

BID SOLICITATION



City of Chattanooga
101 East 11th Street, Suite G13
Chattanooga TN 37402

BID OPENING DATE AND TIME:
04/16/2008 2:00 PM
BID NUMBER: B0005067

BUYER: Tucker, William
PHONE #: (423) 757 - 0649 ext.
DELIVERY REQUIRED: 04/16/2008 2:00 PM

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City of Chattanooga
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SEALED BIDS

Mail or submit two (2) signed copies of bid form to this office in the enclosed envelope. Retain one copy for your file.

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Item	Class-Item	Quantity	Unit	Unit Price	Total
	Requisition No. R0107977 Ordering Dept.: Fleet Maintenance Div 2 Buyer: William Tucker Phone No.: (423) 757-0649 ***** Item Being Purchased: Street Sweeper ***** ATTACHMENTS: Specifications (11 pages) Affirmative Action Plan (2 pages) ***** City of Chattanooga Terms and Conditions are posted on Website http://www.chattanooga.gov/finance/66_standardtermsandconditions.htm If you cannot download call buyer for a copy. ***** NOTE: ALL BIDS MUST BE SIGNED All bids received are subject to the terms and conditions contained herein and as listed in the above referenced website. The undersigned Bidder acknowledges having received, reviewed, and agrees to be bound to these terms and conditions, unless specific written exceptions are otherwise stated. ***** Any manufacturer's names, trade names, brand names, or catalog numbers used in the specifications are for the purpose of describing and establishing general quality levels. Such references are not intended to be restrictive. Bids will be considered for any brand which meets or exceeds the quality of the specifications listed for any item. The City of Chattanooga reserves the right to reject any and/or all bids, waive any informalities in the bids received, and to accept any bid which in its opinion may be for the best interest of the city. The City of Chattanooga will be non-discriminatory in the purchase of all goods and services on the basis of race, color, or national origin.				

NOTE: ALL BIDS RECEIVED ARE SUBJECT TO THE TERMS AND CONDITIONS.

ALL BIDS MUST BE SIGNED: The undersigned offers the above quoted prices under the conditions contained herein.

The City is Exempt from all Federal and State Tax.
Bids will be received at the above mentioned address.

COMPANY: _____

TERMS OF PAYMENT: _____

SIGNATURE: _____

TELEPHONE NUMBER: _____

NAME AND TITLE: _____

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Item	Class-Item	Quantity	Unit	Unit Price	Total
	<p>***** *** BIDS MUST BE RECEIVED NO LATER THAN *** *** 2:00 PM EST on April 16, 2008 *** ***** NOTE ***** PLEASE PROVIDE US WITH THE FOLLOWING INFORMATION: Company Name _____ Address _____ Phone/Toll-Free No. _____ Fax No. _____ eMail Address _____ Contact Person's Name _____ Employer's ID No. _____ Estimated Delivery _____ Minority-Owned Business ___ Small Business ___ Veteran ___ Minority Woman Owned Business ___ Disabled Veteran ___ Women-Owned Business ___ ***** ALL ITEMS MUST BE QUOTED F.O.B. DESTINATION *****</p>				
1.0	765-77 2008 Model REGENERATIVE AIR STREET SWEEPER.	1.00	EA		
				TOTAL:	

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SIGNATURE: _____

TELEPHONE NUMBER: _____

NAME AND TITLE: _____

STREET SWEEPER SPECIFICATIONS

INTENT

It is the intent of these specifications to describe a **REGENERATIVE AIR STREET SWEEPER** with hydraulic drives, 4.3 cubic yard hopper, and 80" wide pickup head. The unit must be equipped with vertical digger-type gutter brooms, pressurized dust control spray system and an independent engine to power the sweeping functions. The chassis for this sweeper is to be sufficiently rated to transport a full load of sweeping debris at speeds up to 55 MPH. For safety and comfort of the operator and for quick, local service along with local availability of repair parts, the chassis will NOT be a purpose built chassis built by the sweeper manufacturer. The chassis shall be equipped with spring suspension, dual steering, dual operator controls, and an automatic transmission. All tires shall be the same size and have dual tires on each side of the rear axle (six-wheel configuration).

The unit shall be new of current manufacture. No prototype, demo, used, vacuum type, or mechanical type sweepers will be accepted.

All parts not specifically mentioned which are necessary to provide a complete street sweeper shall be included in the bid and shall conform in strength, quality of materials, and workmanship to what is normally provided to the trade in general.

