

SPECIFICATIONS FOR VACUUM STREET SWEEPER

REQUIREMENTS

Each vacuum sweeper shall be a new, latest current model of the manufacturer's current standard production. Though they are not specifically covered herein, all parts necessary to provide a complete and efficient sweeper shall be furnished with a unit of this type. Such parts shall conform to current engineering practices of the industry relative to design, strength, quality of materials, and workmanship.

Each unit shall be complete when delivered to the Idaho Transportation Department, with all accessories and equipment in place or furnished. All equipment and accessories shall be as approved by the vehicle manufacturer.

Exemption certificates for all allowable excise taxes will be furnished by the Idaho Transportation Department.

Demonstrators will not be considered.

Delivery of sweeper is required within 180 days of receipt of purchase order.

Liquidated Damages: The successful bidder agrees to delivery of items as required in this bid. Failure to deliver as required constitutes an event of default. The actual damages to the Idaho Transportation Department for the delay will be difficult or impossible to determine. Therefore, in lieu of actual damages, the successful bidder shall pay to the Idaho Transportation Department liquidated damages for each calendar day of delay an amount of \$100.00 per unit, up to a maximum of 90 calendar days. Should the defaulting successful bidder be unable to complete the delivery at the end of the 90-day period, the Idaho Transportation Department may, at its option, treat the contract as breached, terminate the contract, purchase substitute goods elsewhere, and charge the full increase, if any, in cost and handling for such purchase to the defaulting successful bidder and seek such additional relief as provided by law. The successful bidder shall not be charged for liquidated damages when delay arises out of cause beyond the control and without the fault or negligence of the successful bidder.

Complete specifications and descriptive literature shall accompany each bid, along with Questionnaire Appendix A. The Item Description Column shall also be completed describing the item in sufficient detail to distinguish what is being supplied from the vendor. **If literature is not submitted with bid, vendor will have 48 hours following written notice to submit the literature. Failure to comply will render bid non-responsive.**

VACUUM STREET SWEEPER (Contd)

For the sake of clarity, the truck and sweeper will be listed under their appropriate sections.

- Section I - General Description
- Section II - Truck Chassis
- Section III - Sweeper

GENERAL

The sweeper furnished under these specifications shall be a six-wheel, self propelled true vacuum street sweeper. It will be used for sweeping all types of debris-type materials from state highways. The unit shall meet or exceed the following minimum specifications:

SECTION I – GENERAL DESCRIPTION

<u>Description</u>	<u>Item Description</u>
A. 1. Type – Manufacturer’s standard two gutter broom (left and right) vacuum street sweeper.	YES
2. Configuration – Six-wheel type.	YES
3. Engine – Dual engine design.	YES
4. Sweeping Width – 144 inches minimum.	YES
5. GVW Rating – 32,000 pounds minimum.	EXCEEDS / 32,900
6. Warranty – Shall be for the duration as described below at the delivered destination. Technician travel time and mileage shall be included as part of the warranty to the machine delivered destination as described in Section IV of this specification.	YES
a. Chassis – Three (3) year parts and labor on complete truck chassis.	YES
b. Power Train – Three (3) years on engine, transmission and rear differential including all parts and labor.	YES
c. Sweeper – Two (2) years or 2,000 hours parts and labor on entire sweeper, including engine.	YES
d. Water Tank - Manufacturer’s warranty shall not be less than life time protection against rust-through of the water tank.	YES

VACUUM STREET SWEEPER (Contd)

	<u>Item Description</u>
e. Bidders submitting literature stating warranties which do not fully comply with warranty requirements of this specification, must submit a letter from the manufacturer certifying warranty compliance as an integral part of their proposal.	YES
7. Color	
a. Cab and Body – Manufacturer’s Standard Winter White.	YES
b. Chassis – Polyurethane Black.	YES
c. Wheels – Manufacturer’s standard White.	YES
d. Color chip shall be supplied and approved by the Equipment Superintendent prior to ordering.	YES
e. Warranty – Paint shall be warranted for a period of two (2) years against fading and peeling.	YES
8. Lube System – Automatic type to provide timed grease application to all greaseable points for the chassis and sweeper. System shall have a two quart capacity and individual nylon hoses to each grease point. Shall be a “Mid West” Centralized Lubrication System.	YES

SECTION II – TRUCK CHASSIS

	<u>Item Description</u>
A. <u>Description</u>	
1. Type – Cab over engine design.	YES
2. Wheelbase – 164 inches maximum.	YES
3. Cab to Axle Dimension – 132 inches maximum.	YES / 111.77
4. Tow Hooks – Manufacturer’s standard.	YES
5. Frame:	
a. Type – High strength, heavy-duty full continuous one-piece channel.	YES
b. Section Modulus – 17.2.	EXCEEDS / 35.7
c. Resisting Bending Moment – 1,825,000 in lbs.	YES

VACUUM STREET SWEEPER (Contd)

