



## STANDARD BID CONDITIONS

## H-16-256P

1. **ACCEPTANCE AND REJECTION:** The Arkansas State Highway and Transportation Department (AHTD) reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the State.
2. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
3. **BID BONDS AND PERFORMANCE BONDS:** If required, a **Bid Bond** in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. **Personal and company checks are not acceptable as Bid Bonds.** Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by AHTD or fails to honor their bid. When a bidder claims and can show clear and convincing evidence that a material mistake was made in the bid and was not the bid intended, the bidder may be permitted to withdraw their bid prior to award without forfeiture of bid bond. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a **Performance Bond** in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** In some cases, a cashier's check or certified check submitted as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company authorized to do business in Arkansas, and must be signed by a Resident Local Agent licensed by the Arkansas State Insurance Commissioner to represent that surety company. Resident Agent's Power-of-Attorney must accompany the surety bond. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). These bonds shall not only serve to guarantee the completion of the work, but also to guarantee the excellence of both workmanship and material until the work is finally accepted and the provisions of the Plans, Specifications, and Special Provisions fulfilled. In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U. S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company. Annual Bid and Performance Bonds on file with E & P Division must have sufficient unencumbered funds to meet current bonding requirements, or the bid will be rejected, unless the balance is submitted as set forth above, prior to bid opening.
4. **TAXES:** The AHTD is not exempt from Arkansas State Sales and Use Taxes, or local option city/county sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by the AHTD as an addition thereto, and should be added to the billing to the AHTD. The AHTD is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by the AHTD.
5. **"ALL OR NONE" BIDS:** Bidders who wish to bid "All or None" on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
6. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
7. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
8. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
9. **FREIGHT:** All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.
10. **SAMPLES, LITERATURE, DEMONSTRATIONS:** Samples and technical literature must be provided free of any charge within 14 days of AHTD request, and free demonstrations within 30 days, unless AHTD extends time. Failure to provide as requested within this period may cause bid to be rejected. Samples, literature and demonstrations must be substantially the same as the item(s) being bid, unless otherwise agreed to by AHTD. Samples that are not destroyed will be returned upon request at bidders expense. Samples from successful bidders may be retained for comparison with items actually furnished.
11. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
12. **BACKORDERS OR DELAY IN DELIVERY:** Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to the AHTD, as soon as possible, of the reason for any delay and the expected delivery date. The AHTD has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
13. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by AHTD after delivery. Default in promised delivery or failure to meet specifications authorizes the AHTD to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
14. **ETHICS:** *"It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business."* (Arkansas Code, Annotated, Section 19-11-708).

**ARKANSAS STATE HIGHWAY  
AND TRANSPORTATION DEPARTMENT**

**NOTICE OF NONDISCRIMINATION**

The Arkansas State Highway and Transportation (Department) complies with all civil rights provisions of federal statutes and related authorities that prohibit discrimination in programs and activities receiving federal financial assistance. Therefore the Department does not discriminate on the basis of race, sex, color, age, national origin, religion or disability, in the admission, access to and treatment in the Department's programs and activities, as well as the Department's hiring or employment practices. Complaints of alleged discrimination and inquiries regarding the Department's nondiscrimination policies may be directed to Joanna P. McFadden Section Head - EEO/DBE (ADA/504/Title VI Coordinator), P. O. Box 2261, Little Rock, AR 72203, (501) 569-2298, (Voice/TTY 711), or the following email address: [joanna.mcfadden@arkansashighways.com](mailto:joanna.mcfadden@arkansashighways.com).

Free language assistance for Limited English Proficient individuals is available upon request.

This notice is available from the ADA/504/Title VI Coordinator in large print, on audiotape and in Braille.

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT  
LITTLE ROCK, ARKANSAS  
EQUIPMENT AND PROCUREMENT DIVISION  
BID SHEET**

**Contract No.: H-16-256P**

**BIDDER:** \_\_\_\_\_

Page 1 of 4

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1. **2** – De-Icing Material Spreader, w/4.5 CY Stainless Steel Hopper w/Calcium Chloride Spray System, (Without Top Screen), to meet AHTD Spec. **16-349-mm092-4.5 SS SP.**

FOB: **AHTD – District 10 Headquarters, 2510 West Kingshighway, Paragould, AR 72450**

Bid Price (Do not include any Local, State or Federal Taxes) Each \$ \_\_\_\_\_

Total for **2** Spreaders \$ \_\_\_\_\_

**Spreaders** proposed to furnish:

Make: \_\_\_\_\_ Model \_\_\_\_\_ Warranty \_\_\_\_\_

Guaranteed Delivery Date \_\_\_\_\_

Additional Units may be purchased at the same pricing and conditions through \_\_\_\_\_  
(Date)

2. **1** – De-Icing Material Spreader, w/4.5 CY Stainless Steel Hopper, w/Calcium Chloride Spray System, (With Top Screen), to meet AHTD Spec. **16-348-mm092-4.5 SS SP TS.**

FOB: **AHTD – District 5 Headquarters, 1673 Batesville Blvd., Batesville, AR 73501**

Bid Price (Do not include any Local, State or Federal Taxes) Each \$ \_\_\_\_\_

Total for **1** Spreader \$ \_\_\_\_\_

**Spreader** proposed to furnish:

Make: \_\_\_\_\_ Model \_\_\_\_\_ Warranty \_\_\_\_\_

Guaranteed Delivery Date \_\_\_\_\_

Additional Units may be purchased at the same pricing and conditions through \_\_\_\_\_  
(Date)

3. **11** – De-Icing Material Spreader, w/7.5 CY Stainless Steel Hopper, w/Calcium Chloride Spray System, (With Top Screen), to meet AHTD Spec. **16-356-mm093-7.5 SS SP TS.**

FOB: **AHTD – District 1 Headquarters, 2701 Hwy. 64 West, Wynne, AR 72396**

Bid Price (Do not include any Local, State or Federal Taxes) Each \$ \_\_\_\_\_

Total for **11** Spreaders \$ \_\_\_\_\_

**Spreaders** proposed to furnish:

Make: \_\_\_\_\_ Model \_\_\_\_\_ Warranty \_\_\_\_\_

Guaranteed Delivery Date \_\_\_\_\_

Additional Units may be purchased at the same pricing and conditions through \_\_\_\_\_  
(Date)

4. **4** – De-Icing Material Spreader, w/7.5 CY Mild Steel Hopper, w/Calcium Chloride Spray System, (With Top Screen), to meet AHTD Spec. **16-352-mm093-7.5 MS SP TS.**

FOB: **AHTD – District 3 Headquarters, 2911 Hwy. 29 North, Hope, AR 71801**

Bid Price (Do not include any Local, State or Federal Taxes) Each \$ \_\_\_\_\_

Total for **4** Spreaders \$ \_\_\_\_\_

**Spreaders** proposed to furnish:

Make: \_\_\_\_\_ Model \_\_\_\_\_ Warranty \_\_\_\_\_

Guaranteed Delivery Date \_\_\_\_\_

Additional Units may be purchased at the same pricing and conditions through \_\_\_\_\_  
(Date)

5. **8** – De-Icing Material Spreader, w/10.5 CY Stainless Steel Hopper, w/Calcium Chloride Spray System, (With Top Screen), to meet AHTD Spec. **16-360-mm094-10.5 SS SP TS.**

FOB: 5 ea. - AHTD – District 9 Headquarters, 4590 Hwy. 65 South, Harrison, AR 72601  
3 ea. - AHTD – District 10 Headquarters, 2510 West Kingshighway, Paragould, AR 72450

Bid Price (Do not include any Local, State or Federal Taxes) Each \$ \_\_\_\_\_

Total for **8** Spreaders \$ \_\_\_\_\_

**Spreaders** proposed to furnish:

Make: \_\_\_\_\_ Model \_\_\_\_\_ Warranty \_\_\_\_\_

Guaranteed Delivery Date \_\_\_\_\_

Additional Units may be purchased at the same pricing and conditions through \_\_\_\_\_  
(Date)

6. **6** – De-Icing Material Spreader, w/10.5 CY Stainless Steel Hopper w/Calcium Chloride Spray System, (Without Top Screen), to meet AHTD Spec. **16-361-mm094-10.5 SS SP.**

