



Robertson County Tennessee

Jody Stewart, Finance Director

Finance Department

523 South Brown Street, Springfield, TN 37172

(615) 384-0202 Fax (615) 384-0237

POST DATE: **9/24/2018**

BID NUMBER: **1396**

OIL DISTRIBUTOR FOR ROBERTSON COUNTY HIGHWAY DEPARTMENT

Sealed bids must be received by: **October 8, 2018 at 10 A.M.**

Robertson County Finance Office
523 South Brown Street
Springfield, TN 37172

THE OUTSIDE OF THE ENVELOPE MUST BE MARKED WITH THE BIDDER'S COMPANY NAME, ITEM BID, TIME OF BID OPENING, DATE OF BID OPENING, BID NO. 1396 AND MUST BE MARKED "SEALED BID, DO NOT OPEN."

Bids are opened and read aloud to the public at the Robertson County Finance Office, 523 S. Brown Street, Springfield, TN 37172 immediately after the bid receipt deadline. Each vendor may submit more than one bid provided each bid meets the stated specifications. Each bid must be submitted in a separate sealed envelope with the appropriate notation on the outside. All bids must be signed by an authorized agent and submitted on the prescribed forms. Submission of bids by telegraph, telephone, or other electronic means is strictly prohibited. Any brand name called for the bid specifications is provided as a reference only. Alternate brand name items offered for bid must be equivalent as to function, basic design, type and quality of material, method of construction, and any required dimensions. Bidder must attach a letter of exception to specifications.

For assistance with technical / product information contact Delvin Hester, Superintendent, Robertson County Highway at (615)384-2507. For assistance with bid procedures contact Taylor Tomblin, Robertson County Finance Office at (615) 384-0202 or by email: ttomblin@robcofn.org

Note: Robertson County reserves the right to reject any or all bids, to waive any technicalities or informalities, and to accept any bid deemed in the best interest of the County. All bids will be considered in accordance with Title VI and without regard to age, sex, color, race, creed, national origin, religious persuasion, marital status, political belief, or disability that does not prohibit the performance of duty.

Robertson County, TN
BID NUMBER 1396
Highway Department Oil Distributor
October 8, 2018 / 10 A.M.

OIL DISTRIBUTOR BID SPECIFICATIONS

The Robertson County Highway Department is accepting bids on a new Oil Distributor. This machine shall be new with standard arrangement of the latest design in current production. The bid specifications are as listed below; all items listed are the MINIMUM bids specifications for us. If an item is considered an option but we have it listed as standard it should be bid and the price included with the price of the machine:

Each bid shall state the delivery date and the warranty. Price shall be F.O.B. Robertson County Highway Department in Springfield, Tennessee. Also, bidder shall satisfy Robertson County Highway Department that they maintain and operate a store or branch staffed with qualified servicemen and have provisions for storing a satisfactory supply of parts, along with having provisions for securing parts from the manufacturer within a reasonable length of time for the machine offered, being within 100 miles of the working locations of the equipment. Tech service manuals, operator's manuals, parts manuals and/or computer disc; and diagnostic software are required to be provided with this machine along with a **complete additional set of any and all required filters for the machine**. Minimum warranty for both truck and distributor components shall be twelve (12) months, please include extended warranty pricing with bid. Any variations from or exceptions to the minimum conditions and specifications must be noted on a separate sheet of paper labeled "Exceptions to Bid Conditions and Specifications" and attached to the bid form.

SPECIFICATIONS

GENERAL

It is the intent of these specifications to describe a Bituminous Distributor in sufficient detail to secure bids on comparable equipment. All parts not specifically mentioned, which are necessary to provide a complete Distributor, shall be included in the bid and shall conform in strength and quality of material and workmanship to what is usually provided to the trade in general.

CHASSIS

- Must have a GVWR of at least 33,000 LBS
- 12000 LBS front Axle & 21000 LBS rear axle
- Eaton Fuller FR-9210B or better, 10-speed Manual transmission with a rear axle ratio of 3.91
- Engine must be at least 260 hp ISL Cummins
- Tires must be 11R 22.5
- Truck must be equipped with A/C and power passenger mirror
- Truck to be painted white
- Chassis must have provisions for crankshaft PTO

FUNCTION

The Distributor shall perform the minimum functions:

- Fill tank by Distributor pump from outside source.
- Circulate material in tank as well as in spray bar.
- Spray at a constant desired application rate, regardless of variance in truck speed.
- Hand spray.
- Transfer from an outside source to another outside source without having material enter Distributor tank.
- Pump material back to supply source.
- Automatically go from Circulate in Spray Bar to Spray mode and return to circulate without pushing material over relief valve.

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- It is important that the Distributor be capable of returning all material in the spray bar, and/or hand spray and distributing lines to the Distributor tank by means of pump suction. This function is to be accomplished without reversing the asphalt pump.
- Unit shall use volumetric metering with no bypass when spraying to insure accuracy of application.
- Provision shall be made for easily draining the circulating system independently of the tank and for flushing circulating system and pump with not more than three (3) quarts of fuel oil so as not to dilute tank contents.