	<u>Item Description</u>	
6.	Fuel Tank – One (1) fifty gallon tank shared by both engines, easily accessible without raising or shifting any components to fill with lockable cap.	YES
7.	Exhaust – Vertical left or right hand behind cab.	YES
8.	Travel Speeds – Shall be capable of maintaining all legal highway speeds.	YES
B. <u>Engine</u>		
1.	Type – Shall be in-line, six cylinder, wet sleeve design, turbocharged, electronic controlled diesel.	YES
2.	Rating – 230 horsepower gross.	YES
3.	Torque – 500 ft. lbs.	YES / 506 FT/LBS
4.	Air Filter – Shall be two stage dry type equipped with cab mounted restriction indicator.	YES
5.	Fuel Filters -	
a.	Primary – Replaceable canister or spin-on type.	YES/SEE ADDEMNDUM
b.	Secondary – Replaceable spin-on type fuel/water separator with restriction indicator mounted in operator’s cab.	YES/SEE ADDENDUM
6.	Oil Filter – Full flow, vertical mounted spin-on type.	YES
7.	Cooling System – Heavy-duty type designed for 110° F temperatures and protected to –30° F with permanent type anti-freeze.	YES
8.	Block Heater – Minimum 1,000 watt with stationary receptacle mounted under left door.	YES
9.	Cold Starting Aid – Ether pressure can type with 1-inch fitting, manual operated quick-start with thermostat control. An engine manufacturer’s standard electric manifold pre-heater is acceptable.	YES
10.	Fan Clutch – Shall be a viscous type.	YES
11.	Oil Sampling Valve – Titan Laboratories Model OD1014 or equal installed for easy access.	YES

VACUUM STREET SWEEPER (Contd)

		<u>Item Description</u>
C. <u>Transmission</u>		
1.	Type – Allison Series 2500 five speed overdrive electronic with heavy-duty oil cooler.	YES
2.	Filter – Vertical mounted replaceable spin-on type.	YES
3.	Requirement – Must be designed for heavy-duty truck application.	YES
4.	Oil Sampling Valve – Titan Laboratories Model OD1014 or equal installed for easy access.	YES
D. <u>Axles</u>		
1.	Front – 12,000 lbs. rated capacity and equipped with 12,000 lbs. springs, shock absorbers and a front stabilizer bar.	YES
2.	Turning Radius – 24 ft. maximum.	YES
3.	Rear – 21,000 lbs rated capacity 2-speed and equipped with 21,000 lbs. spring suspension and a magnetic drain plug.	YES
4.	Gear Ratio – Shall be geared for ideal sweeping speeds and having a minimum road speed of 55 miles per hour. The use of the foot service brake to achieve slowest sweeping speeds is not acceptable.	YES
5.	Alignment – Unit must be chassis aligned prior to delivery. Documentation will be required prior to acceptance.	YES
6.	Unit must meet Federal Motor Vehicle Safety Standards (FMVSS) and an FMVSS sticker must be affixed to unit upon delivery.	YES
E. <u>Driveline</u>		
1.	Requirement – Driveline torque rating must exceed engine’s maximum torque rating of engine being furnished.	YES
2.	Main Shaft – Spicer 1700 series 2-piece or equal. No section shall exceed 60 inches in length.	YES
F. <u>Wheels and Tires</u>		
1.	Wheels - Budd Unimount 10-bolt steel disc type with 8.25" base width. Interchangeable equal is acceptable.	YES

VACUUM STREET SWEEPER (Contd)

	<u>Item Description</u>	
2.	Tires - Steel radial type, 11R x 22.5 14-ply with regular highway tread on front and rear. Shall be Goodyear or Michelin only. Tire and wheel assembly shall be interchangeable between front and rear axles.	YES
3.	Requirement – Rear axle shall include dual tires for load capacity. Single tires will not be accepted.	YES
G. <u>Brakes</u>		
1.	Requirement - Brake system to conform to ICC regulations.	YES
2.	Service - Anti-lock (ABS) full air-operated.	YES
3.	Compressor - 15-CFM capacity.	EXCEEDS/20.8 CFM
4.	Type - Shall be Meritor "Q" Plus S-cam brakes on front and rear axles. All wheel end brake components other than slack adjusters shall be Meritor components.	YES
5.	Rear Brake Actuators - Shall be sealed, internally vented Anchorlock Life Seal 3030LC brake chambers.	YES/EQUAL
6.	Slack Adjusters - Automatic type for all axles. Meritor or Haldex only.	YES
7.	Dust Shields - Manufacturer's standard.	YES
8.	Brake Drums - Outboard mounted for all axles.	YES
9.	Air Dryer - Heated, "Bendix" AD-9.	YES
10.	Reservoir Drain - Manual type moisture ejector.	YES
11.	Brake Lines - Brake lines shall be color coded or numbered the entire length of truck.	YES
12.	Brake Actuator Turnbuckles - Shall be one-piece threaded unit and mounted to brake actuator with jam nut. Quick disconnect style is not acceptable.	YES
13.	Plumbing Components – All air brake hardware connections shall have brass fittings. Steel fittings are not acceptable.	YES
H. <u>Cab</u>		
1.	Type – Manufacturer's standard two position cab-over design pressurized for dust and weather sealed protected.	YES

