control Act as amended (33 USC § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration. Contractor must include this requirement in all subcontracts that exceeds \$150,000.

CERTIFICATE REGARDING DEBARMENT AND SUSPENSION (BIDDER OR OFFEROR)

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that at the time the bidder or offeror submits its proposal that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

The bidder must complete the following two certification statements. The bidder must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The bidder agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

- 1) The bidder represents that it is () is not () a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been

exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

- 2) The bidder represents that it is () is not () is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

Note

If a bidder responds in the affirmative to either of the above representations, the bidder is ineligible to receive an award unless the City of Presque Isle has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government’s interests. The bidder therefore must provide information to the owner about its tax liability or conviction to the City of Presque Isle, who will then notify the FAA Airports District Office, which will then notify the agency’s SDO to facilitate completion of the required considerations before award decisions are made.

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twentyfour (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

Date

Signature

Company Name

Title

CERTIFICATION REGARDING DEBARMENT AND SUSPENSION (SUCCESSFUL BIDDER REGARDING LOWER TIER PARTICIPANTS)

The successful bidder, by administering each lower tier subcontract that exceeds \$25,000 as a “covered transaction”, must verify each lower tier participant of a “covered transaction” under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: <http://www.sam.gov>

2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract.

If the FAA later determines that a lower tier participant failed to tell a higher tier that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedy, including suspension and debarment.

DISADVANTAGED BUSINESS ENTERPRISES

The requirements of 49 CFR part 26 apply to this contract. It is the policy of the City of Presque Isle dba Presque Isle International Airport to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

Contract Assurance (§26.13) - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.

Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than **30** days from the receipt of each payment the prime contractor receives from the City of Presque Isle. The prime contractor agrees further to return retainage payments to each subcontractor within **30** days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the City of Presque Isle. This clause applies to both DBE and non-DBE subcontractors.

TEXTING WHEN DRIVING

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving", (10/1/2009) and DOT Order 3902.10, "Text Messaging While Driving", (12/30/2009), the Federal Aviation Administration encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding \$3,500 that involve driving a motor vehicle in performance of work activities associated with the project.

FEDERAL FAIR LABOR STANDARDS ACT

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR part 201, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers.

The Contractor has full responsibility to monitor compliance to the referenced statute or regulation. The Contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

ENERGY CONSERVATION REQUIREMENTS

The contractor agrees to comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Public Law 94-163)

LOBBYING AND INFLUENCING FEDERAL EMPLOYEES

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

- 1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the bidder or offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- 2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

RIGHTS TO INVENTIONS

Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 CFR part 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within 37 CFR §401.14. Contractor must include this requirement in all sub-tier contracts involving experimental, developmental, or research work.

TERMINATION OF CONTRACT

- a. The Sponsor may, by written notice, terminate this contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the contract obligations. Upon receipt of such notice services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this contract, whether completed or in progress, delivered to the Sponsor.
- b. If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.

The Owner may, by written notice of default to the Contractor, terminate all or part of this Contract if the Contractor:

1. Fails to commence the Work under the Contract within the time specified in the Notice-to-Proceed;
2. Fails to make adequate progress as to endanger performance of this Contract in accordance with its terms;
3. Fails to make delivery of the equipment within the time specified in the Contract, including any Owner approved extensions;
4. Fails to comply with material provisions of the Contract;
5. Submits certifications made under the Contract and as part of their proposal that include false or fraudulent statements; or
6. Becomes insolvent or declares bankruptcy.

If one or more of the stated events occur, the Owner will give notice in writing to the Contractor and Surety of its intent to terminate the contract for cause. At the Owner's discretion, the notice may allow the Contractor and Surety an opportunity to cure the breach or default.

If within [10] days of the receipt of notice, the Contractor or Surety fails to remedy the breach or default to the satisfaction of the Owner, the Owner has authority to acquire equipment by other procurement action. The Contractor will be liable to the Owner for any excess costs the Owner incurs for acquiring such similar equipment.

Payment for completed equipment delivered to and accepted by the Owner shall be at the Contract price. The Owner may withhold from amounts otherwise due the Contractor for such completed equipment, such sum as the Owner determines to be necessary to protect the Owner against loss because of Contractor default.

Owner will not terminate the Contractor's right to proceed with the Work under this clause if the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such acceptable causes include: acts of God, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, and severe weather events that substantially exceed normal conditions for the location.

If, after termination of the Contractor's right to proceed, the Owner determines that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the Owner issued the termination for the convenience the Owner.

The rights and remedies of the Owner in this clause are in addition to any other rights and remedies provided by law or under this contract.

TRADE RESTRICTION CLAUSE

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

- 1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);
- 2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and
- 3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

- 1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR or
- 2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or
- 3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (20 CFR Part 1910). The employer must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

PROCUREMENT OF RECOVERED MATERIALS

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

- 1) The contract requires procurement of \$10,000 or more of a designated item during the fiscal year; or
- 2) The contractor has procured \$10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

- a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;

- b) Fails to meet reasonable contract performance requirements; or
- c) Is only available at an unreasonable price.

VETERAN'S PREFERENCE

In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 USC 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

SECTION V: NOTICE TO BIDDERS

NOTICE TO BIDDERS

It is **REQUIRED** that the following Bid Bond form be completed by all bidders.

Alternative forms submitted in lieu of the enclosed **WILL NOT BE ACCEPTED**. The Bid Bond form may be photocopied on another colored paper as long as it retains the original format. Attachments to the **completed** bond form are acceptable.