FOB: AHTD – District 4 Headquarters, 808 Frontier Road, Barling, AR 72923

Bid Price (Do not include any Local, State or Federal Taxes) Each \$ \_\_\_\_\_

Total for **6** Spreaders \$ \_\_\_\_\_

**Spreaders** proposed to furnish:

Make: \_\_\_\_\_ Model \_\_\_\_\_ Warranty \_\_\_\_\_

Guaranteed Delivery Date \_\_\_\_\_

Additional Units may be purchased at the same pricing and conditions through \_\_\_\_\_  
(Date)

7. **4** – De-Icing Material Spreader, w/10.5 CY Mild Steel Hopper w/Calcium Chloride Spray System, (With Top Screen), to meet AHTD Spec. **16-358-mm094-10.5 MS SP TS.**

FOB: 2 ea. - AHTD – District 2 Headquarters, 4900 Hwy. 65 South, Pine Bluff, AR 71611  
2 ea. – AHTD – District 7 Headquarters, 2245 California Avenue, Camden, AR 71701

Bid Price (Do not include any Local, State or Federal Taxes) Each \$ \_\_\_\_\_

Total for **4** Spreaders \$ \_\_\_\_\_

**Spreaders** proposed to furnish:

Make: \_\_\_\_\_ Model \_\_\_\_\_ Warranty \_\_\_\_\_

Guaranteed Delivery Date \_\_\_\_\_

Additional Units may be purchased at the same pricing and conditions through \_\_\_\_\_  
(Date)

**BID TOTAL \$** \_\_\_\_\_

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

**SPECIFICATION 16-349-mm092-4.5 SS SP**

**FOR**

**HYDRAULIC DRIVEN CHEMICAL & MATERIAL SPREADER**  
**304 STAINLESS STEEL CONSTRUCTION**  
**WITH LIQUID CALCIUM CHLORIDE SPRAY SYSTEM**  
**4.5 CUBIC YARDS CAPACITY**  
**(WITHOUT TOP SCREEN)**

**General Conditions:**

1. **Current Model:** Units furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new. Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of the units supplied must have been in the business of producing operational units for at least two years and must have recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation substantiating the aforementioned requirements. A list of user references may also be required.
2. **Literature:** Manufacturers literature, verifying adherence of proposed unit to each line item addressed in this specification, shall be submitted with the bid. If any literature and/or specifications of items conflict with AHTD specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.
3. Any deviations from specifications and requirements herein must be clearly pointed out by bidder. Otherwise it will be considered that equipment offered is in strict compliance with these specifications and requirements, and successful bidder will be held responsible therefor. Deviations must be explained in detail on an attached sheet. However, no implication is made by the Arkansas State Highway and Transportation Department that deviations will be acceptable.
4. **Manuals:** The successful bidder shall furnish one (1) Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book to each FOB point.

The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD, DVD, USB Drive, etc.) in lieu of printed manuals.

5. All parts, accessories and tools necessary for satisfactory operation of unit shall be furnished whether or not they are specifically mentioned in this specification (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications - unless specifically excluded by this specification). Complete installation instructions, including hydraulic system and liquid calcium chloride spray system, shall be furnished with each unit.
6. **Parts Inventory & Service Facilities:** The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
7. **Demonstration:** The Arkansas State Highway & Transportation Department reserves the right to require a demonstration, under actual working conditions, of equipment bid under this specification before award is made. The demonstration would be performed (free of any charge) by the bidder or an authorized representative at a mutually acceptable location. If requested, the bidder should be prepared to demonstrate the equipment within thirty (30) days after notification. Failure of the bidder to perform a satisfactory demonstration within the specified time may be grounds for rejection of the bid.
8. **Cooperative Purchasing:** Other tax-supported entities\* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc. regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.



\* Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

**Unit Specifications:**

1. **General:** This specification is intended to cover a 4.5 cubic yards struck capacity hydraulic driven chemical and material spreader for use in AHTD dump trucks. The spreader shall also be equipped with a liquid calcium chloride spray system designed to operate on 12 volts DC.
2. **Type:** Shall be designed for mounting in dump body with spinner at the rear and below floor of dump body. The spreader shall be a self-contained unit with hopper type body, conveyor system, hydraulic drive, spinner and all necessary components integrally mounted as single unit. Shall have the capacity to spread material to a maximum width of no less than 24'.
3. **Hopper Body:** Hopper shall have a minimum struck capacity of 4.5 cubic yards. Shall be electrically welded construction, adequately reinforced, with no less than 10 gauge 304 stainless steel sides and ends. Sides to slope approximately 45 degrees to allow material to feed into conveyor by gravity. Bottom shall be constructed of no less than 7 gauge 304 stainless steel. All hopper hardware shall be stainless steel. In addition, any long sills, crossmembers or side supports used in the design of the spreader shall be constructed of 304 stainless steel.
4. **Top Screen:** A top screen is not required.
5. **Conveyor:** Shall have a minimum width of 24" and be designed to handle sand, cinders and de-icing chemicals discharging material to spinner at rear of spreader. Shall be equipped with spring loaded idler adjusters to maintain proper conveyor tension.
6. **Drive:** Conveyor and spinner shall be driven by hydraulic motors. Drive to conveyor and spinner assembly to be as regularly furnished by manufacturer. Shall be designed to operate on an open center hydraulic system with a minimum output of 15 gpm at 1,500 psi. (Hydraulic pump will be furnished by AHTD).
7. **Reservoir:** A 20 gallon minimum capacity hydraulic reservoir designed for frame mounting shall be provided. Reservoir shall have filler cap, screen and replaceable 10 micron return line filter. Reservoir suction line fitting shall be sized for no less than 1-1/4" ID suction hose.
8. **Hydraulic Controls:** A pressure compensated dual flow control with built-in pressure relief valve and manual on-off for in-cab mounting shall be provided. Valve shall provide independent variable speed controls for spinner and conveyor.
9. **Spinner Assembly:** Spreader shall be equipped with a "Urethane Spinner" consisting of a one-piece polyurethane disc with a minimum of four (4) molded fins. Spinner disc shall have a minimum diameter of 18" and have a vertical adjustment of no less than 12". Spinner shaft shall be mounted on anti-friction bearings with grease fittings or direct to hydraulic motor. The spinner chute shall be constructed of no less than 10 gauge 304 stainless steel. Unit shall have a minimum of three (3) adjustable 304 stainless steel material deflectors to help regulate spreading pattern. Spinner assembly shall be designed so that it may be hinged up for storage or to discharge material that may be left in the spreader.
10. **Feed Gate:** Material discharge to spinner chute to be controlled by an adjustable 304 stainless steel discharge gate with positive locking device.
11. **Mounting:** Spreader shall be designed for mounting in dump body with inside length of 108" and nominal inside width of 84" on truck with 72" cab to axle measurement. Hold down equipment for dump body mounting shall be furnished. Spreader shall be equipped with lifting bails.
12. **Front Bearing Grease Extensions:** Shall have front bearing grease extension tubes to allow greasing of front bearings. The grease tubes shall either extend to the rear of the spreader or approximately 40" above the dump body floor, and be flexible enough so greasing will not interfere with normal bearing adjustment. The tubes shall be attached to the sides of the spreader with straps made of nylon or a similar material.
13. **Liquid Calcium Chloride Spray System:** Shall be designed to use in conjunction with chemical and material spreader specified above. The system shall spray a liquid de-icing solution directly onto the material as it leaves the conveyor and before it reaches the spinner.

The spray system provided shall be electric operated, designed to spray a constant de-icing solution on material being spread. The system shall be complete with a liquid spray pump, in-cab controls, hose kit with a minimum of two (2) spray nozzles, spray tanks and all necessary hoses and fittings to make the system complete. Spray system shall be capable of spraying calcium and magnesium chloride, glycol, liquid urea, or

other liquid de-icing solutions. All parts that come in contact with liquid being sprayed shall be corrosion resistant. All components shall be rated at no less than 150 psi working pressure.