VACUUM STREET SWEEPER (Contd)

	<u>Item Description</u>	
2.	Sound Suppression – Manufacturer’s standard acoustical insulation to meet 85 dba level maximum and finished in automotive type trim.	YES
3.	Steering – Shall be full power, dual position for both seating positions with dual operator controls. Cross bar steering is not acceptable. Each position shall be fully independent and shall include separate steering gear boxes, separate drag links, and separate pitman arms.	YES
4.	Steering Column – Manufacturer’s standard for both operator positions.	YES
5.	Heater – Manufacturer’s heavy-duty fresh air type with dual defrosters and side window defoggers. Shall have flow through ventilation for optimal temperature control and operator comfort.	YES
6.	Air Conditioner – Manufacturer’s standard factory installed heavy-duty for sustained operation in 110° F ambient temperature.	YES
7.	Seats – “Bostrom” air ride suspension high back type with cloth upholstery, adjustable armrests, and three point seat belts for both seating positions.	YES/EQUAL
8.	Mirrors – Two (2) heated, motorized west coast type mirrors with quick disconnect plug mounted forward of front wheels. Shall be adjustable from operator’s position and equipped with 12 inch convex mirror.	YES
9.	Windshield Wipers – Shall be heavy-duty two speed intermittent type.	YES
10.	Windshield Washers – Manufacturer’s standard electric with washer nozzle mounted on wiper arm.	YES
11.	Glass – Shall be tinted safety type.	YES
12.	Sun Visors – Two (2) total, one for each operator position.	YES
13.	Door Windows – Shall be roll down type and must roll down completely.	YES
14.	Radio – Manufacturer’s standard factory installed AM/FM stereo with clock.	YES

VACUUM STREET SWEEPER (Contd)

		<u>Item Description</u>
15.	Cigarette Lighter – Manufacturer’s standard with ash receiver.	YES
16.	Front Bumper – Manufacturer’s standard.	YES
17.	Fire Extinguisher – 5 pound capacity installed in cab.	YES
18.	Flare Kit - Manufacturer's standard with triangle shaped emergency reflectors.	YES
19.	Hourmeter – Manufacturer’s standard mounted in operator cab.	YES
20.	Operator’s Controls – Manufacturer’s standard for both operator positions to enable operator to view curb location on either the left or right side when sweeping.	YES
21.	Air Horn – Manufacturer’s standard dual trumpet mounted to roof of cab.	YES
I.	<u>Electrical</u>	
1.	Type – 12-volt negative ground.	YES
2.	Battery – Dual maintenance free batteries rated at 600 CCA each.	EXCEEDS/1250CCA
3.	Alternator – 130 ampere rating.	YES
4.	Chassis Lighting – Shall include sealed multi-beam halogen headlights, stop lights, tail lights, backup lights, license plate light, clearance lights, directional lights with hazard switch, and illuminated gauges and instrument panel.	YES
5.	Requirement – All lighting must comply with Federal Standards.	YES
6.	Switches – Rocker type for hydraulic functions mounted in a control panel located in the operator’s cab. Switches shall be clearly identified by name and international symbol and illuminated so they can be readily identified without the use of the cab dome light.	YES
7.	Backup Alarm – Shall be a Preco-Matic ambient automatic type.	YES
8.	Circuit Breakers – Shall be supplied in lieu of fuses.	YES

VACUUM STREET SWEEPER (Contd)

SECTION III - SWEEPER

		<u>Item Description</u>
A.	<u>Engine</u>	
1.	Type – Shall be an in-line, turbocharged, four cylinder design. Engine shall be Tier 3 Emission compliant.	YES
2.	Rating – Shall be a minimum of 115 HP @ 2500 RPM, and 275 ft. lbs of torque.	YES
3.	Air Cleaner – Shall be dual stage dry type equipped with a Turbo II pre-cleaner with a cab mounted restriction indicator.	YES
4.	Fuel Filters-	YES
	a. Primary – Replaceable canister or spin-on type.	YES
	b. Secondary – Replaceable spin-on type with fuel/water separator.	YES
5.	Oil Filter – Full flow spin-on type matched to engine.	YES
6.	Cooling System – Heavy-duty type designed for 110° F temperatures and protected to –30° F with permanent type anti-freeze.	YES
7.	Cold Starting Aid – Ether pressure can type with 1-inch fitting, manual operated quick-start with thermostat control. An engine manufacturer’s standard electric manifold pre-heater is acceptable.	YES
8.	Oil Sampling Valve – Titan Laboratories Model OD1014 or equal installed for easy access.	YES
9.	Emergency Shut Down – Shall be equipped to shut down engine in the event of low oil pressure, high water temperature and low coolant level.	YES
10.	Block Heater – 500 watt with stationary receptacle.	EXCEEDS/1000
11.	Mounting – Engine, radiator and auxiliary engine shall be resilient mounted through a dedicated engine frame.	YES
12.	Engine Cover – Manufacturer’s standard to minimize vandalism. Doors accessing engine compartment to service engine without tilting hopper.	YES