TANK AND FITTINGS

- Oil Tank Capacity: Minimum two thousand (2000) U.S. Gallons.
- Oil Tank Shape: Oval in cross section, with the long axis horizontal.
- Oil Tank Material: Shell shall be ten (10) gauge steel with ten (10) gauge steel heads, deep dished and flanged, welded to tank shell both inside and outside for strength and durability.
- Oil Tank Surge Plate: Tank is to be supported with full section surge plate, deep dished and flanged, constructed often (10) gauge steel. To be spaced to provide adequate tank strength and proper surge control. Openings shall be provided in the surge plates for the free flow of material to the pump and large enough for a man to crawl through.
- Oil Tank Manhole: Shall be twenty inch (20") inside diameter manhole with quick opening cover.
- Oil Tank Overflow: Tank overflow shall be three inch (3") diameter overflow, extending at least six inches (6") above the liquid, and draining internally only through the bottom of the tank in such a location as to clear all chassis members. A tank overflow design that drains asphalt material into the spill collar around manhole is not acceptable.
- Oil Tank Insulation: Shall be two inch (2") fiberglass, one pound (1 lb) density with spacers to prevent compression and protected by aluminum jacket sheet four tenths of inch thick (.040").
- Oil Tank Mounting: Mounting saddles shall be full bolster style and include aluminum fenders.
- Oil Tank Gauge: Gauge shall be float type with dial calibrated in 50 gallon increments, both front and rear of tank.

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- Oil Tank shall have spillage collar, overflow drain and include refiners platform and ladder.
- Oil Tank design and construction to meet all applicable Federal Cargo Tank Regulations 49 CFR 173.247 and including DOT-406, HM-183, HM-198A, with consideration for hot asphalt products. Must have ASME tank approval number to assure that federal cargo tank regulations can be met.

POWER UNIT

1. Hydrostatic Transmission Shall Consist of:

- Pump: Infinitely variable displacement pump with a minimum displacement of 3.1 cubic inches per revolution, axial piston type. Electronic stroker control.
- Motor; Piston motor with gearbox. 1.53 cubic inch per revolution displacement, direct coupled to the asphalt pump. Entire transmission unit shall be capable of operating speeds up to 2800 RPM.

Hydraulic oil may reach temperature up to 200 degrees without damage to the unit. Unit shall have internal valving and shall be fitted with relief valve as well as high oil temperature signal in cab.

2. Crankshaft Take-Off:

- Hydrostatic pump driven by crankshaft take off: chassis must be equipped to accept crankshaft drive.

3. Hydraulic Lines:

- High pressure hose with swaged type split flange "0" ring fittings, per S.A.E. standards.
- Low pressure hose installation shall be made according to transmission manufacturer's recommendations. Only top quality fittings, tubing and hoses to be used.

4. Controls: Electronic micro-control of hydrostatic transmission for setting asphalt pump discharge rate shall be located in truck cab.

- Control to permit stopping the variable pump discharge without disconnecting the drive and be equipped with an override of the micro-control which shall allow increases in asphalt pump output for filling, sucking back, etc., without affecting application rate setting.
- Override control shall be located at rear of unit.

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5. Reservoir. Minimum twenty (20) gallon hydraulic reservoir with dial thermometer and level indicator.
6. Filter: a 10 micron, replaceable cartridge type filter with vacuum gauge shall be located in the line between oil reservoir and hydrostatic pump.

BITUMEN PUMP

- Bitumen pump shall be positive displacement rotary gear type. 4 1/2" suction x 4" discharge.
- Pump to be located below the bottom level of the tank so that the material will flow vertically from the suction to the discharge, insuring complete drainage when tank contents valve is closed.
- Pump capacity shall be minimum of four hundred (400) gallons per minute.
- Self Flushing line from fuel tank or heating system to fill line. Includes minimum twenty (20) gallon capacity fuel tank with float level gauge. Located away from burners for safe operation.

HEATING SYSTEM

- Two flues (2) with high pressure fuel oil burner, with minimum of 1,000,000 BTU per hour per burner capacity; regulated by automatic thermostat ignition and outlier.

SPRAY BAR

- Full circulating twenty (20) feet in length, hinged to permit folding for traveling. Length of bar in folded position not to exceed eight (8) feet with positive circulation from one end of the bar to the other end, regardless of bar length or asphalt pump rate.
- Spray Bar shall consist of an eight (8) foot center section with two (2) folding wing sections.
- Cab controlled electric-air on-off in one (1) foot increments.
- Cab controlled electric-hydraulic spray bar shifting, lifting and wing folding.
- Nozzles to be spaced on four (4) inch centers on spray bar and shall have an individual valve for each spray nozzle. Each nozzle valve to have flip lever control so spray width can

be adjusted and allows individual valves to be disconnected without the use of tools or pulling pins. Right and left side wings (bar extensions) to relieve fore and aft. Pin replacement required when bar relieves.

- Bar to adjust for positive or negative crown and also adjustment for pitch of bar to aim nozzle valves rearward. Sections to be interchangeable, right or left side.