- A. Drive System: Shall be a 12 volt DC electric motor/pump combination with an internal circuit breaker. The pump shall be a diaphragm type resistant to the effects of the de-icing solutions specified above and have a minimum output rating of 2.8 gpm. Output shall remain constant regardless of conveyor/spinner speed.
  - B. Controls: Shall have an in-cab mounted switch to provide immediate on/off capability. An indicator light (green) shall be provided to show when power is on. An additional indicator light (red) shall be provided to warn of low system pressure or low solution level in the reservoirs. A variable speed control shall be furnished for increasing or decreasing saturation of the material to be spread.
  - C. Sprayer Reservoirs: A minimum of two (2) reservoirs with a capacity of no less than 60 gallons each shall be provided. Reservoirs shall be molded polyethylene construction and be complete with replaceable screen line strainer, shut-off valves and mounting hardware. The reservoirs shall be angle formed to allow for mounting to the sides of the chemical and material spreader specified above. (Sides of spreader are to have an approximate 45° slope). The reservoirs shall be designed so that one (1) reservoir is mounted on each side of the spreader with all fill openings, shut-off valves, etc. readily accessible.
  - D. Nozzles: There shall be a minimum of two (2) spray nozzles equipped with necessary cores, discs and mounting hardware.
14. Color: 304 stainless steel components to be unpainted. Non-stainless steel parts to be painted black or aluminum.
15. Warranty: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by AHTD.
- A. Warranty shall include all parts, labor and transportation costs to the location of equipment.
  - B. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
  - C. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
  - D. If any warranty literature submitted with the bid conflicts with AHTD warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.
  - E. Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

**SPECIFICATION 16-348-mm092-4.5 SS SP TS**

**FOR**

**HYDRAULIC DRIVEN CHEMICAL & MATERIAL SPREADER**  
**304 STAINLESS STEEL CONSTRUCTION**  
**WITH LIQUID CALCIUM CHLORIDE SPRAY SYSTEM**  
**4.5 CUBIC YARDS CAPACITY**  
**(WITH TOP SCREEN)**

**General Conditions:**

1. **Current Model:** Units furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new. Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of the units supplied must have been in the business of producing operational units for at least two years and must have recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation substantiating the aforementioned requirements. A list of user references may also be required.
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5. All parts, accessories and tools necessary for satisfactory operation of unit shall be furnished whether or not they are specifically mentioned in this specification (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications - unless specifically excluded by this specification). Complete installation instructions, including hydraulic system and liquid calcium chloride spray system, shall be furnished with each unit.
6. **Parts Inventory & Service Facilities:** The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
7. **Demonstration:** The Arkansas State Highway & Transportation Department reserves the right to require a demonstration, under actual working conditions, of equipment bid under this specification before award is made. The demonstration would be performed (free of any charge) by the bidder or an authorized representative at a mutually acceptable location. If requested, the bidder should be prepared to demonstrate the equipment within thirty (30) days after notification. Failure of the bidder to perform a satisfactory demonstration within the specified time may be grounds for rejection of the bid.
8. **Cooperative Purchasing:** Other tax-supported entities\* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc. regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.

\* Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

**Unit Specifications:**

1. **General:** This specification is intended to cover a 4.5 cubic yards struck capacity hydraulic driven chemical and material spreader for use in AHTD dump trucks. The spreader shall also be equipped with a liquid calcium chloride spray system designed to operate on 12 volts DC.
2. **Type:** Shall be designed for mounting in dump body with spinner at the rear and below floor of dump body. The spreader shall be a self-contained unit with hopper type body, conveyor system, hydraulic drive, spinner and all necessary components integrally mounted as single unit. Shall have the capacity to spread material to a maximum width of no less than 24'.
3. **Hopper Body:** Hopper shall have a minimum struck capacity of 4.5 cubic yards. Shall be electrically welded construction, adequately reinforced, with no less than 10 gauge 304 stainless steel sides and ends. Sides to slope approximately 45 degrees to allow material to feed into conveyor by gravity. Bottom shall be constructed of no less than 7 gauge 304 stainless steel. All hopper hardware shall be stainless steel. In addition, any long sills, crossmembers or side supports used in the design of the spreader shall be constructed of 304 stainless steel.
4. **Top Screen:** A top screen to keep oversize material from entering hopper shall be provided with the spreader.
5. **Conveyor:** Shall have a minimum width of 24" and be designed to handle sand, cinders and de-icing chemicals discharging material to spinner at rear of spreader. Shall be equipped with spring loaded idler adjusters to maintain proper conveyor tension.
6. **Drive:** Conveyor and spinner shall be driven by hydraulic motors. Drive to conveyor and spinner assembly to be as regularly furnished by manufacturer. Shall be designed to operate on an open center hydraulic system with a minimum output of 15 gpm at 1,500 psi. (Hydraulic pump will be furnished by AHTD).
7. **Reservoir:** A 20 gallon minimum capacity hydraulic reservoir designed for frame mounting shall be provided. Reservoir shall have filler cap, screen and replaceable 10 micron return line filter. Reservoir suction line fitting shall be sized for no less than 1-1/4" ID suction hose.
8. **Hydraulic Controls:** A pressure compensated dual flow control with built-in pressure relief valve and manual on-off for in-cab mounting shall be provided. Valve shall provide independent variable speed controls for spinner and conveyor.
9. **Spinner Assembly:** Spreader shall be equipped with a "Urethane Spinner" consisting of a one-piece polyurethane disc with a minimum of four (4) molded fins. Spinner disc shall have a minimum diameter of 18" and have a vertical adjustment of no less than 12". Spinner shaft shall be mounted on anti-friction bearings with grease fittings or direct to hydraulic motor. The spinner chute shall be constructed of no less than 10 gauge 304 stainless steel. Unit shall have a minimum of three (3) adjustable 304 stainless steel material deflectors to help regulate spreading pattern. Spinner assembly shall be designed so that it may be hinged up for storage or to discharge material that may be left in the spreader.
10. **Feed Gate:** Material discharge to spinner chute to be controlled by an adjustable 304 stainless steel discharge gate with positive locking device.
11. **Mounting:** Spreader shall be designed for mounting in dump body with inside length of 108" and nominal inside width of 84" on truck with 72" cab to axle measurement. Hold down equipment for dump body mounting shall be furnished. Spreader shall be equipped with lifting bails.
12. **Front Bearing Grease Extensions:** Shall have front bearing grease extension tubes to allow greasing of front bearings. The grease tubes shall either extend to the rear of the spreader or approximately 40" above the dump body floor, and be flexible enough so greasing will not interfere with normal bearing adjustment. The tubes shall be attached to the sides of the spreader with straps made of nylon or a similar material.
13. **Liquid Calcium Chloride Spray System:** Shall be designed to use in conjunction with chemical and material spreader specified above. The system shall spray a liquid de-icing solution directly onto the material as it leaves the conveyor and before it reaches the spinner.

The spray system provided shall be electric operated, designed to spray a constant de-icing solution on material being spread. The system shall be complete with a liquid spray pump, in-cab controls, hose kit with a minimum of two (2) spray nozzles, spray tanks and all necessary hoses and fittings to make the system complete. Spray system shall be capable of spraying calcium and magnesium chloride, glycol, liquid urea, or

other liquid de-icing solutions. All parts that come in contact with liquid being sprayed shall be corrosion resistant. All components shall be rated at no less than 150 psi working pressure.