VACUUM STREET SWEEPER (Contd)

	<u>Item Description</u>	
B.	<u>Electrical</u>	
1.	Requirement – Sweeper electrical system shall be independent from the electrical system of the chassis.	YES
2.	Type – 12 volt negative ground.	YES
3.	Battery – One (1) 925 CCA rated.	EXCEEDS/1000cca
4.	Alternator – “Delco” 24SI, 95 amp rated.	YES
5.	Warning Lights – Shall include hydraulic filter restriction, low hydraulic oil, air filter restriction, low water level, hopper up, hopper full, voltage, fuel/water restriction and shall be located in operator’s cab.	YES
6.	Hourmeter – Manufacturer’s standard mounted in operator’s cab.	YES
7.	Circuit Breakers – Shall be supplied in lieu of fuses.	YES
C.	<u>Hydraulic System</u>	
1.	Type – Manufacturer’s standard open or closed circuit direct drive from auxiliary engine. Belt driven or PTO driven hydraulic pump is not acceptable.	YES
2.	Filter – 10 micron vertical mounted disposable spin-on with bypass.	YES
3.	Cooler – Manufacturer’s standard air to oil or liquid to oil.	YES
4.	Reservoir – Twenty (20) gallon capacity with pressurized vent, 10 micron fill filter, magnetic drain plug, external sight gauge, shut-off valve and suction strainer. Reservoir shall be located so that sight gauge is visible without tilting hopper.	YES
5.	Requirement – For testing, all hydraulic circuits shall have quick disconnect check ports.	YES
6.	Hydraulic Hose Fittings – All high pressure fittings shall be O-ring face seal on hose ends or O-ring boss on hydraulic ports.	YES
7.	Oil Sampling Valve – Titan Laboratories Model OD1014 or equal installed for easy access.	YES

VACUUM STREET SWEEPER (Contd)

	<u>Item Description</u>
D. <u>Gutter Brooms</u>	
1. Mountings – Left and right.	YES
2. Type – Plastic, quick change, disposable segments.	YES
3. Size – 36 inches.	YES
4. Drive – Full hydraulic with variable speed control independent of vehicle speed adjustable from inside the operators cab while sweeping.	YES
5. Lift Control – Hydraulic or pneumatic to compensate for sweeping pressure and broom wear, adjustable from inside the operators cab while sweeping and equipped with gauges mounted in operators cab to monitor down pressure. For safety, side brooms shall automatically stop and raise when the transmission is placed in reverse or when the sweeper is put in the transport mode.	YES
6. Variable Tilt Pitch Control – Electronically controlled linear actuator shall allow the operator tilt the side broom inward and outward while sweeping.	YES
7. Broom Rotation – Shall include forward and reverse and shall be selectable from the operators cab.	YES
8. Curtain – Manufacturer’s standard to contain material under sweeper.	YES
E. <u>Pickup Head</u>	
1. Type – Dual nozzle for left and right sweeping, all steel construction.	YES
2. Extension Broom- 16 inches diameter by 54 inches long center pickup broom with polypropylene strip broom disposable filler. Broom shall be reversible.	YES
3. Drive – Hydraulic motor directly mounted to broom core with overload protection.	YES
4. Lift Control – Hydraulic or pneumatic to compensate for cleaning pressure and wear. Shall be adjustable from inside the operators cab while sweeping. For safety, the pickup head shall automatically raise when the transmission is placed in reverse.	YES

VACUUM STREET SWEEPER (Contd)

	Item Description
5. Hoses – 3/8” molded wire reinforced rubber, 11” diameter with quick disconnect for easy clean out.	YES <hr/>
F. <u>Blower</u>	
1. Size – Shall be rated at 20,000 CFM minimum. Certification of fan rating shall be supplied at time of bid by an independent test facility.	YES <hr/>
2. Construction – Shall be turbine type with a minimum of 9 vanes/blades constructed of abrasion resistant steel and be fully balanced for longevity of fan and bearing life. A die-cast aluminum alloy covered with rubber is not acceptable.	YES <hr/>
3. Drive – Fluid coupler with power belt. Belt shall have safety shields and automatic tension adjustment.	YES <hr/>
4. Mounting – Blower fan shall be mounted in heavy-duty greasable bearings. Bearings shall be greased via the automatic lube system specified in Section I.	YES <hr/>
5. Housing – Constructed of 10-gauge abrasion resistant steel with manufacturer’s standard liner for maximum extended wear. Housing shall not be an integral part of the hopper so that replacement of the housing can be accomplished without cutting or welding.	YES <hr/>
G. <u>Dirt Hopper</u>	
1. Type – Hydraulic dumping style.	YES <hr/>
2. Capacity – 8 cubic yard volumetric capacity.	YES <hr/>
3. Hopper Door – Hydraulic open/close and lock/unlock.	YES <hr/>
4. Construction – Floor shall be constructed of ¼” abrasion resistant steel with 10 gauge top, sides and door.	YES <hr/>
5. Dump Angle – Hopper shall tilt to a dump angle of not less than 50° to ensure complete removal of all debris.	YES <hr/>
6. Lift Capacity – Shall have a lift capacity of 11,000 lbs. minimum.	YES <hr/>
7. Full Indicator – Shall be equipped with a full indicator that is activated by the weight of the material in the hopper.	YES <hr/>
8. Screens – High carbon ¼” mesh screens designed not to restrict air flow even in difficult sweeping conditions.	YES <hr/>

