

1904

Truck, 1500 Gallon Asphalt Distributor

Specification Requirements	Check If Meet or Exceed	Describe Offered Alternatives
I. General:		
1. This specification describes a truck that will function as an asphalt distributor during paving season.	X	
2. The distributor portion must be self-contained and remove as a unit.	X	
3. The bidder shall determine truck chassis dimensions that best meet the distributor body requirements and this specification if WSDOT elects to purchase the chassis from this bid.	X	
4. In the event WSDOT chooses to delete the cab and chassis from this bid, the successful vendor will provide all of the chassis configuration information to WSDOT. WSDOT will then drop ship a chassis to the successful vendor location for the installation of the oil distributor.	X	
Section 1 Truck Chassis		
II. Frame:		
1. The entire length of the frame rails shall be full depth, including an integral front frame extension.	X	
2. Both frame rails, from front to rear, shall have a minimum section modulus of 22 and a minimum RBM of 2,500,000 in. lbs.	X	
3. The frame rails shall have a protective coating, to curtail rusting and deterioration, from exposure to salt and anti icing materials. State type of coating bid <u>Powdered</u>	X	
<u>Thermosetting</u>	X	
4. There shall be no holes or bolts in the top flange of the frame rails.	X	
5. Cross-members shall not be riveted to the frame rails; however cross-member components may be riveted to form a cross-	X	

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member assembly.	X	
6. A front cross member shall be positioned and drilled to accommodate the mounting of a hydraulic pump and lines without further modification.	X	
7. Shall have a front bumper of sweptback design, with two front tow loops or hooks accessible through the bumper.	X	

III. Cab and Related Equipment:

1. Shall have an air ride premium cab to include the following:
 - a. Insulated Engine Cover
 - b. Insulated Floor
 - c. Molded header pockets for the driver and passenger
 - d. Reading Lights
 - e. Door storage pockets
 - f. Courtesy lights under instrument panel.
 - g. Coaxial speakers.

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b. Engine oil pressure gauge.	X	
c. Tachometer and Hour-meter.	X	
d. Engine coolant temperature gauge.	X	
e. High output heater with fresh air selection. The heater shall have a 30,000 BTU output rating.	X	
f. Sun visors for both driver and passenger and an auxiliary sun visor on driver's side.	X	
g. Factory installed air conditioning.	X	
h. Shall have a digital, and illuminated outside temperature indicator.	X	
i. Visual and audible low oil pressure/high coolant temperature warning system.	X	
8. Dual heated and motorized bright finished rearview mirrors measuring at least 7 x 15.75 inch rearview mirrors. The mirrors shall be equipped with an 8 to 10 inch convex spot mirror and extendable to 102-inch width.	X	INTEGRAL 7.44" SQUARE CONVEX
9. Shall be equipped with an air horn.	X	
10. Shall be equipped with cowl mounted, electric, intermittent, windshield wipers.	X	
11. Shall have a heavy-duty wiper motor with, snow clutch, and thermo protection.	X	
12. The cab noise level shall not exceed 83 dB (A) inside the cab with windows closed, measured at 1800 RPM and at normal road speed. This will be measured at time of compliance inspection.	X	
13. Shall be equipped with both interior and exterior, egress / ingress assist handles. On the drivers side and interior grab handles on the passenger side.	X	
14. Shall be equipped with an AM/FM Radio with Weather Band.	X	