SECTION VI: BID BOND

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, the undersigned _____

as Principal, and _____

as Surety, are hereby held and firmly bound unto the City of Presque Isle, Maine, as OWNER in the penal sum of five (5) percent of the bid amount not to exceed _____

_____ (*spell out & write in numbers*)
for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors, and assigns.

Signed, this _____ day of _____, 2023. The condition of the above obligation is such that whereas the Principal has submitted to _____ a certain Bid, attached hereto and hereby made a part here of to enter into a contract in writing, for the:

Purchase of Aircraft Deicing Equipment –
Deicing Truck
AIP Project No. 3-23-0039-XX-2023
Presque Isle International Airport
Presque Isle, Maine

NOW, THEREFORE, if said Bid shall be rejected, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event exceed the penal amount of this obligation as herein stated.

The Surety, for value received, hereby stipulates and agrees that the obligations of said Surety and its Bond shall be in no way impaired or affected by any extension of the time within which the Owner may accept such Bid; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year set forth above.

Principal

Surety

By: _____

IMPORTANT - Surety companies executing Bonds must appear on the U.S. Treasury Department's most current list (Circular 570, as amended) and be authorized to transact business in the State of Maine.

SECTION VII: BID PROPOSAL FORM

SCHEDULE OF PRICES

BASE BID

1. One **Deicing Truck**: Price for supply and delivery of one (1) Deicing Truck in accordance with the specifications:

TO BE PAID BY the City of Presque Isle for the sum of: \$ _____

Spell out dollars in words: _____

Make: _____ Model: _____

Total BASE BID \$ _____

The Base Bid will be awarded at the discretion of the City of Presque Isle. The selection of the lowest qualified bidder will be based on the Base Bid. If the contract is awarded to include the Base and Additive Bid Items, the selection of the lowest qualified bidder will be based on the Base Bid only.

ADDITIVE BID ITEM 1

1. **Intentionally left blank.**

ADDITIVE BID ITEM 2

2. Intentionally left blank. :

TO BE PAID BY the City of Presque Isle for the sum of: \$ _____

Spell out dollars in words: _____

Make: _____ Model: _____

Total ADDITIVE BID ITEM 2 \$ _____

ADDITIVE BID ITEM 3

3. Intentionally Left Blank:

ADDITIVE BID ITEM 4

4. Intentionally left blank. .

TO BE PAID BY the City of Presque Isle for the sum of: \$ _____

Spell out dollars in words: _____

Make: _____ Model: _____

Total ADDITIVE BID ITEM 4 \$ _____

ADDITIVE BID ITEM 5

5. Intentionally left blank. :

TO BE PAID BY the City of Presque Isle for the sum of: \$ _____

Spell out dollars in words: _____

Make: _____ Model: _____

Total ADDITIVE BID ITEM 5 \$ _____

ADDITIVE BID ITEM 6

6. **Intentionally left blank.** :

TO BE PAID BY the City of Presque Isle for the sum of: \$ _____

Spell out dollars in words: _____

Make: _____ Model: _____

Total ADDITIVE BID ITEM 6 \$ _____

ADDITIVE BID ITEM 7

7. **Intentionally left blank.** :

TO BE PAID BY the City of Presque Isle for the sum of: \$ _____

Spell out dollars in words: _____

Make: _____ Model: _____

Total ADDITIVE BID ITEM 7 \$ _____

SCHEDULE OF PRICES SUMMARY

TOTAL BASE BID AND ADDITIVE BID N/A.

Spell out dollars in words: _____

TOTAL BASE BID AND ADDITIVE BID ITEMS N/A. \$ _____

The Base Bid will be awarded at the discretion of the City of Presque Isle. The selection of the lowest qualified bidder will be based on the Base Bid. If the contact is awarded to include the Base and Additive Bid Items, the selection of the lowest qualified bidder will be based on the Base Bid only

NOTES:

1. In the event of a bidder's mathematical error in tabulating any bid prices, the written unit price shall govern. Selection of the lowest bidder will be based on the calculated total of all items as written in words.
2. This purchase is tax exempt.

EXCEPTIONS

Exception(s) to Bid Conditions and Specifications (if none, so state):

BIDDER'S CERTIFICATION:

The undersigned agrees that the foregoing statements contained herein are true and correct and were made without collusion, and agrees to the conditions set forth in this request for bids and in the following technical specifications.

Name of Bidder: _____

Signature of Bidder: _____

Date of Signature: _____

Title of Bidder: _____

Company Making the Bid: _____

Address: _____

City, State, Zip: _____

Telephone Number: _____

Expected Date of Delivery: _____

Technical Specification

Specifications for One (1) Aircraft Deicing Vehicle with Forced Air System

1.0 Scope:

1.1 This document outlines the design and performance features of a self-propelled, boom-type aerial device, equipped with an aircraft deicing/anti-icing fluid spraying system. The aircraft deicing/ant-icing fluid spraying system shall be mounted on a diesel powered truck chassis, with a telescopic/articulated boom and enclosed cab constructed and mounted in accordance with national safety standards. The deicer will apply heated deicing fluid, cold anti-icing fluid, forced air or a combination of heated deicing fluid injected into the air stream or heated deicing fluid over the forced air to aircraft surfaces. The fluid pumping system, boom system, creep drive system, and fluid heating system shall be fully maintained by the chassis engine. This specification includes Single Operator (1-man) Drive System, and forced air system.

1.2 All major components shall be enclosed in a compartmentalized body meeting recognized appearance and functional standards of the truck body industry. A torsion bar incorporated into the suspension system shall provide active stability. A touch screen user interface with all operator controls located inside the chassis cab for operator convenience. The unit deicer, herein referred to as the "Deicer" shall be capable of deicing and/or anti-icing all the exterior surfaces of all private aircraft, commercial (regional, wide body, and narrow body) and military airframes.