VACUUM STREET SWEEPER (Contd)

	<u>Item Description</u>
9.	Safety -
a.	Interlock – Shall be equipped with an interlock to prevent dumping hopper without engaging park brake.
b.	Safety Prop – Steel bar type for hopper body and for hopper door.
10.	Dump – Unit shall dump without the use of outriggers and other aids.
11.	Lubrication – All lift joints and hopper pivots shall be greasable or shall be constructed using self lubricating bronze bushings.
H.	<u>Rear Mounted Wandering Hose</u>
1.	Type – Shall be an 8" inside diameter, 12' long hydraulic wandering hose located at the rear of the machine and capable of deep cleaning catch basins shall be provided. This system is approved for the addition of (4) 4 ft. aluminum wandering hose extensions.
2.	Catch Basin Nozzles – Shall have an 8-in., diameter x 5 -ft. long catch basin nozzle and water injection system for dust control.
3.	Controls – Shall come equipped with dual push button fingertip controls on the nozzle handles to hydraulically raise and lower the nozzle.
4.	Throttle – Shall come equipped with a rear engine throttle control.
5.	Hose Construction – Shall be constructed of heavy-duty rubber. Plastic hoses will not be acceptable.
6.	Requirement – Hydraulic inlet changeover plates shall automatically convert from sweeper to catch basin operation.

VACUUM STREET SWEEPER (Contd)

	<u>Item Description</u>
I.	<u>Water System</u>
1.	Type – Manufacturer’s standard corrosion resistant spray system on both gutter and pickup brooms including a front mounted spray bar for increased water supply during extreme sweeping conditions. Spray system shall be designed to meet PM-10 Regulations. YES
2.	Tank – 600 gallon total capacity constructed of non-rusting material. Water tanks shall be frame mounted and shall not share a common wall with hopper. YES/EXCEED 615
3.	Fill Hose – Twenty-five (25) ft. of 2-1/2” fire hose with hydrant coupler. YES
4.	Filter – Tank fill shall be equipped with a 100 mesh filter to prevent contaminants from entering the water tank during filling. YES
5.	Anti-siphon – Tank shall be equipped with an anti-siphon device compliant to American National Standard Air Gaps in Plumbing Systems ASME A112.12-1991. YES
6.	Wash Down Hose – A 25 ft. wash down hose shall be provided. YES
7.	Pump – Shall be twin diaphragm 12-volt type, (containing no ferrous parts) with a rated capacity of 4 GPM @ 40 psi to the suction nozzle, side brooms and extension broom, capable of running dry indefinitely without damage. Belt driven pumps are not acceptable. YES
8.	Spray Nozzles – Water system shall include brass spray nozzles in the following quantities: two on each gutter broom, four (4) on the extension broom, seven (7) in each suction nozzle and three (3) on the front spray bar. YES
9.	Wash Down System – Shall be equipped with a rear door mounted hopper flush and wash down system. YES
10.	Spray Bar Controls – Broom spray bars and nozzles shall be controlled from inside the operators cab by electrical activation switches. Water flow control valves shall be non-ferrous heavy-duty “agricultural” type. YES
11.	Hydrant Wrench – Shall be supplied with unit. YES

VACUUM STREET SWEEPER (Contd)

		<u>Item Description</u>
J.	<u>Emergency Lighting</u>	
1.	Warning Lights – Shall consist of the following lights. Rotating lights shall have a separate switch from the alternating lights.	YES
a.	Rotating Lights – Two (2) total 15” Ecco “Blaze” Model 5135A dual rotating, halogen, amber, light bars. Each light shall be mounted on the centerline of the vehicle, one fore and on aft.	YES
b.	Alternating Flashing Lights – Four (4) “Ecco” No. 3860A 6" oval LED directional style amber warning lights mounted to the rear of the sweeper.	YES
i.	Flashing Lights shall incorporate an “Alternating Flasher Delay System”. This system is designed to momentarily cancel the flashing lights when the truck brake pedal or turn signal is activated. The system shall be comprised of the “Crouzet”– No. 88-867-100, 12V AC/DC (OUR4) adjustable timer and eight (8) pin relay base “Crouzet” No. 25-622-128. http://www.crouzet.com/crouzet-microcontrole/html/en/crouzet-homepage-EN.htm	YES
2.	Switches – Manufacturer’s standard illuminated with labels.	YES
3.	Slow Moving Emblem – Manufacturer’s standard mounted to rear of unit.	YES
K.	<u>Manuals</u>	
1.	The following manuals and schematics are to be supplied for <u>EACH</u> unit provided:	
a.	Two (2) operators and preventive maintenance manuals.	YES
b.	One (1) parts manual in CD-Rom format if available.	YES
c.	Two (2) complete shop service, trouble shooting and repair manuals in CD-Rom format if available.	YES
d.	One (1) electrical schematic for truck chassis and sweeper.	YES
e.	One (1) air and/or hydraulic schematic for sweeper.	YES