Bidders must indicate compliance for each item throughout the bid by writing "YES" or "NO". Failure to do so may be cause to reject the bid. All "NO" answers must be fully explained on a separate sheet of paper and be attached to and submitted with bid. Failure to explain "NO" answers may be cause to reject bid.

STREET SWEEPER SPECIFICATIONS

SWEEPER ENGINE

- _____ A. An auxiliary diesel engine shall be provided to power the sweeper. The engine shall be a Tier 2 compliant four-cylinder turbo-charged Perkins (or equivalent) with a horsepower rating of not less than 60 H.P. at 2,800 RPM. Minimum displacement shall be not less than 149 cubic inches.
- _____ B. Engine shall be equipped with a full-flow spin-on oil filter, fuel filter and fuel water separator.
- _____ C. Unit shall have a heavy-duty two-stage dry type air cleaner with a centrifugal pre-cleaner and air filter restriction indicator.
- _____ D. Engine shall be equipped with a 3-point safety engine shutdown device that shuts down the engine for low oil pressure, high coolant temperature, and low coolant level.
- _____ E. Injector pump shall have centrifugal type variable speed governor for speed control of auxiliary engine RPM.
- _____ F. Twelve (12) volt electrical system, electric starter and 65 amp alternator shall be provided. Sweeper shall have re-settable circuit breakers.
- _____ G. Sweeper auxiliary engine to share 30 gallon fuel tank and batteries with chassis engine.
- _____ H. Auxiliary engine, muffler, blower housing, fuel tank, battery box, and hydraulic tank and cooler shall be protected by a shroud.

HYDRAULIC SYSTEM

- _____ A. Hydraulic power shall be used to operate all broom rotation, lifting functions, and dust suppression systems of the sweeper. All functions shall operate independently of each other with their own in-cab controls to include separate controls for each gutter broom. Systems incorporating pneumatic-type controls will not be accepted.
- _____ B. Sweeper shall utilize a direct drive, gear driven hydraulic pump, minimum 16 gallon vented hydraulic reservoir with 80 mesh suction strainer, a spin-on 10 micron return filter, and high pressure hoses and fittings. Hydraulic reservoir to have tank mounted level and temperature indicator. Hydraulic reservoir to be mounted above hydraulic pump.

STREET SWEEPER SPECIFICATIONS

- _____ C. Hydraulic system shall have a 12,500 BTU oil to air radiator type hydraulic oil cooler.
- _____ D. Hydraulic tank shall have shut-off valves for hydraulic oil filter servicing.
- _____ E. Hydraulic pressure shall not exceed 2,250 PSI.
- _____ F. Hydraulic system shall have quick disconnect relief pressure check ports mounted in the hydraulic manifold.
- _____ G. For safety of the operator, no sweeper hydraulic lines shall run into or through the cab.
- _____ H. Hydraulic valves shall have built-in diagnostic system lighting for troubleshooting hydraulic flow.
- _____ I. A 12-volt DC hydraulic backup system shall be provided which may be used to operate all hydraulic functions without starting the auxiliary engine.

DUST SEPARATOR

- _____ A. Separation of the dirt and refuse from the air stream shall be accomplished within the hopper by means of a circular centrifugal dust separator. The dust separator shall be designed so that it will not plug with normally encountered debris.
- _____ B. The dust separator shall have a clean-out door that opens automatically and discharges debris from the separator when the hopper is raised to the dump position. The dust separator must be automatic self-emptying each time the hopper is dumped.
- _____ C. Cable or other manual/mechanical means required for discharging debris from the separator will not be allowed.
- _____ D. Dust separation filters will not be accepted due to them clogging, the cost of replacement, and cleaning.

HOPPER

- _____ A. The volumetric capacity of the hopper shall not be less than 4.3 cubic yards.
- _____ B. A heavy gauge steel hopper screen of not less than 10 gauge steel shall be provided to allow air to move freely from the hopper into the

STREET SWEEPER SPECIFICATIONS

centrifugal dust separator. Screen shall be bolt-in design for easy replacement.