Specification Requirements

Check If Meet or Exceed

Describe Offered Alternatives

IV. Radio Installation:

1. The cab shall be outfitted with a header pocket to accommodate an EF Johnson radio. (Part # 242-97-55-111.) The measurements of the radio are as follows:
 - a. Width 7 ^{3/16} inches.
 - b. Length 8 ^{5/16} inches.
 - c. Thickness 2 ^{1/8} inches.
2. The radio shall be located in a manner that allows the operator to read the LCD without detracting from road visibility. The radio shall be accessible by the operator and be within arms reach of an average person.
3. When installed; the face of the radio shall not extend further than one inch out of the pocket.
4. Within the radio pocket, there shall be a radio-mounting bracket, (Enclosure PF-130 or equal) which will accept the EF Johnson radio. The radio shall have the ability to be removed and re-installed without removing the header panel.
5. To the left of the radio pocket and as close as possible to the radio, a **grounded** microphone-mounting clip shall be installed.
6. On the exterior of the cab roof, there shall be a Larson NMO-K-DS-FME antenna base. The specific mounting location shall provide the antenna with at least 18 inches of clear area around the antenna base and at the tip of the antenna when a body cab shield is used.
7. The roof mount antenna base shall be sealed and capped with a protective cover for shipping.
8. The antenna cable shall extend to the EFJ radio mount plus 6 inches of additional cable.
9. Above the rear window and centered in the cab, shall be a functional two-way radio speaker for the EF J radio.
10. Shall have a dedicated and labeled 15-amp

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constant duty (fused) power circuit for the EFJ Radio.	X	
11. Connected to the 15-amp EFJ dedicated radio power circuit shall be a power wire (EFJ Part# 023-9750-010 or equal) extended to radio mount plus 15 inches of additional wire.	X	
12. Shall have a sensing circuit for the EFJ radio. The circuit shall be a fused 3-amp and will be switched through the ignition switch and active in the run or accessory positions.	X	
13. Connected to the 3-amp EFJ radio sensing circuit shall be a sense wire (EFJ Part # 023-9750-011 or equal) extended to the radio mount plus 15 inches of additional wire.	X	
14. All wiring associated with the EF Johnson radio will be continuous with no splices or wire gauge change.	X	
15. Shall have the manufacturers standard CB radio package to include an OEM speaker located in close proximity to the operator.	X	
16. Each mirror bracket will be outfitted with a CB radio antenna base.	X	
IV. Seats		
1. Driver and passenger seats shall be a vinyl covered high back National air ride seat with air lumbar support and arm rest.	X	
2. Both seats shall have compatible; three point type seat belts with shoulder strap and retractors.	X	
V. Fuel Tank:		
1. Shall have an 80-gallon aluminum fuel tank.	X	
2. Shall be mounted on the left frame rail under the cab.	X	
3. Shall not extend past the back of the cab.	X	

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VI. Electrical & Lighting Systems:	X	
1. All chassis lighting shall be conventional lighting (International lighting is not acceptable). An example of International lighting is amber turn signals. This is unacceptable.	X	
2. Shall be a 12-volt system to include chassis programmable capability with at least 6 in dash switches.	X	
3. All power distribution boxes, and fuse boxes will be mounted inside the cab. In the event the manufacturer cannot mount the power distribution box(s) inside, the manufacturer will warranty each box for eight years.	X	
4. Batteries shall have at least 1,950 cold cranking amps (CCA) and be maintenance-free.	X	
5. The battery box cover shall be constructed of a non-metallic reinforced material. The batteries shall rest in a plastic tray, and be protected by an additional plastic cover, covering all of the batteries.	X	
6. The battery box shall be mounted at least 4 inches below the top flange of frame rail.	X	
7. All cable ends shall be sealed, and equipped with rubber retainers and covers, and all battery cables exiting the battery box shall be routed through rubber grommets.	X	
8. A round 7-conductor cable shall be wired from the main electrical panel to the rear of the chassis and terminate into a standard 7-pole trailer connector with ABS. (Conventional Wiring).	X	
9. The connection points on the 7-wire plug will be sealed and watertight. Both sides of this receptacle shall be packed with dielectric grease.	X	
10. Shall be equipped with halogen headlamps	X	
11. Shall have Trucklite series or equal, LED taillights. The bidder shall determine tail	X	