VACUUM STREET SWEEPER (Contd)

	<u>Item Description</u>
f.	Two (2) truck chassis and sweeper lubrication charts. YES
g.	Two (2) sets of manufacturer's instructional videos showing proper safety procedures, maintenance, adjustments, and operation. YES
L.	<u>Service and Training</u>
1.	Successful bidder will be required to furnish a factory employed and trained representative capable of making any needed final adjustments to the unit at time of delivery. YES
2.	A qualified technician shall provide complete training covering safety features, operational, and preventative maintenance to ITD personnel at the at the time of delivery or at a time requested by the Equipment Superintendent at each delivered destination. Training shall be no less than four (4) hours. YES
3.	Department shall be notified two (2) weeks in advance of scheduled delivery. YES
4.	Required delivery is 180 days ARO. Can you meet the required delivery? YES

VACUUM STREET SWEEPER (Contd)

QUESTIONNAIRE APPENDIX A

SECTION I - TRUCK CHASSIS

1. Make and Model NISSAN UD 3300
2. Rated GVW 32,900 lbs
3. Wheelbase 164" in.
4. Sweeping Width 144" in.
5. Lube System: Make and Model MID-WEST AC 3
6. Frame: Section Modulus 51,200 PSI / 35.7 RBM 1,828,000 in.lbs.
7. Engine:
Make and Model HINO MD230
Horsepower 230 Torque Rating 506 FT / LBS
8. Transmission: Make and Model ALLISON 2500 SERIES ELECTRONIC / 5 SPEED OVERDRIVE
9. Axle Capacity: Front 12,000 lbs Rear 21,000 lbs
10. Name of Dealer Furnishing Truck Chassis CHICAGO MACK

SECTION II - SWEEPER

1. Make and Model ELGIN WHIRLWIND MV
2. Engine:
Make and Model JOHN DEERE 4045 TE
Horsepower 115 Torque Rating 278 FT / LBS
3. Broom Diameter: Gutter 36" in. Pickup 16" in.
4. Pickup Broom Length 54" in.
5. Conveyor Type NOT APPLICABLE IN A VACUUM SWEEPER
6. Hopper Capacity 8YDS³ Cu. Yd.

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August 11, 2009

AMENDMENT ONE

TO: All Concerned Vendors

RE: Bid 3437, Agency Requisition M001390, Vacuum Street Sweeper, for Idaho Transportation Department, Bid Closing June 29, 2009 @ 5 PM Mountain Time.

Specification Section II, paragraph B, item 5, which reads:

- "5. Fuel Filters
- a. Primary – Replaceable canister or spin-on type
 - b. Secondary – Replaceable spin-on type fuel/water separator with restriction indicator mounted in operator's cab";

Is changed to read:

- "5. Fuel Filters
- a. Primary – Replaceable canister or spin-on type
 - b. Secondary – Replaceable spin-on type fuel/water separator with restriction indicator mounted in operator's cab;
- OR
- c. Combination fuel filter/ fuel- water separator with a clear sediment bowl and a heated element on the filter base for cold weather operations. A fuel primer pump is integral to the fuel filter base. The fuel filter can be designed to be cleaned rather than replaced or replaced. The filter shall have a lighted indicator in the cab to alert the operator when service or replacement is needed."

There are no other changes.

If you have already submitted your bid and this addendum will alter your bid, please contact the State Division of Purchasing for another copy of the bid or download and print another copy from the sicomm.net web site.

Thank you for your interest in supplying the needs of the State of Idaho.

The Division of Purchasing contact person for this bid is Dick Vogel, CPPB @ 208-327-1605 or dick.vogel@adm.idaho.gov.

cc: Idaho Transportation Department

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August 11, 2009

AMENDMENT TWO

Amendment One June 8, 2009

TO: All Concerned Vendors

RE: Bid 3437, Agency Requisition M001390, Vacuum Street Sweeper, for the Idaho Transportation Department, Bid Closing June 29, 2009 @ 5 PM Mountain Time.

The following are questions, statements, clarifications, and their responses regarding the referenced bid. This additional information is added to and will be made a part of the referenced bid.

Question 1: Section 1- A - Sub Sec. 6 - Warranty - Warranty will be for sweeper only, chassis, transmission and engines will be warranted through their respective dealers.

Answer 1: The warranty required as part of the specifications is the warranty for the entire unit including sweeper, chassis, transmission and engine. A unit proposed not meeting these requirements for the complete unit is NOT Acceptable.

Question 2: Section 1- A Sub Sec. 7 - Color - b. - This is for the chassis?

Answer 2: The chassis portion of the cab and chassis shall be black.

Question 3: Section 2 - A sub sec. 2 - 2. - For a 600 gallon water tank wheelbase would have to be 170"

Answer 3: Page 3 of 17, Item II.A.2 – is changed to read: "2. Wheelbase, 170 inches maximum."