- A. Drive System: Shall be a 12 volt DC electric motor/pump combination with an internal circuit breaker. The pump shall be a diaphragm type resistant to the effects of the de-icing solutions specified above and have a minimum output rating of 2.8 gpm. Output shall remain constant regardless of conveyor/spinner speed.
  - B. Controls: Shall have an in-cab mounted switch to provide immediate on/off capability. An indicator light (green) shall be provided to show when power is on. An additional indicator light (red) shall be provided to warn of low system pressure or low solution level in the reservoirs. A variable speed control shall be furnished for increasing or decreasing saturation of the material to be spread.
  - C. Sprayer Reservoirs: A minimum of two (2) reservoirs with a capacity of no less than 60 gallons each shall be provided. Reservoirs shall be molded polyethylene construction and be complete with replaceable screen line strainer, shut-off valves and mounting hardware. The reservoirs shall be angle formed to allow for mounting to the sides of the chemical and material spreader specified above. (Sides of spreader are to have an approximate 45° slope). The reservoirs shall be designed so that one (1) reservoir is mounted on each side of the spreader with all fill openings, shut-off valves, etc. readily accessible.
  - D. Nozzles: There shall be a minimum of two (2) spray nozzles equipped with necessary cores, discs and mounting hardware.
14. Color: 304 stainless steel components to be unpainted. Non-stainless steel parts to be painted black or aluminum.
15. Warranty: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by AHTD.
- A. Warranty shall include all parts, labor and transportation costs to the location of equipment.
  - B. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
  - C. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
  - D. If any warranty literature submitted with the bid conflicts with AHTD warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.
  - E. Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

**SPECIFICATION 16-356-mm093-7.5 SS SP TS**

**FOR**

**HYDRAULIC DRIVEN CHEMICAL & MATERIAL SPREADER**  
**304 STAINLESS STEEL CONSTRUCTION**  
**WITH LIQUID CALCIUM CHLORIDE SPRAY SYSTEM**  
**7.5 CUBIC YARDS CAPACITY**  
**(WITH TOP SCREEN)**

**General Conditions:**

1. **Current Model:** Units furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new. Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of the units supplied must have been in the business of producing operational units for at least two years and must have recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation substantiating the aforementioned requirements. A list of user references may also be required.
2. **Literature:** Manufacturers literature, verifying adherence of proposed unit to each line item addressed in this specification, shall be submitted with the bid. If any literature and/or specifications of items conflict with AHTD specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.
3. Any deviations from specifications and requirements herein must be clearly pointed out by bidder. Otherwise it will be considered that equipment offered is in strict compliance with these specifications and requirements, and successful bidder will be held responsible therefor. Deviations must be explained in detail on an attached sheet. However, no implication is made by the Arkansas State Highway and Transportation Department that deviations will be acceptable.
4. **Manuals:** The successful bidder shall furnish one (1) Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book to each FOB point.  
  
The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD, DVD, USB Drive, etc.) in lieu of printed manuals.
5. All parts, accessories and tools necessary for satisfactory operation of unit shall be furnished whether or not they are specifically mentioned in this specification (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications - unless specifically excluded by this specification). Complete installation instructions, including hydraulic system and liquid calcium chloride spray system, shall be furnished with each unit.
6. **Parts Inventory & Service Facilities:** The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
7. **Demonstration:** The Arkansas State Highway & Transportation Department reserves the right to require a demonstration, under actual working conditions, of equipment bid under this specification before award is made. The demonstration would be performed (free of any charge) by the bidder or an authorized representative at a mutually acceptable location. If requested, the bidder should be prepared to demonstrate the equipment within thirty (30) days after notification. Failure of the bidder to perform a satisfactory demonstration within the specified time may be grounds for rejection of the bid.
8. **Cooperative Purchasing:** Other tax-supported entities\* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc.

regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.

\* Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

**Unit Specifications:**

1. **General:** This specification is intended to cover a 7.5 cubic yards minimum struck capacity hydraulic driven chemical and material spreader for use in AHTD dump trucks. The spreader shall also be equipped with a liquid calcium chloride spray system designed to operate on 12 volts DC.
2. **Type:** Shall be designed for mounting in dump body with spinner at the rear and below floor of dump body. The spreader shall be a self-contained unit with hopper type body, conveyor system, hydraulic drive, spinner and all necessary components integrally mounted as single unit. Shall have the capacity to spread material to a maximum width of no less than 24'.
3. **Hopper Body:** Hopper shall have a minimum struck capacity of 7.5 cubic yards. Shall be electrically welded construction, adequately reinforced, with no less than 10 gauge 304 stainless steel sides and ends. Sides to slope approximately 45 degrees to allow material to feed into conveyor by gravity. Bottom shall be constructed of no less than 7 gauge 304 stainless steel. Front of hopper shall be sloped to allow spreader to be mounted in a dump body which has the hydraulic cylinder hoist housing in the front of the body. (Refer to Paragraph 11 for hydraulic cylinder hoist housing dimensions.) All hopper hardware shall be stainless steel. In addition, any long sills, crossmembers or side supports used in the design of the spreader shall be constructed of 304 stainless steel.
4. **Top Screen:** A top screen to keep oversize material from entering hopper shall be provided with the spreader.
5. **Conveyor:** Shall have a minimum overall width of 24" and be designed to handle sand, cinders and de-icing chemicals discharging material to spinner at rear of spreader. Shall be equipped with spring loaded idler adjusters to maintain proper conveyor tension.
6. **Drive:** Conveyor and spinner shall be driven by hydraulic motors. Drive to conveyor and spinner assembly to be as regularly furnished by manufacturer. Shall be designed to operate on an open center hydraulic system with a minimum output of 15 gpm at 1,500 psi. (Hydraulic pump will be furnished by AHTD.)
7. **Reservoir:** A 20 gallon minimum capacity hydraulic reservoir designed for frame mounting shall be provided. Reservoir shall have filler cap, screen and replaceable 10 micron return line filter. Reservoir suction line fitting shall be sized for no less than 1-1/4" ID suction hose.
8. **Hydraulic Controls:** A pressure compensated dual flow control with built-in pressure relief valve and manual on-off for in-cab mounting shall be provided. Valve to provide independent variable speed controls for spinner and conveyor.
9. **Spinner Assembly:** Spreader shall be equipped with a "Urethane Spinner" consisting of a one-piece polyurethane disc with a minimum of four (4) molded fins. Spinner disc shall have a minimum diameter of 18" and have a vertical adjustment of no less than 12". Spinner shaft shall be mounted on anti-friction bearings with grease fittings or direct to hydraulic motor. The spinner chute shall be constructed of no less than 10 gauge 304 stainless steel. Unit shall have a minimum of three (3) adjustable 304 stainless steel material deflectors to help regulate spreading pattern. Spinner assembly shall be designed so that it may be hinged up for storage or to discharge material that may be left in the spreader.
10. **Feed Gate:** Material discharge to spinner chute to be controlled by an adjustable 304 stainless steel discharge gate with positive locking device.
11. **Mounting:** Spreader shall be designed for mounting in dump body which has the hydraulic cylinder hoist housing in the front of the body. Body has an inside length of 144", an inside width of 84" and is mounted on a tandem axle truck with 84" cab to axle measurement. The hydraulic cylinder hoist housing is 19.5" wide at the bottom and extends 35" into the bed. Width at top is 14" and extends 16" into the bed. Overall height of the housing is 42". Hold down equipment for dump body mounting shall be furnished. Spreader shall be equipped with lifting bails.
12. **Front Bearing Grease Extensions:** Shall have front bearing grease extension tubes to allow greasing of front bearings. The grease tubes shall either extend to the rear of the spreader or approximately 40" above the dump body floor, and be

flexible enough so greasing will not interfere with normal bearing adjustment. The tubes shall be attached to the sides of the spreader with straps made of nylon or a similar material.

13. Liquid Calcium Chloride Spray System: Shall be designed to use in conjunction with chemical and material spreader specified above. The system shall spray a liquid de-icing solution directly onto the material as it leaves the conveyor and before it reaches the spinner.

The spray system provided shall be electric operated, designed to spray a constant de-icing solution on material being spread. The system shall be complete with a liquid spray pump, in-cab controls, hose kit with a minimum of two (2) spray nozzles, spray tanks and all necessary hoses and fittings to make the system complete. Spray system shall be capable of spraying calcium and magnesium chloride, glycol, liquid urea, or other liquid de-icing solutions. All parts that come in contact with liquid being sprayed shall be corrosion resistant. All components shall be rated at no less than 150 psi working pressure.