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light location.	X	
12. Supplier splices into the factory wiring harness is unacceptable.	X	
13. Shall have an OEM in dash 6 position switch panel powered by the ignition switch in both run and accessory positions. and all switches shall be on/off All 6 switches shall be on the same row	X	
VII. Engine:		
1. Shall have a 330 gross hp at 2100 rpm and 1250 ft lbs torque at 1000 to 1200 RPM. The engine shall meet all Federal Emissions Standards including 2010 Requirements.	X	EGR EMISSIONS
2. Shall be equipped with an engine brake.	X	
3. Electronic engine controls shall have the following settings:	X	
a. Maximum road speed to be 65 mph at 1700 RPM.	X	BASED ON FINAL APPROVED GEAR RATIO
b. Cruise control speed to be 60 mph.	X	
c. Automatic Idle shut down to be 5 minutes.	X	
d. Idle, Set 675, Resume 1,000.	X	
e. Shall have idle bump up/down feature.	X	
4. Shall be equipped with 1100 to 1500 watt 110 volt block heater, with the plug-in receptacle located on the left side under the driver's door.	X	
5. A driveline hole through the radiator is not acceptable.	X	
VIII. Air Cleaner:		
1. Shall be dual element, dry-type.	X	
2. A vacuum, needle gauge restriction indicator shall be mounted on the dash.	X	
3. A cab controlled selector valve shall be located in the air cleaner that allows fresh air intake from outside of the vehicle during	X	

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normal operations and from under the hood during cold weather operations.	X	
4. The selector valve components shall not interfere with the hood operation (opening and closing).	X	
IX. Engine Cooling System:		
1. Shall be equipped with a temperature controlled air clutch fan drive.	X	
2. Radiator shall be a cross flow with deaeration system.	X	
3. All coolant hose clamps shall be Constant Torque.	X	
4. Shall be equipped with a radiator stone guard.	X	
X. Transmission:		
1. Shall be an Allison 4000-RDS six speed automatic transmission to include an oil level sensor and a T-handle gear selector.	X	
2. The transmission ECM shall be located inside the cab of the truck.	X	
XI. Steering System:		
1. Shall have a dual power steering system.	X	
2. Steering column shall be fully adjustable to include tilt and telescopic.	X	
XII. Axles and Suspension:		
1. <i>Front Axle Assembly</i> shall be an 18,000 lbs. load rated axle, with heavy-duty double acting shock absorbers.	X	
2. <i>Rear Axle</i> shall have a 23,000 lbs. rating and a gear ratio to allow 65-mph at 1700 RPM with driver controlled traction differential.	X	
3. Shall have a vari-rate or progressive	X	

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suspension with 31,000 lbs. capacity. Additionally the unit shall be equipped with 4,500 lbs., Multi-leaf auxiliary springs.		
XIII. <u>Wheels and Tires:</u>	X	
1. <i>Front wheels</i> shall be Hub Pilot with 385/65R 22.5 LRJ steel belted Goodyear tubeless tires.	X	
2. <i>Rear wheels</i> shall be Hub Pilot with R 22.5 steel belted traction tires. The center hub shall have a thickness of at least .472 inches.	X	
3. All wheels shall be an Accuride steel wheel with an individual weight rating of at least 8,000 pounds per wheel.	X	
4. Lead wheel weights are unacceptable.	X	
XIV. <u>Brake System:</u>	X	
1. Shall be a Bendix anti-lock series air braking system.	X	
2. Shall have self-adjusting "S" cam air brakes front and rear, with shields installed.	X	
3. Shall have outboard mounted brake drums, and the size of the drums will accommodate the manufacturers GVWR of the chassis.	X	
4. All brake blocks shall be non-asbestos.	X	
5. Shall have 30 sq. in. MGM TR-T series rear brake chambers.	X	MGM TR3030LP3TSHD
6. Shall have an 18 C.F.M. air compressor with intake plumbed to the filtered side of the air cleaner.	X	21 CFM
7. Shall have the Rockwell Wabco System Saver 1200 air dryer. Location to be determined by successful bidder. The removable filter must be easily serviceable.	X	
8. The air tank drain will be accessible from outside the frame rails.	X	