Question 4: Section 2 - A sub sec 2 - 3 - Cab to Axle would then be 139"

Answer 4: Page 3 of 17, Item II.A.3 – is changed to read: "3. Cab to Axle Dimension - 139" maximum."

Question 5: Section 2 - A sub sec 5 - b. - Section Modulus would be 12.69

Answer 5: The Idaho Transportation Department's (ITD) experience with sweeper chassis has shown the need for a high strength rigid frame. Based on this experience, the minimum Section Modulus is as specified. The specification will remain as written.

Question 6: c. - Resisting Bending Moment would then be 1,015,000

Answer 6: ITD's experience with sweeper chassis has shown the need for a high strength rigid frame. Based on this experience, the minimum RBM is as specified. This specification will remain unchanged.

Question 7: Section 2 - sub sec B - 1. - No wet sleeve with this design.

Answer 7: ITD's experience with sweeper units has shown a need for wet sleeve design engines to facilitate rebuilds if required. Based on this experience, a wet sleeve design engine is required.

Question 8: 2. - 215 HP

Answer 8: Page 4 of 17, Item II.B.2 – is changed to read: “2. Rating - 215 horsepower gross.”

Question 9: 3. 560 ft. lbs.

Answer 9: What the vendor proposes exceeds the specifications and therefore is acceptable.

Question 10: 9. This would come with Glow plugs

Answer 10: Glow plugs are acceptable and meet the requirements of the specifications.

Question 11: Section 2 - sub sec G., - 3. - 12.9 CFM

Answer 11: Page 6 of 17, Item II.G.3 – is changed to read: 3. “Compressor - 12-CFM capacity.”

Question 12: 9. AD-IS

Answer 12: The "Bendix" AD-IS is an acceptable alternative to the AD-9 specified.

Question 13: Section 2 - sub sec I. - 3. - 100 AMP

Answer 13: Due to the quantity of warning lights and other related electrical equipment, the 130 ampere rating specified is the minimum acceptable amount.

Question 14: Section 3 - sub sec A. - 12. - No

Answer 14: The specification as written is the minimum required.

Question 15: Section 3 - sub sec D. - 3. - 28"

Answer 15: The size specified is the minimum required. The specifications will remain as written.

Question 16: 5. - Lift control adjustable from inside however, there are no gages.

Answer 16: Gauges are required to monitor down pressure. A unit without gauges is not acceptable.

Question 17: 7. - Broom is forward rotation only.

Answer 17: A unit with both forward and reverse rotation is required. A unit without forward and reverse is not acceptable.

Question 18: Section 3 - sub sec E. - 1. - Aluminum only

Answer 18: A unit with a steel nozzle is required. Aluminum is not acceptable.

Question 19: 2. - Broom is 16 X 50" not reversible

Answer 19: Page 11 of 17, Item III.E.2 – is changed to read: “2. Extension Broom - 16 inches diameter by 50 inches long minimum center pickup broom with polypropylene strip broom disposable filler. Broom shall be reversible.”

Question 20: 5. - Hose are quick disconnect with a 10" diameter

Answer 20: Page 12 of 17, Item III.E.5 – is changed to read: “5. Hoses - 3/8" molded wire reinforced rubber, 10" diameter with quick disconnect for easy clean out.’

Question 21: Section 3 - sub sec F. - 3. - No Belt

Answer 21: Belt drive is required for this unit. A unit without a belt drive is not acceptable.

Question 22: 4. - Bearings are sealed

Answer 22: Bearings shall be grease able type. A unit with sealed bearings is not acceptable.

Question 23: 5. - No Liner

Answer 23: A unit with a liner is required. A unit without a liner is not acceptable.

Question 24: Section 3. Sub sec G. - 4. - Stainless Steel

Answer 24: Stainless steel is acceptable.

Question 25: Section 3. -sub sec H. 1. - Hose located on Top of Hopper

Answer 25: A unit with a hose connected to the top of hopper is acceptable. Hose shall be stored and located at the rear of the machine for use at the rear of the machine.

Question 26: Section 3 - sub sec I. - 2. - Tank would be 663 gallons

Answer 26: A unit with a water capacity of 663 gallons exceeds ITD specifications and is acceptable.

Question 27: 9. - No

Answer 27: A wash down system is required in the rear door. A unit without the system is not acceptable.

Question 28: B. Engine 2. Rating – 230 horsepower gross. 3. Torque - 500 ft. lbs. Please accept 7.8 Liter, 215 HP engine with 560 ft lbs.

Answer 1: Item II.B.2 is changed to read: 2. Rating – 215 horsepower gross.

Question 29: D. Gutter Brooms: 3. Size - 36 inches. Please accept 44 inch gutter broom design...

Answer 29: The specification is listed as a minimum. What the vendor proposes is acceptable.

Question 30: 7. Broom Rotation - Shall include forward and reverse and shall be selectable from the operators cab. Please accept Gutter brooms that are made to go in the forward position only.

Answer 30: A unit with both forward and reverse rotation are required. A unit without forward and reverse is not acceptable.