1.3 The Deicer shall consist of;

1.3.1 A single Fluid Heater of at least 3,400,000 BTU, enclosed flame Fluid Heating System with self- diagnostics.

1.3.2 Stainless steel construction including burner components, fluid tubing, exterior components etc.

1.3.3 Heater shall be diesel powered.

- 1.3.4 Heater shall be provided with variable speed fuel and blower for maximum efficiency.
- 1.3.5 Heater shall be designed and constructed to provide the safest possible operation.
- 1.3.6 Heater shall have an hour meter.
- 1.3.7 Heater shall have a diagnostic check prior to heater start-up.
- 1.3.8 Heater shall be designed such that if all conditions are not met, the heater will not initialize a startup and faults will be present.
- 1.3.9 Heater shall provide fault codes in the event there are component failures or the heater is out of acceptable operational ranges while the heater is operating. If a fault or faults occur the heater will shut down in a logical and safe fashion.
- 1.3.10 Heater shall be designed to effectively heat fluid to 180°F (82°C).
- 1.3.11 Heated fluid temperature shall be within 5% of heater set point.
- 1.3.12 “Instant last-pass heating”. The system will provide 180°F (82°C) at the nozzle within 6 minutes (starting with tank temperature of 50° F (10°C).
- 1.3.13 Isolated deicing and anti-icing fluid tanks to prevent cross contamination and heat transfer of the fluids. At least 1800 gallons deicing fluid and at least 300 gallons anti-icing.
- 1.3.14 4 separate burners positioned together inside the stainless steel housing.
- 1.3.15 11 separate computer controlled stages that allow maximum

thermal transfer and fuel efficiency.

- 1.3.16 Telescopic boom, an articulating fly tip and an enclosed cab.
- 1.3.17 A Centrifugal Pump for De-icing fluid. Centrifugal Pump, Meyers 12C-20 Two Stage
120 Gpm (454 Lpm) 200 PSI (13.79 Bar). The pump shall be adjusted to 20 Gpm (75.71 Lpm)
@ 50 PSI (3.45 Bar)
- 1.3.18 A Diaphragm Pump for Anti-Icing fluid. Positive Displacement Hardi 364 capable of
57 Gpm (215.7 Lpm) 220 PSI (15.17 Bar). The pump shall be adjusted to 20 Gpm (75.71 Lpm)
@ 50 PSI (3.45 Bar).
- 1.3.19 Forced Air Deicing System with fluid injection.
- 1.3.20 Deiseal Powered Chassis with visibility through the cab roof.
- 1.3.21 Articulated Boom, 370° non continuous swing, 78° topping angle, Articulating Fly, Extension
Auto Enclosed cab leveling. Working Height shall be at least 47' (14.7m)
- 1.3.22 Enclosed Deicing Cab 180° cab rotation.
- 1.3.23 Spray Nozzle, 90° horizontal sweep & 135° vertical sweep.
- 1.3.24 3 Barrell Nozzle System. High Flow Deicing Fluid 45 Gpm plus, Low Flow Deicing Fluid 20 Gpm, Anti-Icing Flow 20 Gpm, Fluid Injection/ forced air at 6 Gpm, Forced Air, Deicing Fluid Low flow with Fluid Injection.
- 1.3.25 One man operation

2.0 Applicable Documents:

- 2.1 SAE ARP 1971 - Aircraft Deicing Vehicle - Self propelled, large capacity.
- 2.2 OSHA 1910.21 - Walking and Working Surfaces.
- 2.3 OSHA 1910.23 - Guarding Floor and Wall Openings and Holes.
- 2.4 OSHA 1910.67 - Vehicle Mounted Elevating and Rotating Work Platforms.
- 2.5 OSHA 1910.178 - Powered Industrial Trucks.
- 2.6 ANSI A12.1 - Safety Requirements for Floor and Wall Openings, Railings and Toe boards.
- 2.7 ANSI A92.2 - Vehicle Mounted Elevating and Rotating Boom.
- 2.8 ANSI B56.1 - Low Lift and High Lift Trucks
- 2.9 SAE ARP 1247B - General Requirements for Aerospace Ground Equipment.
- 2.10 SAE ARP 1375 - Minimum Safety Requirements for Special Purpose Airline.
- 2.11 NFPA 70 - National Fire Protection Association Electrical Code.
- 2.12 Department of Transportation Federal Motor Vehicle Safety Standards (FMVSS).
- 2.13 Joint Industry Conference (JIC) Hydraulic Standard for Industrial Equipment Weighing and Measuring Devices.

3.0 Performance Features:

- 3.1 The primary function of the deicer shall be to apply heated deicing fluid, cold anti-icing fluid, forced air, a combination of deicing fluid and forced air, from a variable height telescopic boom to the surfaces of stationary aircraft while traversing their perimeter. The deicer shall be specifically designed

for use around terminal gate areas, airport service roads and aircraft deicing pads.