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Section II. <u>Asphalt Distributor System: Bearcat BC-501/CRC or equal.</u>		
I. <u>Capacity and Construction:</u>		
	X	
1. Tank shall have a capacity of 1500 gallons.	X	
2. Tank shape shall be an elliptical cross section. Size of oval and length of tank to be determined by supplier.	X	
3. Tank shall be constructed of 10-gauge steel with 8-gauge rolled heads and 2 or more baffles.	X	
4. Tank baffle plates shall fit the shape of the tank and support the tank as well as control the motion of liquid material during transport. Each baffle shall have opening at the top and bottom with offset 20-inch crawl openings.	X	
5. The tank shell shall be encased with 2-inches of mineral wool insulation covered with .04 inch aluminum jacket.	X	
6. Shall have a 20-inch diameter manhole with a hinged, quick-opening cover: a high temperature gasket, an overflow well and 3-inch drain.	X	
7. Shall have a rear-mounted ladder and a top mounted grip-strut cat walk 24-inches wide with a 5-inch border around the dome well.	X	
8. Shall have a float gauge reading in 50 gallon increments mounted on the street (driver's) side readable from the ground and the review mirror.	X	
9. Shall have a sampling valve located on the rear of tank.	X	
10. Shall have a heated 4-inch plug valve for positive cut-off of material between the tank and bitumen pump.	X	
11. Shall have an easy access hose tray mounted on street (driver's) side of the tank.	X	
12. Shall have dual flanged aluminum fenders with flaps.	X	
13. Shall have rollover protection per USDOT specification 49-CFR 173.247.	X	

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II. Distributor functions:		
1. The distributor shall be able to accurately apply all types of bituminous materials from 0.01 – 1 gallon per square yard.	X	
2. Shall be equipped with valves and plumbing to perform the following functions:	X	
a. Load tank with pump suction.	X	
b. Circulate material in Tank.	X	
c. Circulate material in spray bar.	X	
d. Spray at a constant desired rate regardless of variance in truck speed and spray bar width	X	
e. Return material to tank from spray bar or hand spray by pump suction.	X	
f. Transfer material from an outside source to another outside source without material entering the tank.	X	
g. Pump material back to supply source	X	
h. Clean out of pump, spray bar, hand spray and piping with cleaning solvent	X	
III. Heating System:		
1. Shall have dual 8-inch “U” type flues the full length of the tank.	X	
2. The distributor shall have the ability to heat the entire contents of the tank to include the lower ¼ of the tank without re-circulation.	X	
3. The flues shall have internal stainless steel liners and a stainless steel stack on the exhaust end.	X	
4. Shall have an integral high pressure diesel fuel burner with solid state type of ignition.	X	
5. The Burner shall receive its fuel from the chassis fuel supply with quick disconnect couplers.	X	
IV. Spraybar:		
1. The spray bar shall be a full circulating type with hydraulic wings, bar lift and shift with switches front and rear.	X	

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2. Shall have an overall working length of 12 feet with 12-inch spray increments.	X	
a. Shall have an 8 ft one piece center section.	X	
b. Shall have two 2 foot long folding wings	X	
c. Shall have a forward and backward breakaway system.	X	
d. Shall have a minimum shift of 12-inches to the left and right of center.	X	
e. Shall have a minimum lift height of 18-inches from the ground.	X	
f. Shall lower to within 6-inches of the ground.	X	
g. Shall have a lock-out valve to hold the bar at any height within the range of travel.	X	
3. Shall have tilt switch on each folding wing segment to prevent spraying when in the vertical position.	X	
4. The bar and wings shall be fully supported during transport mode.	X	
5. Special Note: The spray bar shall have cab controls to allow individual control functions for all spray bar sections.	X	
5. Shall have cab controlled electric over air "line marker valves" located on the outer most part of the left and right wings.	X	
6. Shall have enclosed poppet type spray valves.	X	
7. Valve shall be cab controlled in 3 valve increments (1ft) by electrical air cylinder.	X	
8. All airlines shall be wire braided with a 3000 lbs psi. rating.	X	
V. Cab Mounted Control Panel:	X	
1. Shall have a computerized rate control module installed in easy reach of the operator.	X	
2. The module shall have a digital display, and all the switches and digital indicator necessary to establish and automatically maintain a spread	X	