Question 31: E Pick-up Head - 1. Type - Dual nozzle for left and right sweeping, all steel construction. Please accept pickup head to be spring balanced all steel fabricated with separate upper and lower chambers where pressurized air is blasted from the upper chamber through an elongated blast orifice to the lower chamber creating a 90" Pick-up Path.

Answer 31: From the description above, it appears as though the vendor is proposing a regenerative air sweeper in lieu of a straight vacuum sweeper. ITD has not had good success with regenerative air sweepers in the application intended for this unit. The specifications will remain as written.

Question 32: 2. Extension Broom- 16 inches diameter by 54 inches long center pickup broom with polypropylene strip broom disposable filler. Broom shall be reversible. Instead of Extension Broom will you please accept 90 inch wide pick-up head / sweeping path with a blast orifice that acts as an air knife. The blast orifice to be angled a minimum of 3 degrees towards the suction side of the pickup head. This will ensure a smooth transfer of debris by increasing pressure as the debris moves toward the suction tube.

Answer 32: As in question 4, it appears that the vendor is proposing a regenerative air sweeper. For this application, ITD has determined that a straight vacuum sweeper with extension broom is required. The specifications will remain as written.

Question 33: 3. Drive - Hydraulic motor directly mounted to broom core with overload protection. Our design doesn't require hydraulic motor for the pick-up head. Please accept this exception.

Answer 33: See Answer 32 above.

Question 34: F. Blower 1. Size - Shall be rated at 20,000 CFM minimum. Certification of fan rating shall be supplied at time of bid by an independent test facility. Please accept the current 3" wide blower that is certified at 17,000 CFM rating. It has over 65 inches of water column lift. New model will have a new 5" wide blower is rated at 20,000 CFM and is in the process of being certified.

Answer 34: The efficiency of a vacuum street sweeper is directly related to the CFM rating of the blower. Based on ITD experience, a unit with a larger CFM rating will perform better than a unit with less. Since the manufacture is upgrading to a 20,000 CFM unit, they are acknowledging this as well. The specifications will remain as written.

Question 35: 3. Drive - Fluid coupler with power belt. Belt shall have safety shields and automatic tension adjustment. Please accept the Blower to be powered by the sweeper auxiliary engine via a heavy-duty 5-groove v-belt. A belt safety guard shall be supplied.

Answer 35: A unit with a fluid coupler belt drive is required. A unit without a fluid coupler and direct drive from the engine is not acceptable.

Question 36: G. Dirt Hopper: 4. Construction - Floor shall be constructed of ¼" abrasion resistant steel with 10 gauge top, sides and door. Please accept the Floor hopper construction of 3/16" abrasion resistant steel with 10 gauge top, sides and door.

Answer 36: A unit with a ¼" thick floor versus a 3/16" will have a longer resistance to abrasion over the life of the unit before a new floor is required. ITD's replacement cycle for vacuum brooms is 13 plus years. Based on this, a unit with a 3/16" floor is not acceptable.

Question 37: 8. Screens - High carbon ¼" mesh screens designed not to restrict air flow even in difficult sweeping conditions. Please accept 3/8" mesh screens designed not to restrict air flow even in difficult sweeping conditions.

Answer 37: The hopper screens restrict the flow of material that could be discharged by the vacuum operation. This unit is being purchased with CMAQ funding for improving air quality. Therefore, a unit with the least amount of material discharges is required. The specifications will remain as written.

Question 11: I. Water System: 8. Spray Nozzles - Water system shall include brass spray nozzles in the following quantities: two on each gutter broom, four (4) on the extension broom, seven (7) in each suction nozzle and three (3) on the front spray bar. Please accept brass spray nozzles in the following quantities: (5) on the front spray bar, (2) on each broom, (5) around suction head, (2) inside suction nozzle, (2) on front axle and 2 inside hopper.

Answer 11: What the vendor proposes is acceptable. However, the unit proposed must meet specification requirement III.I.1 – Spray system shall be designed to meet PM-10 Regulations. A bid proposal for a unit with a different spray nozzle configuration of what was originally specified must have the PM-10 certification provided at time of bid closing.

Bid 3437, Vacuum Street Sweeper
For the Idaho Transportation Department
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There are no other changes.

If you have already submitted your bid and this addendum will alter your bid, please contact the State Division of Purchasing for another copy of the bid or download and print another copy from the sicomm.net web site.

Thank you for your interest in supplying the needs of the State of Idaho.

The Division of Purchasing contact person for this bid is Dick Vogel, CPPB @ 208-327-1605 or dick.vogel@adm.idaho.gov.

cc: Idaho Transportation Department

SUPPLEMENTAL OPTION SHEET

VACUUM STREET SWEEPER BID NUMBER 3437

Deductions to base price in red
Additions to base price in blue

Delete forward and reverse option on gutter brooms		\$1,300
(2) 4' aluminum wandering hose extensions – rear mount	Add	\$1,285
(1) 4' aluminum wandering hose extension – front mount	Add	\$ 700
Auto shutter left hand	Add	\$ 440
Auto Shutter right hand	Add	\$ 440