- A. Drive System: Shall be a 12 volt DC electric motor/pump combination with an internal circuit breaker. The pump shall be a diaphragm type resistant to the effects of the de-icing solutions specified above and have a minimum output rating of 2.8 gpm. Output shall remain constant regardless of conveyor/spinner speed.
- B. Controls: Shall have an in-cab mounted switch to provide immediate on/off capability. An indicator light (green) shall be provided to show when power is on. An additional indicator light (red) shall be provided to warn of low system pressure or low solution level in the reservoirs. A variable speed control shall be furnished for increasing or decreasing saturation of the material to be spread.
- C. Sprayer Reservoirs: A minimum of two (2) reservoirs with a capacity of no less than 100 gallons each shall be provided. Reservoirs shall be molded polyethylene construction and be complete with replaceable screen line strainer, shut-off valves and mounting hardware. The reservoirs shall be angle formed to allow for mounting to the sides of the chemical and material spreader specified above. (Sides of spreader are to have an approximate 45° slope). The reservoirs shall be designed so that one (1) reservoir is mounted on each side of the spreader with all fill openings, shut-off valves, etc. readily accessible. Reservoirs shall be plumbed together with a minimum 1-1/2" ID hose with a tee located on the left rear corner of the spreader.
- D. Nozzles: There shall be a minimum of two (2) spray nozzles equipped with necessary cores, discs and mounting hardware.
14. Color: 304 stainless steel components to be unpainted. Non-stainless steel parts to be painted black or aluminum.
15. Warranty: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by AHTD.
- A. Warranty shall include all parts, labor and transportation costs to the location of equipment.
- B. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
- C. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
- D. If any warranty literature submitted with the bid conflicts with AHTD warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.
- E. Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.



**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

**SPECIFICATION 16-352-mm093-7.5 MS SP TS**

**FOR**

**HYDRAULIC DRIVEN CHEMICAL & MATERIAL SPREADER  
WITH LIQUID CALCIUM CHLORIDE SPRAY SYSTEM**

**7.5 CUBIC YARDS CAPACITY  
(WITH TOP SCREEN)**

**General Conditions:**

1. **Current Model:** Units furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new. Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of the units supplied must have been in the business of producing operational units for at least two years and must have recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation substantiating the aforementioned requirements. A list of user references may also be required.
2. **Literature:** Manufacturers literature, verifying adherence of proposed unit to each line item addressed in this specification, shall be submitted with the bid. If any literature and/or specifications of items conflict with AHTD specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.
3. Any deviations from specifications and requirements herein must be clearly pointed out by bidder. Otherwise it will be considered that equipment offered is in strict compliance with these specifications and requirements, and successful bidder will be held responsible therefor. Deviations must be explained in detail on an attached sheet. However, no implication is made by the Arkansas State Highway and Transportation Department that deviations will be acceptable.
4. **Manuals:** The successful bidder shall furnish one (1) Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book to each FOB point.

The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD, DVD, USB Drive, etc.) in lieu of printed manuals.

5. All parts, accessories and tools necessary for satisfactory operation of unit shall be furnished whether or not they are specifically mentioned in this specification (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications - unless specifically excluded by this specification). Complete installation instructions, including hydraulic system and liquid calcium chloride spray system, shall be furnished with each unit.
6. **Parts Inventory & Service Facilities:** The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
7. **Demonstration:** The Arkansas State Highway & Transportation Department reserves the right to require a demonstration, under actual working conditions, of equipment bid under this specification before award is made. The demonstration would be performed (free of any charge) by the bidder or an authorized representative at a mutually acceptable location. If requested, the bidder should be prepared to demonstrate the equipment within thirty (30) days after notification. Failure of the bidder to perform a satisfactory demonstration within the specified time may be grounds for rejection of the bid.
8. **Cooperative Purchasing:** Other tax-supported entities\* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc. regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.

\* Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

**Unit Specifications:**

1. **General:** This specification is intended to cover a 7.5 cubic yards minimum struck capacity hydraulic driven chemical and material spreader for use in AHTD dump trucks. The spreader shall also be equipped with a liquid calcium chloride spray system designed to operate on 12 volts DC.
2. **Type:** Shall be designed for mounting in dump body with spinner at the rear and below floor of dump body. The spreader shall be a self-contained unit with hopper type body, conveyor system, hydraulic drive, spinner and all necessary components integrally mounted as single unit. Shall have the capacity to spread material to a maximum width of no less than 24'.
3. **Hopper Body:** Hopper shall have a minimum struck capacity of 7.5 cubic yards. Shall be electrically welded construction, adequately reinforced, with no less than 10 gauge high grade steel sides and ends. Sides to slope approximately 45 degrees to allow material to feed into conveyor by gravity. Bottom shall be constructed of no less than 7 gauge high grade steel. Front of hopper shall be sloped to allow spreader to be mounted in a dump body which has the hydraulic cylinder hoist housing in the front of the body. (Refer to Paragraph 11 for hydraulic cylinder hoist housing dimensions.)
4. **Top Screen:** A top screen to keep oversize material from entering hopper shall be provided with the spreader.
5. **Conveyor:** Shall have a minimum overall width of 24" and be designed to handle sand, cinders and de-icing chemicals discharging material to spinner at rear of spreader. Shall be equipped with spring loaded idler adjusters to maintain proper conveyor tension.
6. **Drive:** Conveyor and spinner shall be driven by hydraulic motors. Drive to conveyor and spinner assembly to be as regularly furnished by manufacturer. Shall be designed to operate on an open center hydraulic system with a minimum output of 15 gpm at 1,500 psi. (Hydraulic pump will be furnished by AHTD.)
7. **Reservoir:** A 20 gallon minimum capacity hydraulic reservoir designed for frame mounting shall be provided. Reservoir shall have filler cap, screen and replaceable 10 micron return line filter. Reservoir suction line fitting shall be sized for no less than 1-1/4" ID suction hose.
8. **Hydraulic Controls:** A pressure compensated dual flow control with built-in pressure relief valve and manual on-off for in-cab mounting shall be provided. Valve to provide independent variable speed controls for spinner and conveyor.
9. **Spinner Assembly:** Spreader shall be equipped with a "Urethane Spinner" consisting of a one-piece polyurethane disc with a minimum of four (4) molded fins. Spinner disc shall have a minimum diameter of 18" and have a vertical adjustment of no less than 12". Spinner shaft shall be mounted on anti-friction bearings with grease fittings or direct to hydraulic motor. The spinner chute shall be constructed of no less than 10 gauge steel. Unit shall have a minimum of three (3) adjustable material deflectors to help regulate spreading pattern. Spinner assembly shall be designed so that it may be hinged up for storage or to discharge material that may be left in the spreader.
10. **Feed Gate:** Material discharge to spinner chute to be controlled by an adjustable discharge gate with positive locking device.
11. **Mounting:** Spreader shall be designed for mounting in dump body which has the hydraulic cylinder hoist housing in the front of the body. Body has an inside length of 144", an inside width of 84" and is mounted on a tandem axle truck with 84" cab to axle measurement. The hydraulic cylinder hoist housing is 19.5" wide at the bottom and extends 35" into the bed. Width at top is 14" and extends 16" into the bed. Overall height of the housing is 42". Hold down equipment for dump body mounting shall be furnished. Spreader shall be equipped with lifting bails.
12. **Front Bearing Grease Extensions:** Shall have front bearing grease extension tubes to allow greasing of front bearings. The grease tubes shall either extend to the rear of the spreader or approximately 40" above the dump body floor, and be flexible enough so greasing will not interfere with normal bearing adjustment. The tubes shall be attached to the sides of the spreader with straps made of nylon or a similar material.
13. **Liquid Calcium Chloride Spray System:** Shall be designed to use in conjunction with chemical and material spreader specified above. The system shall spray a liquid de-icing solution directly onto the material as it leaves the conveyor and before it reaches the spinner.

The spray system provided shall be electric operated, designed to spray a constant de-icing solution on material being spread. The system shall be complete with a liquid spray pump, in-cab controls, hose kit with a minimum of two (2)

spray nozzles, spray tanks and all necessary hoses and fittings to make the system complete. Spray system shall be capable of spraying calcium and magnesium chloride, glycol, liquid urea, or other liquid de-icing solutions. All parts that come in contact with liquid being sprayed shall be corrosion resistant. All components shall be rated at no less than 150 psi working pressure.