- _____ C. Hopper roof shall include a hinged door allowing access for washout of the screen. This door shall be in addition to the dump door. Access door shall be constructed from heavy duty ABS plastic.
- _____ D. Dumping shall be accomplished hydraulically by tilting the hopper a minimum of 88 degrees. Contents to be dumped to the rear of the vehicle at a height of 67 inches. Twin dumping cylinders to be used for tilting hopper. Tilting of hopper to be controlled from within the sweeper cab.
- _____ E. Hopper shall be airtight through the use of rubber seals on all doors and openings.
- _____ F. Hopper shall be constructed with a minimum of 10-gauge steel.
- _____ G. Large 24" X 10" inspection doors shall be provided on left and right sides of hopper. These doors provide an easy way to manually load debris and provide a convenient access for hopper inspection and cleaning.
- _____ H. Hopper interior shall be coated with an anti-wear/anti-seize coating.
- _____ I. Sweepers that use a no tilt method of dumping hopper or use an inside of hopper mechanical means of pushing debris out of the hopper will not be accepted.
- _____ J. Hopper shall have a shroud enclosing the auxiliary engine, muffler, blower housing, fuel tank, battery box, and hydraulic tank and cooler. Shroud shall be designed to help protect components from the elements and vandals. Shroud shall also be designed to reduce auxiliary engine noise by having a minimum of 1" thick sound deadening material attached to the inside of shroud in the engine compartment area. Sound deadening material must consist of at least 28 square feet of material. Shroud must be part of the hopper and lift when the hopper is raised and be designed to give the sweeper a neat well thought out streamlined appearance. In the interest of sweeper protection, public safety, and sweeper noise reduction, sweepers that do not meet all of these requirements will not be accepted.

STREET SWEEPER SPECIFICATIONS

BLOWER

- _____ A. Heavy-duty steel blower shall be used to create air pressure and suction (regenerative air) for removing debris from road surface. Sweepers that clean road surface by using suction only (pure vacuum) will not be accepted.
- _____ B. Blower to be powered by the sweeper auxiliary engine via a heavy-duty 3v 8-groove belt. A belt safety guard shall be supplied.
- _____ C. The blower shall be a closed face turbine type with 10 curved blades, having a 30-inch diameter. The blower shall be constructed of T-42 steel. Fan to be fully balanced within 1.5 grams on both sides for long fan and bearing life. A die-cast aluminum alloy open face blower, either covered with rubber or not, or a die cast steel open face blower will not be acceptable.
- _____ D. Blower shall have a rated performance of 40 inches of water and 12,000 CFM.
- _____ E. Must be equipped to provide a 360 degree average dB(a) rating of 72.0 or less at an unobstructed distance of 50 feet at 2000 RPM. Sound dampening material is required in the area of the auxiliary engine and blower to aid in soundproofing.
- _____ F. The blower housing shall be constructed of 10-gauge steel with the inside of the housing covered with a replaceable rubber liner.
- _____ G. Blower housing shall have a vacuum enhancer for discharging a portion of the blast air for sweeping light materials such as leaves and paper. The vacuum enhancer shall be electrically powered by a DC actuator and controlled from a switch located on the control panel inside the cab. The vacuum enhancer to be capable of 0 - 80% air diversion for maximum control.
- _____ H. Blower housings shall not be an integral part of the hopper. Replacement of the blower housing must be possible without having to cut the housing from the hopper and having to re-weld a new housing into the hopper.
- _____ I. Blower shall be mounted on self-aligning sealed anti-friction bearings, blower shaft to have greaseable shaft bearings requiring a 1/4-ounce of grease every 250 hours to ensure maximum life expectancy. Non-greaseable sealed bearings are unacceptable.

STREET SWEEPER SPECIFICATIONS

PICKUP HEAD

- _____ A. Pickup head shall 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.
- _____ B. The pickup head shall not be less than 80 inches wide and 26 inches long giving a total head area of 2080 square inches.
- _____ C. Pressure and suction hoses shall be twelve inches in diameter and be constructed from 3/8-inch thick heavy-duty molded wire reinforced rubber.
- _____ D. Pressure and suction hose clamps shall be constructed from stainless steel.
- _____ E. Sweeping paths shall be:
Pickup head only = 80 inches
Pickup head and one gutter broom = 100 inches
Pickup head and two gutter brooms = 120 inches
- _____ F. Pickup head shall be equipped with doublewide full-length carbide drag shoes for maximum life. Front and rear of drag shoe to be snowshoe design to follow road contour without damage. Shoes shall be interchangeable from either the left or right side.
- _____ G. Drag shoes shall be warranted against wear-out for a minimum of two years/2000 hours, prorated.
- _____ H. Sweeping head shall be raised and lowered hydraulically by a single switch located in the cab.