- 3.2 The deicer shall provide a safe and stable configuration for maneuvering about the aircraft with the boom in any possible position at speeds up to 4 mph (6km/hr) in deicing mode and with fluid and fuel tanks at any level. The deicer shall be specifically designed for airport surfaces (non-highway), and a 25mph (40km/hr) speed with fluid tanks at maximum levels.
- 3.3 The boom shall be telescopic with an articulated fly tip. The enclosed cab to ground height shall be at least 42 feet (12.8m) with the boom fully extended. The enclosed cab capacity shall be at least 300 lbs (136 kg).
- 3.4 The deicing fluid system shall provide a standard delivery rate at the enclosed cab spray nozzle of at least 40 US Gpm at 100 PSI pre-nozzle discharge pressure with the boom fully elevated.
- 3.5 The anti-icing fluid system shall provide a delivery rate at the enclosed cab spray nozzle at at least 18 U.S. Gpm (76 Lpm). at 3.5 kg/sq. cm 50 PSI (3.5 Bar) pre-nozzle discharge pressure with the boom fully elevated.
- 3.6 The deicing and anti-icing fluid tanks should be constructed of Type #304 12 gauge stainless steel bottom with 14-gauge stainless steel sides and top. One tank shall provide at least 1,800 U.S. gallons capacity for deicing fluid and a second tank shall provide at least 300 U.S. gallons (1135.6 liters) capacity for anti-icing fluid.
- 3.7 An enclosed flame internal combustion diesel powered heater with “last pass heating” shall provide a nozzle temperature of at least 185° F (85° C) immediately with minimum tank temperature of 50° F (10° C)
- 3.8 The chassis engine and heater shall be able to operate during deicing operations with the heater running for approximately 4 hours without refueling. During normal deicing procedures the average shall be 15 to 20 hours depending on how ambient air temperatures affect thermal retention of the heated fluids. An ample supply of usable fuel for the truck engine shall remain after the supply is depleted to allow an opportunity for the truck to be refueled. The fuel system shall be designed to shutdown the heater first, allowing the chassis engine pumps to continue the deicing operation before its fuel supply is exhausted.

- 3.9 Operation of the fluid spray system shall not be contingent upon operation of the heater. Operation of the boom and deicing drive system shall not be contingent upon operation of the fluid spray system.
- 3.10 All hardware fasteners shall be SAE Grade 5 or better.
- 3.11 An intercom system shall provide communication between the operator in the truck chassis cab and the operator in the enclosed cab.

4.0 Chassis Specification:

- 4.1 The chassis shall be a standard, current truck model offered by a leading automotive manufacturer.
- 4.2 Axle ratings shall be at least; front axle 12,000lbs (5,443kgs), rear axle 23,000lbs (10,433kgs).
- 4.3 The driver's position shall be on the left side of the chassis to provide the maximum possible unobstructed view of the operator and the enclosed cab under all operating conditions.
- 4.4 The chassis shall include a standard truck cab for the vehicle driver and one passenger.
- 4.5 The chassis fuel tank shall have at least a capacity of 50 U.S. (189L) and shall be located on the driver side.
- 4.6 In addition to standard chassis cab equipment (heater/defroster, lights, electric wipers and washer, side view mirrors, etc.), the roof cab is fitted with at least 1888 sq in (11612 sq cm) sloped observation window and electric wiper for overhead viewing from the driver's position. Three sided windows on the pod for a total of at least 2108 sq in (13600 sq cm). The overhead wiper shall automatically shut off after wiping the window a few strokes to prevent premature failure of the wiper blades and motor.
- 4.7 The vehicle drive-train shall be equipped with an automatic

transmission.

- 4.8 Power steering and air braking systems shall be provided.
- 4.9 The brake pedal and accelerator pedal shall be fitted with a non-slip material contact surface.
- 4.10 The parking brake shall be air applied by a rear wheel spring mechanism with air release.
- 4.11 The chassis shall be rated to sustain loads imposed by the vehicle at speeds up to 25mph (40km/hr) with fluid tanks full.
- 4.12 Tow hooks shall be installed on the chassis structure at the front and rear bumper. Two at the front and one at rear.
- 4.13 Snow/mud tread tires shall be provided on drive wheels.
- 4.14 Chassis batteries shall be heavy-duty 1500 CCA.
Vehicle electrical system shall be 12 VDC. Deicer electrical system shall also be 12 VDC.
- 4.15 The alternator shall supply 100% of the maximum electrical steady load imposed at engine idle RPM plus a 1 A minimum additional charge capacity.
- 4.16 An Engine hour meter shall be located on the chassis instrument cluster to record truck engine operating hours.
- 4.17 Heated Mirrors on the chassis cab

5.0 Transfer Case Gear Box Specification:

5.1 Standard Features:

5.1.1 The transfer case shall be driven by the chassis transmission. When the transfer case is shifted, Internal to drive the front driveline shall switch from powering the rear driveline to powering the hydraulic pumps. At the same time or within a few seconds the transfer case shall switch the hydraulic motor from a free wheel rotation to driving the rear driveline thus driving the deicer hydrostatically. When both gear sets have been switched the transmission will shift to 4th gear lock up and the engine rpm will increase to 1750. Safety's have been implemented to prevent damage or in adverted movement of the deicer in the condition the transfer case has not shifted fully the 4th gear lock up and the engine rpm increase will not engage. When the transfer case is engaged the deicer will maintain a speed of 25 mph (0 to 32 kph) with boom in the rest driven in the chassis cab. This includes operation of the fluid spraying and fluid heating system. When the boom is out of the rest the deicer has a maximum speed of 4 mph (0 to 6 kph). When the transfer case is disconnected the chassis can be driven normally.

The Deicer will still be limited to 0 to 25 mph (0 to 32 kph) and a restricted speed of 0 to 4 (0 to 6 kph) when the boom is out of the rest.

5.1.2 The transfer case gear box.

5.1.3 Direct Drive thru gear box 1:1 ratio.

5.1.4 Pump Drive 1.8:1 step up ratio.

5.1.5 Creep Drive 2.76:1 ratio.

5.1.6 High Tensile Cast Aluminum Case.

5.1.7 Disengagement and Engagement position switches for PTO and creep drive.

5.1.8 5 quart lubrication sump with oil slinger.

5.1.9 Dipstick to check oil level.

5.1.10 Magnetic oil drain plug.

5.1.11 Hour meter for the transfer case shall be located on the Control Panel

6.0 Boom Description:

6.1 Standard Features.

6.1.1 The telescopic boom with an articulating fly tip shall conform to all applicable national safety and stability regulations. Boom elevating hydraulic cylinders shall be equipped with pilot operated holding valves ported integrally to the base of the cylinders to prevent inadvertent boom lowering from a hydraulic system pressure loss. The enclosed cab shall have a self-adjusting mechanism to maintain a vertical attitude in all boom positions. Outriggers or other ground contact devices shall not be included and shall not be required to obtain the specified stability.