- A. Drive System: Shall be a 12 volt DC electric motor/pump combination with an internal circuit breaker. The pump shall be a diaphragm type resistant to the effects of the de-icing solutions specified above and have a minimum output rating of 2.8 gpm. Output shall remain constant regardless of conveyor/spinner speed.
  - B. Controls: Shall have an in-cab mounted switch to provide immediate on/off capability. An indicator light (green) shall be provided to show when power is on. An additional indicator light (red) shall be provided to warn of low system pressure or low solution level in the reservoirs. A variable speed control shall be furnished for increasing or decreasing saturation of the material to be spread.
  - C. Sprayer Reservoirs: A minimum of two (2) reservoirs with a capacity of no less than 60 gallons each shall be provided. Reservoirs shall be molded polyethylene construction and be complete with replaceable screen line strainer, shut-off valves and mounting hardware. The reservoirs shall be angle formed to allow for mounting to the sides of the chemical and material spreader specified above. (Sides of spreader are to have an approximate 45° slope). The reservoirs shall be designed so that one (1) reservoir is mounted on each side of the spreader with all fill openings, shut-off valves, etc. readily accessible.
  - D. Nozzles: There shall be a minimum of two (2) spray nozzles equipped with necessary cores, discs and mounting hardware.
14. Color: Manufacturer's standard color is acceptable.
15. Warranty: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by AHTD.
- A. Warranty shall include all parts, labor and transportation costs to the location of equipment.
  - B. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
  - C. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
  - D. If any warranty literature submitted with the bid conflicts with AHTD warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.
  - E. Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

**SPECIFICATION 16-360-mm094-10.5 SS SP TS**

**FOR**

**HYDRAULIC DRIVEN CHEMICAL & MATERIAL SPREADER**  
**WITH LIQUID CALCIUM CHLORIDE SPRAY SYSTEM**  
**304 STAINLESS STEEL CONSTRUCTION**  
**10.5 CUBIC YARDS CAPACITY**  
**(WITH TOP SCREEN)**

**General Conditions:**

1. **Current Model:** Units furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new. Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of the units supplied must have been in the business of producing operational units for at least two years and must have recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation substantiating the aforementioned requirements. A list of user references may also be required.
2. **Literature:** Manufacturers literature, verifying adherence of proposed unit to each line item addressed in this specification, shall be submitted with the bid. If any literature and/or specifications of items conflict with AHTD specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.
3. Any deviations from specifications and requirements herein must be clearly pointed out by bidder. Otherwise it will be considered that equipment offered is in strict compliance with these specifications and requirements, and successful bidder will be held responsible therefor. Deviations must be explained in detail on an attached sheet. However, no implication is made by the Arkansas State Highway and Transportation Department that deviations will be acceptable.
4. **Manuals:** The successful bidder shall furnish one (1) Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book to each FOB point.

The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD, DVD, USB Drive, etc.) in lieu of printed manuals.

5. All parts, accessories and tools necessary for satisfactory operation of unit shall be furnished whether or not they are specifically mentioned in this specification (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications - unless specifically excluded by this specification). Complete installation instructions, including hydraulic system and liquid calcium chloride spray system, shall be furnished with each unit.
6. **Parts Inventory & Service Facilities:** The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
7. **Demonstration:** The Arkansas State Highway & Transportation Department reserves the right to require a demonstration, under actual working conditions, of equipment bid under this specification before award is made. The demonstration would be performed (free of any charge) by the bidder or an authorized representative at a mutually acceptable location. If requested, the bidder should be prepared to demonstrate the equipment within thirty (30) days after notification. Failure of the bidder to perform a satisfactory demonstration within the specified time may be grounds for rejection of the bid.
8. **Cooperative Purchasing:** Other tax-supported entities\* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc. regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.

\* Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

**Unit Specifications:**

1. **General:** This specification is intended to cover a 10.5 cubic yards minimum struck capacity hydraulic driven chemical and material spreader for use in AHTD dump trucks. The spreader shall also be equipped with a liquid calcium chloride spray system designed to operate in conjunction with the hydraulically driven chemical pump mounted on the truck.
2. **Type:** Shall be designed for mounting in dump body with spinner at the rear and below floor of dump body. The spreader shall be a self-contained unit with hopper type body, conveyor system, hydraulic drive, spinner and all necessary components integrally mounted as single unit. Shall have the capacity to spread material to a maximum width of no less than 24'.
3. **Hopper Body:** Hopper shall have a minimum struck capacity of 10.5 cubic yards. Shall be electrically welded construction, adequately reinforced, with no less than 10 gauge 304 stainless steel sides and ends. The hopper body shall be 15' in length with sides to slope approximately 45 degrees to allow material to feed into conveyor by gravity. Bottom shall be constructed of no less than 7 gauge 304 stainless steel. All hopper hardware shall be stainless steel. In addition, any long sills, crossmembers or side supports used in the design of the spreader shall be constructed of 304 stainless steel.
4. **Top Screen:** A top screen to keep oversize material from entering hopper shall be provided with the spreader.
5. **Conveyor:** Shall have a minimum overall width of 24" and be designed to handle sand, cinders and de-icing chemicals discharging material to spinner at rear of spreader. Shall be equipped with spring loaded idler adjusters to maintain proper conveyor tension.
6. **Drive:** Conveyor and spinner shall be driven by hydraulic motors. Drive to conveyor and spinner assembly to be as regularly furnished by manufacturer. Shall be designed to operate on a closed center hydraulic system with a minimum output of 15 gpm at 1,500 psi. (Hydraulic pump will be furnished by AHTD.)
7. **Spinner Assembly:** Spreader shall be equipped with a "Urethane Spinner" consisting of a one-piece polyurethane disc with a minimum of four (4) molded fins. Spinner disc shall have a minimum diameter of 18" and have a vertical adjustment of no less than 12". Spinner shaft shall be mounted to the hydraulic spinner motor output shaft. The spinner chute shall be constructed of no less than 10 gauge 304 stainless steel. Unit shall have a minimum of three (3) adjustable material deflectors to help regulate spreading pattern. Spinner assembly shall be designed so that it may be hinged up for storage or to discharge material that may be left in the spreader.
8. **Feed Gate:** Material discharge to spinner chute to be controlled by an adjustable discharge gate with positive locking device.
9. **Mounting:** Spreader shall be designed for mounting in a dump body which is devoid of hydraulic cylinder hoist housing in the front of the body. Body has an inside length of 180", an inside width of 86" and is mounted on a tandem axle truck with 144" cab to axle measurement. Hold down equipment for dump body mounting shall be furnished. Spreader shall be equipped with lifting bails.
10. **Front Bearing Grease Extensions:** Shall have front bearing grease extension tubes to allow greasing of front bearings. The grease tubes shall either extend to the rear of the spreader or approximately 40" above the dump body floor, and be flexible enough so greasing will not interfere with normal bearing adjustment. The tubes shall be attached to the sides of the spreader with straps made of nylon or a similar material.
11. **Liquid Spray System Components:** The spray system components provided shall work in conjunction with a pre-existing hydraulically driven chemical pump and control system on the truck. The system shall include a hose kit with a minimum of two (2) spray nozzles and reservoirs. The kit shall also include all necessary hoses and fittings to connect the spray system to the truck mounted pumping system located at the rear of the trucks dump body on the driver's side. Spray system shall be capable of continuous spraying of calcium and magnesium chloride, glycol, liquid urea, or other liquid de-icing solutions directly onto the material as it leaves the conveyor and before it reaches the spinner. All parts that come in contact with liquid de-icing solutions shall be corrosion resistant. All components shall be rated at no less than 150 psi working pressure.
  - A. **Sprayer Reservoirs:** A minimum of two (2) reservoirs with a capacity of no less than 150 gallons each shall be provided. Reservoirs shall be molded polyethylene construction and be complete with replaceable screen line strainer, shut-off valves and mounting hardware. The reservoirs shall be angle formed to allow for mounting to the sides of the chemical and material spreader specified above. (Sides of spreader are to have an approximate 45° slope). The

reservoirs shall be designed so that one (1) reservoir is mounted on each side of the spreader with all fill openings, shut-off valves, etc. readily accessible. Reservoirs shall be plumbed together with a minimum 1-1/2" ID hose with a tee located on the left rear corner of the spreader.