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rate.	X	
3. Shall have all the switches to control spread rate, pump idle rate, spray size and movement, both horizontal and vertical, to include wing movement.	X	
4. All switches will be high quality and field replaceable without soldering.	X	
5. The control panel shall provide automatic control of pump speed to maintain a desired spread rate, and compensate for changes in spray bar length, truck speed, and reasonable changes in engine RPM. The auxiliary computer speed sensor circuit on the chassis shall be used for this function.	X	
6. Shall provide a spread rate digital adjustment resolution of .01 gallons per square yard (gsy).	X	
7. Control and adjust the material recalculation function of the unit.	X	
8. All spraying functions and bar movement shall be controlled by switches located on the control panel.	X	
VI. Bituminous Hand Spray System:	X	
Shall have a hand spray system with 40 feet of 3/4 -inch diameter flexible hose, aluminum wand with cold handle, 2 nozzles with drip-free vales; all mounted on a retractable hose reel with swivel connections.	X	
VII. Flushing/Wash Down System:	X	
1. The onboard flushing system shall provide heated cleaner for cleaning the delivery system.	X	
VIII. Power System:	X	
1. Shall have an engine driven front mounted variable displacement Sundstrand series 90 or equal hydrostatic pump.	X	
2. Hydrostatic pump speed shall have 2 control modes: (1) automatic control using the computer control module and (2) a manual control using a	X	

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valve selector assembly.	X	
3. Shall have a gear type heated bitumen pump capable of dispensing 400 gallons per minute.	X	
4. Material pump shall be driven with a hydrostatic motor coupled to the material pump.	X	
IX. Back Up Collision Avoidance System	X	
1. Shall have a Guardian Alert model 1900 radar backup system.	X	ESCORT / GUARDIAN ALERT MODEL 2000
X. Exterior Finish	X	
1. The exterior finish is expected to be superior craftsmanship. There shall be no welding scale, rough or sharp edges or corners.	X	
2. The cab and chassis shall be painted with a base coat/clear coat National Safety Yellow (Sikkens 4039 or Equal).	X	
XI. Options	X	
2. A deduct amount for the chassis. When the chassis is deducted from this bid the Vendor will ensure all required sub frame and components are supplied for WSDOT to install onto a chassis.	X	\$103,466.13 CREDIT
3. A 2500 Gallon unit in lieu of the 1,500 gallon unit to include a 58,000 GVWR cab and chassis.	X	\$6,500 ADDITIONAL (INCL 58K CHASSIS)
4. Additional amount for a 58,000 GVWR chassis.	X	\$5,500 ADDITIONAL
5. Supply a 240 volt 3 phase heater to allow the oil in the tank to be kept warm during non operational times.	X	\$2,500 ADDITIONAL
6. Optional spray bar widths and wings		
a. 10 foot bar		
b. 11 foot bar		
c. 12 foot bar		
d. 14 foot bar		
e. 16 foot bar		
f. 4 foot wing (one per side, total of two)	X	ALL BAR WIDTHS NO CHARGE

Specification Requirements

**Check
If Meet
or
Exceed**

Describe Offered Alternatives

XII. Publications:

1. Each unit shall be delivered with an operator's manual.

X

2. Bidders shall provide the Service, and Parts Manuals or CD's for this unit, as annotated below.

X

1 Parts Manual

1 Service Manual

X