6.1.2 The vehicle and boom shall require to remain stable with the fluid tanks at any level and the boom at any attitude, one operator of up to 300 lb (136 kg) working in the enclosed cab, and at 46 mph (75 km/h) wind from any direction. A torsion bar stability system shall be used to maintain stability when the boom is elevated. Vehicle stability shall conform to ANSI A92.2.

6.1.3 Boom Rotation shall be at least 180° arc in either direction.

6.1.4 The enclosed cab shall be designed to position an operator to effectively apply fluid to the upper areas of aircraft control surfaces, wings, empennage and fuselage.

6.1.5 Stability and safety shall be a paramount design that features the boom with smooth and Proportional controls.

6.1.6 The enclosed cab shall be equipped with a complete set of aerial device (boom) controls. All controls shall be controlled by one left-hand mounted joystick. Control of enclosed cab Rotation shall also be included in the joystick.

6.1.7 Full boom function controls shall also be provided at ground level at the

rear of the unit on the driver's side. A selector switch shall be provided at this lower station to select between the enclosed cab and ground level controls. The ground level controls shall override the enclosed cab controls once this switch has been activated. Auxillary controls are also located on the touchscreen user interface

- 6.1.8 All control levers shall agree with direction of movement, wherever possible, and shall be of the "return-to-neutral" type. The control functions shall be identified with a placard and located above the control levers.
- 6.1.9 The normal position of the enclosed cab, when at rest or stowed, shall be forward of the truck cab to permit entry from ground level through the forward opening, top mounted, entry door.
- 6.1.10 An emergency hydraulic pump and motor powered by the auxiliary engine 12 VDC battery electrical systems shall be provided, which will enable the boom and loaded enclosed cab to be maneuvered and lowered for approximately five (5) minutes in the event of engine malfunction/shutdown. Full function boom controls for this emergency pump shall be located in the enclosed cab and the ground level controls.

7.0 Enclosed Cab Description:

- 7.1 Standard Features:
- 7.2 The enclosed cab shall be constructed of a square and rectangular tube frame. Structural design shall be sufficient for rated load capacity of 300 lbs (136 kg). Cab shall have a De-ice/Anti-ice remote joystick controlled spray nozzle monitor.
- 7.3 A heater shall be provided with adjustable temperature control, adjustable fan speed and window defrosting capabilities.
- 7.4 Adjustable (minimum 2 inch (5cm) fore and aft) full back cushioned seat with lumbar support and seat belt shall be provided.
- 7.5 Instrumentation inside cab shall be provided as follows:

- 7.5.1 A8 Touchscreen Control
- 7.5.2 Boom centered light.
- 7.5.3 Cab centered light.
- 7.5.4 **Forced air** System.
- 7.5.5 Fluid Flow meters.

7.6 The following controls shall be ergonomically designed, provided and located for ease of operation.

7.6.1 Left Hand Joystick: Boom Controls single 2-axis can-bus joystick with capacitive sensor As the dead man control. Axis Y raise and lowers the boom. Axis X swings the boom CW and CCW. Three proportional roller switches at the top of the joystick controls the enclosed cab rotation CW / CCW, Fly up / down, and Boom telescope in / out.

7.6.2 Right Hand Joystick: Fluid and **Forced air** Spray Nozzle direction, spray pattern control.

7.6.3 Right Hand Joystick Trigger: Spray Nozzle On/Off control.

7.6.4 Switches.

7.6.4.1 12 VDC Emergency Hydraulic System: Right Console.

7.6.4.2 Emergency stop (red push/pull palm button): Left Console.

7.6.4.3 Deicing / Anti-icing Fluid Selection Switch (Right Console)

7.6.4.3.1 Anti-Icing Fluid 20 Gpm (75 lpm)

7.6.4.3.2 Deicing Fluid High Flow/Low Flow up to 45 Gpm (170 lpm)

7.6.4.3.3 Forced air Fluid Injection

7.6.4.4 Lights

7.6.4.5 Wipers

7.7 Two (2) windshield wipers at left and right windows and one (1) at front window with window wash nozzles.

7.7.1 Front (1) pantograph with 2 speed and time delay with washer.

7.7.2 Sides (2) – time delay with washers. (wet arm style with flex blades)

7.7.3 Two (2) washer reservoirs (1 gal.) and individual controls.

7.7.4 Circuit protection to prevent motor damage if wipers are left in the “on” position.

7.8 Enclosed Cab Lights:

7.8.1 Cab Interior

7.8.1.1 One Dome Light mounted at the rear corner. (LED)

7.8.1.2 Control Panel Light. Located on the forward Left console.

7.8.2 Enclosed Cab Exterior Lights

7.8.2.1 One (1) 30” (LED) light bar mounted on top of cab.

7.8.2.2 One (1) (LED) flood light mounted to nozzle.

7.9 Enclosed Cab Windows shall be:

- 7.9.1 1 Font, 2 left side and 2 right side.
- 7.9.2 Rear windows: (1) fixed and (1) sliding
- 7.9.3 Windows are abrasion resistant polycarbonate material
- 7.9.4 Two (2) side windows and one (1) front window shall be designed and labeled as emergency exits.
- 7.10 Enclosed Cab Entry Door shall be designed with:
 - 7.10.1 Front mounted. (hinged at top)
 - 7.10.2 Gas shocks. (to maintain open position)
 - 7.10.3 Handles. (inside and outside), and positive self-latching when closing.
 - 7.10.4 Handle shall be easily accessible for seated operator.
 - 7.10.5 Inside full width bar, to facilitate closing & opening of door.
- 7.11 The spray monitor shall use a variable spray pattern nozzle ranging from stream to fan.
- 7.12 All components, controls, and wiring shall be easily accessed by panels for ease of inspection and maintenance.
- 7.13 Electrical design shall be provided with (but not restricted to):
 - 7.13.1 Wires that are white with permanent black identification numbers, or color codes every 6 in (15 cm).