- B. Nozzles: There shall be a minimum of two (2) spray nozzles equipped with necessary cores, discs and mounting hardware.
12. Color: 304 stainless steel components to be unpainted. Non-stainless steel parts to be painted black or aluminum.
13. Warranty: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by AHTD.
- A. Warranty shall include all parts, labor and transportation costs to the location of equipment.
  - B. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
  - C. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
  - D. If any warranty literature submitted with the bid conflicts with AHTD warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.
  - E. Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

**SPECIFICATION 16-361-mm094-10.5 SS SP**

**FOR**

**HYDRAULIC DRIVEN CHEMICAL & MATERIAL SPREADER**  
**WITH LIQUID CALCIUM CHLORIDE SPRAY SYSTEM**  
**304 STAINLESS STEEL CONSTRUCTION**  
**10.5 CUBIC YARDS CAPACITY**  
**(WITHOUT TOP SCREEN)**

**General Conditions:**

1. **Current Model:** Units furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new. Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of the units supplied must have been in the business of producing operational units for at least two years and must have recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation substantiating the aforementioned requirements. A list of user references may also be required.
2. **Literature:** Manufacturers literature, verifying adherence of proposed unit to each line item addressed in this specification, shall be submitted with the bid. If any literature and/or specifications of items conflict with AHTD specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.
3. Any deviations from specifications and requirements herein must be clearly pointed out by bidder. Otherwise it will be considered that equipment offered is in strict compliance with these specifications and requirements, and successful bidder will be held responsible therefor. Deviations must be explained in detail on an attached sheet. However, no implication is made by the Arkansas State Highway and Transportation Department that deviations will be acceptable.
4. **Manuals:** The successful bidder shall furnish one (1) Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book to each FOB point.

The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD, DVD, USB Drive, etc.) in lieu of printed manuals.

5. All parts, accessories and tools necessary for satisfactory operation of unit shall be furnished whether or not they are specifically mentioned in this specification (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications - unless specifically excluded by this specification). Complete installation instructions, including hydraulic system and liquid calcium chloride spray system, shall be furnished with each unit.
6. **Parts Inventory & Service Facilities:** The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
7. **Demonstration:** The Arkansas State Highway & Transportation Department reserves the right to require a demonstration, under actual working conditions, of equipment bid under this specification before award is made. The demonstration would be performed (free of any charge) by the bidder or an authorized representative at a mutually acceptable location. If requested, the bidder should be prepared to demonstrate the equipment within thirty (30) days after notification. Failure of the bidder to perform a satisfactory demonstration within the specified time may be grounds for rejection of the bid.
8. **Cooperative Purchasing:** Other tax-supported entities\* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc. regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.

\* Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

**Unit Specifications:**

1. **General:** This specification is intended to cover a 10.5 cubic yards minimum struck capacity hydraulic driven chemical and material spreader for use in AHTD dump trucks. The spreader shall also be equipped with a liquid calcium chloride spray system designed to operate in conjunction with the hydraulically driven chemical pump mounted on the truck.
2. **Type:** Shall be designed for mounting in dump body with spinner at the rear and below floor of dump body. The spreader shall be a self-contained unit with hopper type body, conveyor system, hydraulic drive, spinner and all necessary components integrally mounted as single unit. Shall have the capacity to spread material to a maximum width of no less than 24'.
3. **Hopper Body:** Hopper shall have a minimum struck capacity of 10.5 cubic yards. Shall be electrically welded construction, adequately reinforced, with no less than 10 gauge 304 stainless steel sides and ends. The hopper body shall be 15' in length with sides to slope approximately 45 degrees to allow material to feed into conveyor by gravity. Bottom shall be constructed of no less than 7 gauge 304 stainless steel. All hopper hardware shall be stainless steel. In addition, any long sills, crossmembers or side supports used in the design of the spreader shall be constructed of 304 stainless steel.
4. **Top Screen:** A top screen is not required.
5. **Conveyor:** Shall have a minimum overall width of 24" and be designed to handle sand, cinders and de-icing chemicals discharging material to spinner at rear of spreader. Shall be equipped with spring loaded idler adjusters to maintain proper conveyor tension.
6. **Drive:** Conveyor and spinner shall be driven by hydraulic motors. Drive to conveyor and spinner assembly to be as regularly furnished by manufacturer. Shall be designed to operate on a closed center hydraulic system with a minimum output of 15 gpm at 1,500 psi. (Hydraulic pump will be furnished by AHTD.)
7. **Spinner Assembly:** Spreader shall be equipped with a "Urethane Spinner" consisting of a one-piece polyurethane disc with a minimum of four (4) molded fins. Spinner disc shall have a minimum diameter of 18" and have a vertical adjustment of no less than 12". Spinner shaft shall be mounted to the hydraulic spinner motor output shaft. The spinner chute shall be constructed of no less than 10 gauge 304 stainless steel. Unit shall have a minimum of three (3) adjustable material deflectors to help regulate spreading pattern. Spinner assembly shall be designed so that it may be hinged up for storage or to discharge material that may be left in the spreader.
8. **Feed Gate:** Material discharge to spinner chute to be controlled by an adjustable discharge gate with positive locking device.
9. **Mounting:** Spreader shall be designed for mounting in a dump body which is devoid of hydraulic cylinder hoist housing in the front of the body. Body has an inside length of 180", an inside width of 86" and is mounted on a tandem axle truck with 144" cab to axle measurement. Hold down equipment for dump body mounting shall be furnished. Spreader shall be equipped with lifting bails.
10. **Front Bearing Grease Extensions:** Shall have front bearing grease extension tubes to allow greasing of front bearings. The grease tubes shall either extend to the rear of the spreader or approximately 40" above the dump body floor, and be flexible enough so greasing will not interfere with normal bearing adjustment. The tubes shall be attached to the sides of the spreader with straps made of nylon or a similar material.
11. **Liquid Spray System Components:** The spray system components provided shall work in conjunction with a pre-existing hydraulically driven chemical pump and control system on the truck. The system shall include a hose kit with a minimum of two (2) spray nozzles and reservoirs. The kit shall also include all necessary hoses and fittings to connect the spray system to the truck mounted pumping system located at the rear of the trucks dump body on the driver's side. Spray system shall be capable of continuous spraying of calcium and magnesium chloride, glycol, liquid urea, or other liquid de-icing solutions directly onto the material as it leaves the conveyor and before it reaches the spinner. All parts that come in contact with liquid de-icing solutions shall be corrosion resistant. All components shall be rated at no less than 150 psi working pressure.
  - A. **Sprayer Reservoirs:** A minimum of two (2) reservoirs with a capacity of no less than 150 gallons each shall be provided. Reservoirs shall be molded polyethylene construction and be complete with replaceable screen line strainer, shut-off valves and mounting hardware. The reservoirs shall be angle formed to allow for mounting to the sides of the chemical and material spreader specified above. (Sides of spreader are to have an approximate 45° slope). The



reservoirs shall be designed so that one (1) reservoir is mounted on each side of the spreader with all fill openings, shut-off valves, etc. readily accessible. Reservoirs shall be plumbed together with a minimum 1-1/2" ID hose with a tee located on the left rear corner of the spreader.

- B. Nozzles: There shall be a minimum of two (2) spray nozzles equipped with necessary cores, discs and mounting hardware.
12. Color: 304 stainless steel components to be unpainted. Non-stainless steel parts to be painted black or aluminum.
13. Warranty: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by AHTD.
- A. Warranty shall include all parts, labor and transportation costs to the location of equipment.
  - B. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
  - C. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
  - D. If any warranty literature submitted with the bid conflicts with AHTD warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.
  - E. Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.

**ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT**

**SPECIFICATION 16-358-mm094-10.5 MS SP TS**

**FOR**

**HYDRAULIC DRIVEN CHEMICAL & MATERIAL SPREADER  
WITH LIQUID CALCIUM CHLORIDE SPRAY SYSTEM**

**10.5 CUBIC YARDS CAPACITY**

**(WITH TOP SCREEN)**

**General Conditions:**

1. **Current Model:** Units furnished under this specification shall be the latest improved model in current production, as offered to commercial trade, built for the U.S. market, and shall be of quality workmanship and material. Machines manufactured for foreign markets will not be accepted. All equipment offered under this specification shall be new. Used, reconditioned, shopworn, demonstrator, prototype or discontinued models are not acceptable. Manufacturers of the units supplied must have been in the business of producing operational units for at least two years and must have recently sold similar units to domestic governmental agencies. The model furnished must have been in production for a minimum of one year, or be the latest version of a previous model. Bidder/s may be required to submit documentation substantiating the aforementioned requirements. A list of user references may also be required.
2. **Literature:** Manufacturers literature, verifying adherence of proposed unit to each line item addressed in this specification, shall be submitted with the bid. If any literature and/or specifications of items conflict with AHTD specifications, the conflict(s) shall be specifically noted, corrected and submitted with the bid.
3. Any deviations from specifications and requirements herein must be clearly pointed out by bidder. Otherwise it will be considered that equipment offered is in strict compliance with these specifications and requirements, and successful bidder will be held responsible therefor. Deviations must be explained in detail on an attached sheet. However, no implication is made by the Arkansas State Highway and Transportation Department that deviations will be acceptable.
4. **Manuals:** The successful bidder shall furnish one (1) Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book to each FOB point.

