



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J. ERIC BOYETTE  
SECRETARY

September 27, 2023

WBS No: 21S.060, Etc  
County: Mecklenburg  
Description: Fully-Operated Equipment for Snow and Ice Control (Multi-Axle Trucks With Brine Tanks) Contract C

Addendum No. 1  
October 4, 2023 Letting

To: Prospective Bidders

Please note the following changes to the proposal for the above referenced project.

- SP Titled "Equipment" has been updated. Paragraph 4 under Pump & Plumbing, first sentence the word "Self-Loading" was changed to "Top-Loading" and the word "Either" was removed.

The changes and attachments included with this addendum will become part of contract MJ00028.

Please sign the Addendum acknowledgement form on page 68 of the proposal and submit the form with your bid.

If you have any questions, please contact me at (704) 983-4400.

Sincerely,

DocuSigned by:

Jared S Mathis

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Jared Mathis  
Contracts Engineer

cc: File

## **EQUIPMENT:**

The Contractor shall provide the following types of equipment:

- A minimum of five (5) multi-axle trucks with operators, equipped with a Global Positioning System (GPS) with a monitoring software subscription, *and a Roadway surface temperature monitoring system compatible with the GPS system.*  
12.0-ft. snowplow and a Brine Solution Tandem Truck Application System.
- *A minimum of one (1) vehicle, with a supervisor, equipped with a Global Positioning System (GPS) with a monitoring software subscription, and a Roadway surface temperature monitoring system compatible with the GPS system. **The supervisor shall also have a tablet or iPad with access to the internet for the purpose of monitoring the current weather conditions and tracking the locations of their trucks.***

All Brine Solution Tandem Application System shall meet the minimum specification as follow:

### **Tank:**

Single molded polyethylene tank that is UV-stabilized with a specific gravity of 1.9

Minimum capacity of 1600 gallons

A baffling system that will eliminate unsafe conditions resulting from liquid slosh associated with mobile poly tanks. A tank with built in baffles is not acceptable.

The tank is to have a minimum of 2" stainless steel outlet with a stainless steel nipple and 2" brass port ball valve or equal components resistant to de-icing solutions.

Tank gallon markings visible from rear of truck.

Fill line shall be a 2" line to be fill from top of tank.

### **Pump & Plumbing:**

Furnish a centrifugal product pump capable of meeting required flow and pressure for dispensing 50 gallons per lane mile at 60 miles per hour. The pump is to allow for variances higher and lower such as 60 gallons per lane mile at 40 miles per hour.

Pump is to have minimum 2" NPT inlet, 1 ½ NPT outlet, stainless steel shaft, ceramic seals and integral drain port with plugs.

All plumbing components, mounting hardware, fasteners and clamps to be of proven resistance to standard de-ice or anti-ice solutions.

The plumbing to be configured to allow top-loading and unloading through a base dispensing system or the product pump and shall allow and unused product being pumped to be returned to the tank.

As a minimum furnish a 2" quick fill port ball valve shut-off.

Quick couple connections to have integral cam lock tethered dust caps/plugs.

System to include a Y-strainer with serviceable screen filter cartridge and an adjustable brass pressure relief valve with gauge.

### **Spray Bar & Nozzles:**

Unit capable of 1,2,or 3 lane coverage.

Spray bars 1 ½ " minimum schedule 80 PVC or functionally equivalent.

Spray nozzles are to be brass.

Spray bar to include an inline check valve to prevent siphoning.

Center spray bar to have a minimum of 10 nozzles.

Spray bar height to pavement to be adjustable.

Each spray bar to be independently controlled by electric on/off valves that are designed for de-icing or anti-icing solution and can be separated for maintenance or repair.

Spray bar system to include a flow meter.

### **System Control:**

Cab mounted controller with digital display.

Application rates which can be adjusted on the move.

Automatic or manual operation.

Display application error.

Front panel and display are backlit.

Calibration lockout feature.

Minimum of 3 switches for independent lane selection.

Rotary switch (or equal to view as a minimum gallons per lane mile; sub gallons, total lane miles; sub lane miles, gallons per minute, total gallons, feet, and mph).

System to stop spraying automatically when the trucks stops and start spraying when truck start to move.

Application rate shall be in proportion to ground speed.

**Frame:**

System mounted on a frame that will support tank and components while in dump body; during loading; during unloading and during storage.

All snowplows provided under this agreement should be hydraulic powered, reversible, hydraulic angling, moldboard type plows, with a dual trip spring assembly, which will automatically return the plow to the normal plowing position. The trip spring assembly is intended to reduce the potential for damage to the plowing equipment resulting from collision with roadway structures, such as, but not limited to, manholes and valve boxes. The Department will not be responsible for damage to the Contractor's equipment resulting from collisions with such structures. Also, the snowplow operating heights will be determined by the NCDOT. In some cases, the Contractor may be directed to have the snowplow in direct contact with the pavement surface.

A copy of the DOT specifications for snowplows and will be made available to the Contractor upon request.

Operators of all trucks shall have a Commercial Driver's License. The Contractor shall provide enough operators, per piece of equipment provided under this agreement, to operate 24 hours per day during a storm event. Operators are limited to a maximum 12-hour shift within a 24-hour period.

All vehicles provided by the Contractor shall be equipped with warning lights similar to those used by the Department. All dump trucks shall have headlights mounted to provide forward lighting over the snowplow. Communication devices shall be available in each piece of equipment so the operators can communicate with the Contractor's designated supervisor. All equipment shall be equipped with reverse gear warning devices.

All trucks provided by the Contractor shall be equipped with permanent mounted Global Positioning Devices (GPS) **such as the GPS Trackit™ or equivalent model**. The GPS units must be accompanied with an annual monitoring subscription that will begin and cover the period between October 15 and April 15 of each year. And shall be in good working

condition at all times including reading surface and air temperatures on the web account. The GPS unit and monitoring subscription must demonstrate the following capabilities:

- Generate reports in a spreadsheet format
- Generate mapping
- Report every 30 sec.
- Turn-by-turn tracking
- Roadway surface temperature monitoring all trucks
- Plow and Spreader control
- Internet monitoring with NCDOT management access
- Ability to track vehicle operating speed
- Software must send alert via email or text message when desired speed has been exceeded
- Software or web application must be capable of Zone Assignments and notification
- Tampering alert notification
- Operate during extreme temperatures
- Battery backup system

The Contractor shall be responsible for all costs or charges incurred in the operation and maintenance of the equipment during the term of the contract including, but not limited to: fuel, oil, snow plow blades, tire chains, equipment repairs, communication equipment, subscription costs etc. The Contractor will be compensated for equipment operation and incidentals at the Equipment Operating Rate define elsewhere in this contract.

The Contractor shall be responsible for the equipment provided in this contract at all times and at all locations during the term of the contract. The Contractor shall have no claim against the Department of Transportation for any expense involving damage or loss to the Contractor's equipment (including vandalism, theft, fire and acts of God) arising out of, or relating to, work performed under this agreement.