- 7.13.2 Connectors or screw terminal wire terminations, where practicable, with the avoidance of butt splices.
- 7.13.3 Weather protected wiring and terminations.
- 7.13.4 Protected components.
- 7.13.5 Electrical controls that are 12 VDC.
- 7.14 Cab Rotation shall be 90° right or left of center for a total of 180° cab rotation:
- 7.15 Side view mirrors shall be installed for easier viewing when operating the enclosed cab.
- 7.16 Three Barrel Nozzle for forced air System.
 - 7.16.1 Includes 7 position switch for forced air, fluid injection, 45 Gpm deicing high flow, anti-icing, deicing high flow over forced air, deicing high flow over fluid injection, and 20 Gpm low flow deicing fluid.
- 7.17 Touch Screen user interface, color display, located in enclosed cab.
 - 7.17.1 Standard Features:
 - 7.17.1.1 Deicing System Engagement
 - 7.17.1.2 PTO Engaged / Disengaged icon
 - 7.17.1.3 Creep Drive Engaged / Disengaged icon
 - 7.17.1.4 Fluid Pumps
 - 7.17.2 Fluid Heater
 - 7.17.2.1 Heater reset button.
 - 7.17.2.2 Heater Fault light.
 - 7.17.2.3 Heater at Temp light.

- 7.17.2.4 Heater Flame on light.
- 7.17.2.5 Heater On /Off.
- 7.17.3 Fluid Tank Levels, Deicing, Anti-icing, Water, and Blend.
- 7.17.4 Fuel tank level
- 7.17.5 Single Operator Controls
 - 7.17.5.1 Activation
 - 7.17.5.2 High/Low Speed
- 7.17.6 Remote Boom controls.
- 7.17.7 Boom speed adjustments-password protected for maintenance only.
- 7.17.8 Faults codes and definition's.
- 7.17.9 About section, firmware version-password protected for maintenance.

8.0 forced air

8.1 The forced air deicing system shall provide a method of removing loose accumulations of ice, frost or snow with forced air at ambient temperatures. After the forced air deicing system is used, then conventional deicing/anti-icing methods can be used. The forced air system shall not produce outlet pressure that exceeds conventional fluid systems

8.1.1 A blower system shall be inside of a scatter shield, and shall provide the air source for the forced air system.

8.1.2 The blower shall be driven at a speed of approximately 2,600 rpm at 3,200 PSI (220.6 Bar), by a hydraulic motor operating at a speed of approximately 4,000 rpm.

8.1.3 A dedicated hydraulic pump shall provide power for the hydraulic motor that drives the blower. The blower shall be rated for continuous duty.

8.1.4 The forced air display panel located in the enclosed cab shall provide the following:

8.1.4.1 Hour Meter.

8.1.4.2 Lubrication oil temperature gauge.

8.1.4.3 Lubrication oil over temperature light.

8.2 The air outlet shall be equipped with a device to prevent discharge of internal components or damaging fragments in the event of a catastrophic failure of the system.

8.3 The forced air system shall exert less surface pressure than conventional de-icing spray to prevent aircraft damage.

8.4 Air flow at approximately 700+ mph, 1,350 ± 150 cfm, 11 ± 2 PSI.

8.4.1 Inject Fluid at least 6 Gpm (22 liters) of deicing fluid into the air stream to reduce fluid consumption.

8.5 High flow of at least 45 Gpm (151 Lpm) traditional fluid spray to deice. Low flow 20 Gpm (75 Lpm) fluid spray to deice.

9.0 Fluid System Specifications:

9.1 Standard Features:

9.1.1 The fluid dispensing system shall provide the following features.

9.1.1.1 Deicing fluid: 1,800 U.S. gallons (7,192 Liters) minimum tank capacity.

9.1.1.2 Anti-icing fluid: 300 U.S. gallons (1,135 Liters) minimum capacity.

9.1.1.3 A Deicing/Anti-icing fluid spray nozzle at enclosed cab

9.2 The fluid handling system shall be compatible with all types of commercially available deicing and anti-icing fluids

9.3 Fluid tanks shall be provided with baffles to prevent undue fluid motion and starvation of the fluid pumps during maneuvering. Return fluid shall be introduced near the bottom and top of the fluid tank and as remote as possible from the outlet to pump. Suitable vents, overflows, manual fills, and liquid level gauges graduated in 100 U.S. gal. (379 Liters) increments shall be provided for each tank. Each tank shall have 18 inch diameter (46cm) minimum manhole with a cover, in the top of the tank, for access and cleaning.

9.4 Tank drainage fittings shall be 2 in. (5cm) minimum, with valves, and

shall be mounted close to each tank with operating handles at the side of the truck. Drainage of the Deicing fluid tank shall take no more than 45 minutes and drainage of the Anti-icing fluid tank shall take no more than 5 minutes.