AIR CONTROLS

Driver Operated Cab Control:

- Distributor shall be equipped with air controls. Air for the controls shall be obtained from the air system on the truck chassis. The Distributor air system shall include its own air reservoir (using of truck chassis reservoir not acceptable) with check valve set at eighty (80) pounds to prevent loss of air on truck chassis brakes in case lines are ruptured. System shall have its own air line oiling device and controls shall be electric, located in cab convenient to operator.

Air Operated:

1. All air solenoid valves and hydraulic solenoid valves are to be mounted to be accessible and serviceable from the ground without climbing on the machine.

TOOL BOX, FENDERS, ETC.

- There shall be an all steel tool box with aluminum door, of sufficient size to store all necessary tools furnished at side of the tank. Must have hinged door at side with flush-type lock. Door at top not acceptable.
- Shall have full dual flanged fenders (.080" aluminum) with rubber flaps. Use of skirting and flaps as a substitute for fenders not acceptable.

CONTROLS / INSTRUMENTATION

Computer with in-cab operator controls which include:

- Computer controlled switches for (minimum) ten (10) preset application rates.
- Distance/volume reset switch.
- Application rate adjustment switch
- Display select switch.

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- Application rate in gallons/square yard or liters/square yard.
- Pump rate in gallons/minute or liters/minute.
- Resettable distance sprayed in feet or meters.
- Resettable volume sprayed in gallons or liters.
- Low tank level warning.
- Warnings that travel speed and/or applications rate are beyond system capability.
 - a. Radar type sensor to pick up ground speed.
 - b. System control of 4-way asphalt valve.

ACCESSORIES

- Hose trough for fill hose instead of hooks.
- Liquid sampling valve located in the rear tank head to be state approved for taking samples
- Hand spray gun attachment shall have cold handle and not less than three (3) nozzles, with twenty-five (25) feet of three quarter (3/4) inch flexible rubber hand spray hose.
- Asphalt system to be designed to all liquid asphalt pumped to the tank, from the tank or to the spray bar must pass through a screen strainer.
- There shall be turn signals at rear of distributor with truck supplying chassis control of signals.
- All lights that are Federal Standard 108 requirements, including reflectors, clearance and identifications lights shall be included and all wiring in loom.
- All necessary special tools for operation and maintenance of the Distributor shall be provided.
- Distributor steel parts shall be painted Black Enamel.

Tank and Accessories:

- Manhole strainer, 20" only required when filling tank overhead storage.
- Dial thermometer, 4".
- Dual scale stick and dial (English and metric).
- Additional cone type strainer in fill line in front of asphalt pump strainer.

Circulating System:

- Front suction valve (in addition to rear) Electric/air cab control valve and line that allows asphalt pump to suck liquid from front of tank when going downhill, etc.
- Power wash down system including electric fuel pump, 15' hose with gun.

Spray Bar:

Standard Spray Bar

- Standard bar extensions with 1' electric-air on-off, up to 24', per foot.
- Extra nozzles, each foot (3 nozzles). (Fan spray)
- Wet storage box with drain plug & hinged lid.
- Provisions for later addition of bar extensions with 1' controls, per foot.

Power System:

- Crankshaft PTO. (chassis must be set-up with provisions)

Heating System:

- There shall be two, eight (8) inch x (6) inch minimum U-type return flues running the full length of the tank. The inlet and exhaust opening of each individual set of flues shall be in the same horizontal plane, allowing heating of a minimum amount of material in the tank.
- Flues shall have stainless steel external stack.
- Two (2) flues with high pressure fuel oil burner shall include auto ignition and outfire
- Fuel oil burners shall have automatic controls, thermostatic controls and out-fire protection.
- Unit shall have a 220V electric belly heater with thermostat to maintain heat with additional asphalt pump heat

Miscellaneous Accessories:

- 12' x 3" rubber fill hose (350 Deg)
- L.E.D. Lights, Sealed system
- Hand Spray hose reel
- Aluminum hand spray gun with swivels
- 3" cam lock fittings
- Back-up alarm
- Strobe light mounted on top of front of tank

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OIL DISTRIBUTOR BID SCHEDULE FORM

MAKE AND MODEL OF MACHINE:

GROSS PRICE F.O.B. ROBERTSON COUNTY HWY DEPT.

WARRANTY OFFERED:

BIDDER & BIDDER ADDRESS:

BIDDER'S CONTRACT #

COMPANY REPRESENTATIVE:

TENTATIVE DELIVERY DATE:

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NON-COLLUSION AFFIDAVIT

The agent of the bidding firm hereby certifies to the best of his/her knowledge and belief that this bid proposal to Robertson County, Tennessee has not been prepared in collusion with any other seller of similar products. The agent also certifies that the prices, terms and conditions of said bid proposal have not been communicated by the undersigned, nor by any employee or agent of the bidding firm, to any other seller of similar products and will not be communicated to any such seller prior to the official opening of said bid. The agent further states that no official or employee of Robertson County Government has promised any personal financial or other beneficial interest, either directly or indirectly in order to influence award of this bid.

Authorized Signature, Title (Owner/ Corporate Officer) **Date**

Printed Name: _____

Company Name

Mailing Address

Telephone No. **Fax No.**

Contact preferred email address: _____