The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD, DVD, USB Drive, etc.) in lieu of printed manuals.

5. All parts, accessories and tools necessary for satisfactory operation of unit shall be furnished whether or not they are specifically mentioned in this specification (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications - unless specifically excluded by this specification). Complete installation instructions, including hydraulic system and liquid calcium chloride spray system, shall be furnished with each unit.
6. **Parts Inventory & Service Facilities:** The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
7. **Demonstration:** The Arkansas State Highway & Transportation Department reserves the right to require a demonstration, under actual working conditions, of equipment bid under this specification before award is made. The demonstration would be performed (free of any charge) by the bidder or an authorized representative at a mutually acceptable location. If requested, the bidder should be prepared to demonstrate the equipment within thirty (30) days after notification. Failure of the bidder to perform a satisfactory demonstration within the specified time may be grounds for rejection of the bid.
8. **Cooperative Purchasing:** Other tax-supported entities\* in Arkansas (cities, counties, state agencies, school districts, etc.) may purchase from this Contract on an individual basis under the same specifications and conditions, and at the pricing set forth by each vendor, all at the discretion of each vendor in each case. Prices could be reduced by a vendor for minor alterations in conditions (changing order quantities, deleting options, etc.) as agreed by both parties, but could not be raised above the contract bid price except for any additional freight charges. Vendors would not be required to sell to any such entity under this contract, and those entities would not be obligated to purchase from the contract.

Each entity wishing to purchase from the contract must make contact directly with the appropriate vendor(s). The Highway Department shall remain "out of the loop" for such transactions: all contact, orders, invoices, payments, etc. regarding such transactions must take place exclusively between the tax-supported entity and the vendor. The Department shall be held harmless of any and all liability arising from such transactions.

\* Tax-supported entities are defined as those receiving more than half of total funding from appropriated tax funds.

**Unit Specifications:**

1. **General:** This specification is intended to cover a 10.5 cubic yards minimum struck capacity hydraulic driven chemical and material spreader for use in AHTD dump trucks. The spreader shall also be equipped with a liquid calcium chloride spray system designed to operate on 12 volts DC.
2. **Type:** Shall be designed for mounting in dump body with spinner at the rear and below floor of dump body. The spreader shall be a self-contained unit with hopper type body, conveyor system, hydraulic drive, spinner and all necessary components integrally mounted as single unit. Shall have the capacity to spread material to a maximum width of no less than 24'.
3. **Hopper Body:** Hopper shall have a minimum struck capacity of 10.5 cubic yards. Shall be electrically welded construction, adequately reinforced, with no less than 10 gauge high grade steel sides and ends. The hopper body shall 15' in length with sides to slope approximately 45 degrees to allow material to feed into conveyor by gravity. Bottom shall be constructed of no less than 7 gauge high grade steel.
4. **Top Screen:** A top screen to keep oversize material from entering hopper shall be provided with the spreader.
5. **Conveyor:** Shall have a minimum overall width of 24" and be designed to handle sand, cinders and de-icing chemicals discharging material to spinner at rear of spreader. Shall be equipped with spring loaded idler adjusters to maintain proper conveyor tension.
6. **Drive:** Conveyor and spinner shall be driven by hydraulic motors. Drive to conveyor and spinner assembly to be as regularly furnished by manufacturer. Shall be designed to operate on an open center hydraulic system with a minimum output of 15 gpm at 1,500 psi. (Hydraulic pump will be furnished by AHTD.)
7. **Spinner Assembly:** Spreader shall be equipped with a "Urethane Spinner" consisting of a one-piece polyurethane disc with a minimum of four (4) molded fins. Spinner disc shall have a minimum diameter of 18" and have a vertical adjustment of no less than 12". Spinner shaft shall be mounted on anti-friction bearings with grease fittings or direct to hydraulic motor. The spinner chute shall be constructed of no less than 10 gauge steel. Unit shall have a minimum of three (3) adjustable material deflectors to help regulate spreading pattern. Spinner assembly shall be designed so that it may be hinged up for storage or to discharge material that may be left in the spreader.
8. **Feed Gate:** Material discharge to spinner chute to be controlled by an adjustable discharge gate with positive locking device.
9. **Mounting:** Spreader shall be designed for mounting in a dump body which is devoid of hydraulic cylinder hoist housing in the front of the body. Body has an inside length of 180", an inside width of 86" and is mounted on a tandem axle truck with 144" cab to axle measurement. Hold down equipment for dump body mounting shall be furnished. Spreader shall be equipped with lifting bails.
10. **Front Bearing Grease Extensions:** Shall have front bearing grease extension tubes to allow greasing of front bearings. The grease tubes shall either extend to the rear of the spreader or approximately 40" above the dump body floor, and be flexible enough so greasing will not interfere with normal bearing adjustment. The tubes shall be attached to the sides of the spreader with straps made of nylon or a similar material.
11. **Liquid Spray System Components:** The spray system components provided shall work in conjunction with a pre-existing hydraulically driven chemical pump and control system on the truck. The system shall include a hose kit with a minimum of two (2) spray nozzles and reservoirs. The kit shall also include all necessary hoses and fittings to connect the spray system to the truck mounted pumping system located at the rear of the trucks dump body on the driver's side. Spray system shall be capable of continuous spraying of calcium and magnesium chloride, glycol, liquid urea, or other liquid de-icing solutions directly onto the material as it leaves the conveyor and before it reaches the spinner. All parts that come in contact with liquid de-icing solutions shall be corrosion resistant. All components shall be rated at no less than 150 psi working pressure.
  - A. **Sprayer Reservoirs:** A minimum of two (2) reservoirs with a capacity of no less than 150 gallons each shall be provided. Reservoirs shall be molded polyethylene construction and be complete with replaceable screen line strainer, shut-off valves and mounting hardware. The reservoirs shall be angle formed to allow for mounting to the sides of the chemical and material spreader specified above. (Sides of spreader are to have an approximate 45° slope). The reservoirs shall be designed so that one (1) reservoir is mounted on each side of the spreader with all fill openings,

shut-off valves, etc. readily accessible. Reservoirs shall be plumbed together with a minimum 1-1/2" ID hose with a tee located on the left rear corner of the spreader.

- B. Nozzles: There shall be a minimum of two (2) spray nozzles equipped with necessary cores, discs and mounting hardware.
12. Color: Manufacturer's standard color is acceptable.
13. Warranty: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by AHTD.
- A. Warranty shall include all parts, labor and transportation costs to the location of equipment.
  - B. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done.
  - C. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
  - D. If any warranty literature submitted with the bid conflicts with AHTD warranty requirements, the conflict(s) shall be specifically noted, corrected and included with the bid or the conflict(s) will be considered an exception to warranty specifications and the bid rejected.
  - E. Recent prior failure to provide warranty-work, parts, replacement parts or service, in a timely manner, for equipment from the same manufacturer or dealer shall be grounds for the rejection of any submitted bid, or for the denial of any otherwise qualified low bidder, whether such failure is attributable to the manufacturer or the dealer of the equipment. For the purposes of this paragraph "timely manner" means a period of time not exceeding thirty (30) calendar days to provide requested warranty-work, parts, replacement parts, or service. For the purposes of this paragraph "manufacturer" means the original manufacturer of the equipment and its successor or successors, regardless of number, and whether acquired by sale, merger, or otherwise. For the purposes of this paragraph "replacement part" means a part redesigned by a manufacturer to correct a design or engineering defect and which replacement part is capable of providing dependable performance in normal operation conditions for its normal service life without failure. Such bid or bids may be rejected by the Department until such failure or failures have been remedied to the satisfaction of the Department and until such manufacturer or dealer is providing such warranty-work, parts, replacement parts, and service in a timely manner.