GUTTER BROOMS

- _____ A. Dual gutter brooms shall be 26" minimum diameter, wire filled vertical digger type for removing debris from gutter area.
- _____ B. Gutter brooms shall be hydraulic motor driven and shall be positioned laterally and vertically by hydraulic cylinders.

STREET SWEEPER SPECIFICATIONS

- _____ C. Each gutter broom shall have an adjustment to allow downward compensation for bristle contact, pattern and wear and shall be free floating to follow street contour.
- _____ D. Each gutter broom shall have lateral flexibility to swing rearward 12" under the chassis when encountering the impact of an immovable object thus avoiding damage to the broom assembly.
- _____ E. Each gutter broom shall be held in the up and transit position by use of an electric lock valve attachment.
- _____ F. Upward motion of gutter broom to be regulated by an adjustable flow control valve.
- _____ G. Gutter broom disk shall be recessed to prevent such items as cassette tape, string, and small rope like material from being wrapped around and damaging the gutter broom motor. Disk to be designed as to allow water to drain off, therefore eliminating water damage to the gutter broom motor seals.
- _____ H. A center deflector shall be provided to direct debris thrown by the gutter brooms into the path of the pickup head. Deflector shall be positioned under the belly of the sweeper and in between the gutter brooms. Deflector to raise and lower with pick-up head.
- _____ I. Each gutter broom shall additionally incorporate an electrically actuated tilt capability of 27 degrees, remotely controlled from the operator's seat to allow instant adjustment for debris removal from deep gutters (such as those resulting from multiple overlays of blacktop).
- _____ J. Each gutter broom shall have an electrically actuated in-cab controls to be able to extend and retract while in sweeping mode. This will allow the gutter brooms to scrub the pavement surface in front of the pickup head. All controls shall be in-cab. At no time shall the operator have to leave the cab to activate this function.

DUST CONTROL SYSTEM

- _____ A. Water spray shall be supplied by a hydraulically driven roller type water pump. The water pump to produce a minimum of 150 PSI. The water pump to automatically disengage when the water supply is depleted.

STREET SWEEPER SPECIFICATIONS

- _____ B. Water tank capacity shall not be less than 105 gallons and shall be constructed of polyethylene for strength and corrosion resistance. Shall be bolt-on design for easy removal.
- _____ C. No part of the water system shall be made with ferrous metal.
- _____ D. A minimum 25-foot long fire hydrant fill hose shall be provided with 2.5" NST coupling to fill water tank. A 2" air gap shall be provided between water fill tube and water tank. Hydrant hose shall include a hydrant wrench and hose storage area.
- _____ E. Water system to be filtered by an 100 mesh cleanable filter located between tank and water pump.
- _____ F. Each water spray function shall have its own independent on/off cab controlled solenoid valve.
- _____ G. An in-cab low water indicator light shall warn operator when water supply is near depletion.
- _____ H. Water spray nozzles shall be provided as follows: four nozzles at pickup head, four nozzles inside hopper, two nozzles at right gutter broom, and two nozzles at left gutter broom.
- _____ I. The water system shall incorporate an air purge system for flushing water lines during freezing conditions.
- _____ J. Sweeper shall be equipped with a front spray bar with 7 nozzles. Spray bar to be mounted on front bumper.

OPERATING CONTROLS

- _____ A. Sweeper shall be equipped with dual steering and controls for left or right hand operations. Center mounted steering or single steering is not acceptable.
- _____ B. Auxiliary engine control and gauges shall be mounted on the control console inside the cab. They shall consist of: keyed ignition, manual lever type throttle control, leaf bleeder control, oil pressure gauge, water temperature gauge, voltmeter, tachometer, and hour meter. All gauges to be lighted.
- _____ C. Console shall have independent switches for operating left gutter broom, tilt and GEO, right gutter broom, tilt and GEO, and pickup head. All switches to be lighted and have international symbols for easy identification.

STREET SWEEPER SPECIFICATIONS

- _____ D. Console shall have water pump on switch and low water level warning light. Independent water control switches for left gutter broom, right gutter broom, pickup head, hopper, and nozzles at front axles. All switches shall be lighted and have international symbols for easy identification.
- _____ E. Console shall have independent switches for each gutter broom light.
- _____ F. All sweeper main electrical systems to be separately fused at the control console by re-settable circuit breakers.