- 9.5 A manhole type gravity fill opening with an attached cover shall be provided for filling each tank. Adequate expansion space remains after filling shall be considered in the design to prevent fluid overflow or tank pressure build-up during heating.
- 9.6 A 2 inch (5cm) pressure fill lines and valves for bottom tank loading shall be provided. Adequate tank venting and overflow provision shall be provided for a Deicing fluid flow rate of 150 Gpm (568 Lpm) and an Anti-icing fluid flow rate of 100 Gpm (379 Lpm) to prevent pressure build-up.
- 9.7 The Deicing fluid pump shall be self-priming and is coupled to a hydraulic motor by means of a Love-Joy style coupling. A safety guard shall be installed around the coupling. Centrifugal Pump, capable of at least 120 Gpm 150 PSI (10.3 Bar).
- 9.8 Maximum degradation of Anti-icing fluid post nozzle shall be less than 10 percent when sprayed at 20 Gpm (75 Lpm) and 50 PSI (3.5 Bar).
- 9.9 Adequate access to components for servicing or removal shall be provided. Isolation shutoff valves shall be installed on all fluid tank ports and at other locations where large spillage would occur if a line were to break.
- 9.10 A 50 ft. (15 m) long ground hose and hand held spray nozzle shall be installed on the front bumper for under wing and landing gear deicing. The nozzle shall be swivel mounted and provides a flow of at least 8 Gpm at 150 PSI (10.3 Bar) pre-nozzle discharge pressure. A shutoff valve shall be provided and installed immediately upstream of the hose. The hose reel shall be powered electrically to rewind.

- 9.11 The fluid heater shall be suitable for continuous operation on the airport and during operation of the unit while in motion when deicing aircraft. The heater combustion chamber shall be an enclosed type and meet the approval of US airport authorities (i.e., PONYA, MASSPORT, etc.) for operation on airport areas.

- 9.12 Location of heater in the fluid system shall be in downstream of the fluid pump so that fluid supplied to the spray nozzles is on a “last pass” through the heater.

- 9.13 The fluid heater shall be equipped with a suitable temperature controller to maintain the fluid temperature at $\pm 5^\circ$ of the set temperature ranging from $170^\circ - 200^\circ \text{ F}$ ($77^\circ - 93^\circ \text{ C}$) under all operating conditions after the initial temperature is reached. The heater shall be incorporated with an integral over-temperature shutdown switch set at 210° F (99° C) with manual reset.

- 9.14 The fluid heater shall be equipped with appropriate safety devices to prevent the occurrence of conditions which might damage the equipment or create an unsafe condition. A flame detection circuit, air flow monitor, fluid flow monitor, exhaust spark arrester, stack over-temp switch, and a device to prevent unburned fuel accumulation shall be supplied.

- 9.15 The fluid heater shall be completely enclosed within the vehicle body. Appropriate shielding shall be provided for the combustion chamber.

10.0 Controls and Instrumentation:

- 10.1 Standard Features:

- 10.2 Touch Screen user interface, Color display located in chassis cab.

10.2.1 Deicing System Engagement

10.2.2 PTO Engaged / Disengaged icon

10.2.3 Creep Drive Engaged / Disengaged icon

10.2.4 Fluid Heater

10.2.4.1 Heater reset button.

10.2.4.2 Heater Fault light.

10.2.4.3 Heater at Temp light.

10.2.4.4 Heater Flame on light.

10.2.4.5 Heater On /Off.

10.2.5 Fluid Tank Levels, Deicing, Anti-icing, Water, and Blend.

10.2.6 Fuel tank level

10.2.7 Single Operator Controls

10.2.8 Remote Boom Controls.

10.2.9 Boom speed adjustments.

10.2.10 Faults codes and definitions.

10.2.11 About Section, Program Numbers

10.2.12 Password Protected adjustments / maintenance

10.3 Heater “on – off” controls on fluid heater control panel and at the heater control box.

- 10.3.1 Inlet fluid temperature.
- 10.3.2 Outlet fluid temperature.
- 10.3.3 Glycol flow rate.
- 10.3.4 Air box pressures.
- 10.3.5 Fuel pressures.
- 10.3.6 Stage of operation.
- 10.3.7 Timing of certain operations.
- 10.3.8 Fault indication and associated fault codes.

- 10.4 Heater control box displays (LED) – heater performance features such as, hours of operation, fuel pressure, deicing fluid temperature, diagnostic features.
- 10.5 Fluid tank level sight gauges located on the driver’s side of the truck. Sight gauges shall be visible when filling fluid tanks. Deicing fluid and Anti-icing fluid level gauges shall be located in the cab.
- 10.6 Permanent, non-fading placards or pictograms shall be provided for all operating controls, instruments, fluid filling points, electrical switches, operating switches, caution signs, and operating instructions.

11.0 Vehicle Body Description:

- 11.1 Standard Features:
 - 11.1.1 All major components, other than the boom, shall be enclosed in a compartmentalized body (shroud) meeting recognized appearance and functional standards of the truck body industry.

- 11.1.2 The heater exhaust shall exit to the top rear of the unit, through a horizontal outlet to minimize damage to equipment parked to either side.
- 11.1.3 The shroud covers of the tank, heater and other major components will have the external appearance of one continuous enclosure.
- 11.1.4 The top surface of the body compartment shall be strong enough to support a 250 lbs. (113 kg) person and is entirely covered with an anti-slip material.
- 11.1.5 A rear view camera shall be installed on the rear of the chassis. The display shall be mounted in either the chassis cab or the enclosed cab.

12.0 Protective Equipment and Safety Devices:

12.1 Features:

- 12.1.1 An emergency shutdown control system shall be provided with activation in three (3) locations: cab, enclosed cab, and manual boom controls.
- 12.1.2 All steps and platforms shall have a non-skid, self-draining surface.
- 12.1.3 The fluid heater shall produce no noticeable smoke under normal operating conditions. Fumes shall not be evident 15 ft. (4.5 m) down-stream from exhaust outlet in still air.
- 12.1.4 Lights and an "on-off" switch shall be installed to illuminate the rear heater compartment where night vision is necessary for maintenance.
- 12.1.5 The fluid heater shall be equipped with one (1) hydraulic motor driven blower and shall include pressure compensated flow controls to provide blower speed control during heater operation.
- 12.1.6 Deicing fluid and Anti-icing fluid tanks shall include low-level shutdown systems to prevent pump damage.
- 12.1.7 Deicing fluid pumping system shall include pressure relief safety valves and strainer at pump inlet.
- 12.1.8 Hydraulic oil cooler with thermostat and high temp/ low-level shutdown system shall be provided to protect the hydraulic system.
- 12.1.9 A hand held fire extinguisher. Mounted on the drivers side front bumper for easy access.