HAND HOSE EQUIPMENT

- _____ A. Sweeper shall have auxiliary hand hose for cleaning remote areas inaccessible to the sweeping head and for cleaning out catch basins.
- _____ B. Hand hose shall be minimum 5" in diameter with an aluminum collection nozzle.
- _____ C. Hand hose shall not have to be taken out of a storage compartment and assembled on site to use. Hand hose shall be stored on the sweeper at the location in which it will be used.
- _____ D. A block off plate shall be provided.

SAFETY EQUIPMENT

- _____ A. Sweeper shall meet all federal motor vehicle safety standards.
- _____ B. Sweeper shall be equipped with a cab-mounted bar light and rear directional LED signal and in-cab controls. Shall be equipped with four (4) amber LED high-intensity alternating flashing lights.
- _____ C. Sweeper shall include two hopper safety struts that lock hopper in the raised position such as during maintenance.
- _____ D. The sweeper shall have two lower stoplights mounted into the rear bumper. The sweeper to also have a third, center positioned high mounted stoplight. All stop turn tail lights shall be LED.
- _____ E. Sweeper shall be equipped with backup alarm, cab mounted 5 lb. fire extinguisher, and a boxed warning triangle kit.
- _____ F. Permanent warning decals shall be provided at all hazard areas.

STREET SWEEPER SPECIFICATIONS

ACCESSORIES

- _____ A. Sweeper to have two toolboxes complete with lockable doors. Toolboxes to be located on either side of sweeper's rear fenders. Tool boxes to be a total of 20 Cu. Ft. The interior wall of each toolbox shall have connecting tubes for storage of long items such as brooms and rakes.
- _____ B. Sweeper must have a full width steel rear bumper mounted to frame.
- _____ C. 8" chrome cab mounted parabolic mirrors shall be provided to aid operator in observing gutter brooms. They shall be mounted below the west coast mirrors on chassis doors.
- _____ D. Sweeper chassis shall be equipped with an Auto Lube System set to maintain all lube points for the sweeper body and chassis.\
- _____ E. AVL

Must include the following;

One (1) Location Technologies brand LT5 Mobile GPS/AVL Modem unit with Control Head Interface Cable.

One (1) LT Battery Guard Vehicle Power Timer and cables

One (1) Location Technology permanent mount GPS Antenna (positioned on top, center of cab) and cables

One (1) Modem Interface Assembly and cables

Data-only Radio: Motorola CDM-750, 4 channel UHF, 25 watt dash mount with 3 .5 db gain antenna for the GPS/AVL system and cables

All equipment must work with current AVL system used by the City of Chattanooga, Department of Public Works, Division of City-Wide Services. All wires and parts to make AVL fully functional on the vehicle must be included.

Installation instructions:

Installation specifics to be determined by City personnel.

Contact Information:

Location Technologies, Inc.

5207 NW Crooked Road, Parkville, MO 64152

<http://www.loctech.com>

- _____ F. Motorola Two-way radio compatible with the City of Chattanooga's current radio

PAINT COLOR

STREET SWEEPER SPECIFICATIONS

- _____ A. The sweeper shall be painted with 1 coat of sealer/primer and 2 coats of DuPont Imron 5000 polyurethane paint in the manufacturers' standard white color.
- _____ B. Gutter brooms, pickup head, sweeper and truck frame shall be painted black.

SWEEPER WARRANTY

- _____ A. Warranty, sweeper body and chassis shall be warranted (bumper to bumper) for a period of 60 months from date of delivery, excluding wear items (wear items not covered shall be listed).

DELIVERY

- _____ A. The unit shall be delivered completely assembled, serviced, and ready to operate. The successful bidder shall have a qualified service representative in attendance with the sweeper during start up operations to make any adjustments needed and to give operator instruction on the proper operation and care of the sweeper. Contact Jack Cobb at 423-757-5249 to arrange this initial set up.
- _____ B. Bidder shall state delivery date.
- _____ A. The bidder shall supply a complete sweeper manual. Manual shall include system/component descriptions, sweeper operation, maintenance, troubleshooting, illustrated parts listing with part numbers, and schematics for the sweeper. Manual shall also include reproducible periodic maintenance schedules.
- _____ B. Auxiliary engine manuals shall also be provided. They shall consist of operations & maintenance, maintenance schedules, component technical manual, and an illustrated parts catalog.
- _____ C. The bidder shall supply a maintenance and operations video for the sweeper. The video shall outline operations, operator maintenance, and safety items relating to the safe and efficient operation of the sweeper.