12.2 Single Operator:

- 12.2.1 The Single Operator system shall allow the chassis to be driven from the enclosed cab. The operator shall have the ability to perform the following :
 - 12.2.1.1 Start and Stop the chassis engine.
 - 12.2.1.2 Change direction of travel. (forward / reverse)
 - 12.2.1.3 Control speed proportionally from 0 to 4 mph.
 - 12.2.1.4 The parking brake shall be released when deicer is in single operator mode and the left joy stick is gripped.
 - 12.2.1.5 Video from the rear of the chassis shall be displayed on the display in the enclosed cab.

12.3 Winterization kit

- 12.3.1 This system shall keep the chassis engine, hydraulic oil, and the transmission fluids warm, as well as to keep the chassis engine and batteries warm using AC shore power.

12.4 Shall have an Anti Collision/Proximity Sensor to warn when in close proximity of the aircraft.

12.5 Shall have Suction fill systems for both type I and Type IV.

12.6 Shall have a Hose & stand pipe kit for the suction of Type I and type IV fluids directly out of storage totes

12.7 Both the Type I and Type IV systems shall have separate flowmeter systems equipped with printer.

12.8 Communications Equipment Space: Transceivers shall be installed in carrier vehicles to establish voice communication with other vehicles, aircraft approaching the airport, and snow control center and maintenance facilities. The vehicle cab shall be designed to provide convenient space near the operator for the installation of a pair of transceivers. Each transceiver shall be equipped with its own microphone, antenna and remote speaker. VHF radios used to communicate with air traffic control facilities shall satisfy the criteria

set forth in section 3 of radio technical commission for Communication Equipment Operating within the Radio Frequency Range 117.975 to 137.000 MHz., dated January 20, 1984. This document may be examined at any FAA regional office or purchased from: RTCA secretariat, One McPherson Square, 1425 K Street, NW, Suite 500 Washington, DC 2005. Transceivers using other frequencies shall meet applicable standards of the Federal Communications Commission.

The transceivers shall be a Motorola XPR2500 and ICOM A120. Note: Both radios are to be programmed and installed prior to delivery. The installation includes the proper selection and placement of the antenna. At a minimum the antenna must be placed in a location where a proper ground plane can be established to maximize the range of the radio. The proper function of each radio shall be verified after the installation is complete and before the vehicle is delivered. The installer must test and certify that the power output from the transceivers meets or exceeds manufacturer's specification. The installer must test and certify that the output from the transceiver/antenna combination meets or exceeds manufacturer's specifications. Both radios need to transmit and receive without causing interference to the other. Certification documentation must be supplied to the airport prior to delivery of the runway broom.

13.0 Paint Specifications:

13.1 Standard Features:

13.1.1 Enclosed cab paint color Safety Yellow (Sherwin Williams # G8-53228-A or equivalent).

13.1.2 Entire boom, chassis and deicer shall be White (Sherwin Williams #G8-40685-A or equivalent).

14.0 Maintenance Manuals:

14.1 The deicing truck manual shall include operation, maintenance, illustrated parts lists, and reproducible masters of hydraulic and electrical circuits. Two (2) digital copies of manuals shall be issued with delivery of the deicer.

14.2 Training:

The manufacturer shall, at no additional cost, furnish the services of trained personnel to the purchaser at a time and place agreed to by all parties. These individuals shall provide instructions to airport personnel sufficient to familiarize themselves with the operational and maintenance characteristics of the vehicle and its auxiliary equipment. The period of instruction shall be 24 hours or as required depending upon crew size.

Initial maintenance training (up to two representatives): Upon delivery, mechanics must complete manufacture maintenance training. This shall be a minimum of 16 hours in length and extensively cover troubleshooting, vehicle component construction, disassembly and repair (engine and automatic transmission tear-down not required). This training will be a complement of operator initial training. The bidder is financially responsible for all transportation and travel expenses for up to two representatives at manufacture facilities. Cost (airfare, lodging and the like) for two representatives of the Purchaser's choosing.

Given that the closest dealer for any potential manufacturer of this equipment is at least 8 hours away and in the case of one manufacturer they are located west of the Mississippi, it should be assumed that the bulk of emergency and non-routine repairs of this equipment will be performed by airport staff. The airport has added a master mechanic to its staff with over 25 years working on heavy equipment. Maintenance training shall be provided for two individuals of the purchaser's choice, at the bidder's factory. Successful bidder shall provide a minimum of five days training to address the operation, diagnosis and repair of the major systems to include the air system, hydraulic system, and chassis electronic systems as they relate to vehicle maintenance activities. Bid price shall include airfare, tuition, books, meals and

lodging. In addition, Maintenance training shall be provided for two individuals of the purchaser's choice, at the bidder's factory. Successful bidder shall provide a minimum of five days training to address to enable service personnel to troubleshoot, diagnose and repair vehicle electronic systems. This course will enable the student to understand the theory of operation of the vehicle engine, transmission, braking, ABS, and electronic system as they relate to maintenance of the chassis electronic system. This course shall offer extensive schematic use and troubleshooting exercises. Bid price shall include airfare, tuition, books, meals and lodging.