**INVITATION TO BID**

**STREET SWEEPER**

**BID #23-23**

**PART 1 - GENERAL INFORMATION**

It is the intent of these specifications to describe a regenerative air street sweeper with hydraulic drives, a 7.3 cubic yard hopper, and an 80" wide pickup head. The head must be capable of sweeping in reverse with the head down without causing damage to the pickup head or its components. The unit must have vertical digger-type gutter brooms, a 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 the 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 rear axle side (six-wheel configuration). The unit shall be new to the current manufacturer. 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. No deviations from these specifications will be allowed.

**1.1 ACCEPTANCE OF MATERIALS OR SERVICES**

1. The material and/or services provided under this contract shall remain the property of the seller until a physical inspection and actual usage of this material and/or services is made and thereafter accepted to the satisfaction of the City.

B. Materials and/or services must comply with all the terms herein. In the event the material and/or service supplied to the City is found to be defective or does not conform to the specifications, the City reserves the right to cancel the order upon written notice to the seller. Materials shall be returned to the seller at the seller’s expense.

**1.2 ADDENDA**

A. The City Purchasing Agent will notify all bidders in writing, by duly issued addendum of any interpretations made of specifications or instructions. It will be the responsibility of the bidder to contact the Purchasing Division prior to submitting a bid to ascertain if any addenda have been issued, to obtain all such addenda, and return executed addenda with the bid.

B. The City will assume no responsibility for oral instruction or suggestions. All official correspondence in regard to the specifications should be directed to and will be issued by the City Purchasing Agent.

**1.3 BID PRICE**

A. A bidder may offer only one (1) price on an item(s) though they may have two (2) or more types that meet specifications. Bidders must determine for themselves which to offer.

Submission by a single bidder of more than one (1) price for a single item shall be sufficient cause for rejection of all prices for that item by the bidder.

Bids stipulating “Price in effect at the time of shipment” or other similar conditions will be considered not responsive to the bid invitation and will not be accepted. All prices shall be quoted F.O.B. Meridian unless otherwise stipulated in the bid invitation.

**1.4 BID OPENING**

A. Bids will be received until the date and time stated in this Invitation to Bid and will be publicly opened and read at the place, time and date stated. It is the bidder’s responsibility to assure that the bid is delivered at the proper time and place of the bid opening.

B. No responsibility will attach to the Purchasing Division for the premature opening of a bid not properly addressed and identified. Bidders or their authorized representatives are invited to be present at the opening of the bids.

**1.5 COMPARISON AND AWARD OF BIDS**

A. The City of Meridian reserves the right to reject any and/or all bids; waive technicalities, informalities, or irregularities in the bids received; solicit new bids; or those that bid which is deemed to be in the best interest of the City of Meridian.

B. In determining the lowest and best bid, the City of Meridian may consider factors other than the dollar amount of the bid. References shall be used to assist in evaluating each bid. Factors that may be used include information relative to the bidder’s: past performance, quality of the bid, past work, skill, facilities for carrying out the contract, honesty and integrity, parts, service, warranty, and any and all other relevant and reasonable factors.

C. Bids which show any omission, irregularity, alteration of forms, additions not called for conditional or unconditional unresponsive bids, or bids obviously unbalanced may be rejected.

**1.6 DEFECTS**

A. In the event any item(s), sold and delivered hereunder, shall be defective in any respect whatsoever, the seller will indemnify and save harmless the City from all loss or expense by reason of all accidents, injuries, or damages to persons or property resulting from the use of such item(s) or which are contributed to be said defective condition.

B. Goods shall be replaced at no additional charge to the City if they prove to be defective and/or not in accordance with specifications. Rejected materials shall be returned at the risk expense of the seller. If the City does not desire a replacement, the seller is to issue full edit.

**1.7 DELIVERY**

A. F.O.B. Meridian. All freight/delivery charges, installation costs, and any/all

set-up charges shall be included in the bid price unless otherwise stated in the specifications or bid.

Delivery shall include assembly, servicing, and placement of equipment in operable status unless otherwise specified, herein.

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 instructions on the proper operation and care of the sweeper.

**1.8 DISPUTES**

A. In cases of disputes, as to whether or not an item or service quoted or delivered meets specifications, the decision of the City shall be final and binding on all parties.

**1.9 EXCEPTIONS**

A. The submission of a bid shall be considered an agreement to all the terms, conditions, and specifications provided herein and in the various bid documents unless specifically noted otherwise in the bid.

All items quoted must comply with the specifications. If you are taking exceptions, indicate those exceptions on company letterhead and attach them with this Invitation for Bids.

**1.10 IMPROPER BIDS**

A. Bids that show any omission, irregularity, alteration of forms, additions not called for conditional or unconditional unresponsive bids, or bids obviously unbalanced may be rejected.

**1.11 INJURY**

A. If the seller delivers on the City’s premises, the seller will indemnify and save the harmless buyer from all loss or expense by reason of any accident, injury, or damage to persons or property occurring in connection therewith.

**1.12 NON-PERFORMANCE**

A. Time is of the essence in this contract and failure to deliver within the time period shall be considered a default.

In case of default, the City may procure the required commodity from other sources and hold the Contractor responsible for any excess costs occasioned thereby and may immediately cancel the agreement.

**1.13 PAYMENT**

A. The City of Meridian will issue a check for payment of the goods and services no later than 45 days after receipt of each invoice and receipt, inspection, and approval of the goods or services for that invoice.

**1.14 PROTEST OF AWARD**

A. Any protest concerning the award of a contract shall be decided by the Purchasing Agent. Protests shall be made in writing to the Office of Purchasing and shall be filed within 48 hours of the issuance of the Award Notification. A protest is considered filed when received by the Office of Purchasing.

The written protest shall include the name and address of the protestor, identification of the procurement, a statement of the specific reasons for the protest, and supporting exhibits.

The Office of Purchasing will respond to the written protest within seven (7) days. The Purchasing Agent’s decision relative to the protest may be appealed to the City Council.

**1.15 QUALITY**

A. All deliveries and services furnished under this Bid must be of the quality specified or in the event no quality is specified, must be the best of their respective kinds, and will be subject to inspection and approval of the City within a reasonable time after delivery of goods or completion of services.

Bidder warrants that all equipment, materials, and workmanship furnished whether furnished by bidder or its sub-suppliers, will comply with its and the City’s specifications, drawings, and other descriptions supplied or adopted, and will be new, fit, and sufficient for the purpose for which they are intended, of good materials, design and workmanship and free from defects or failure.

When manufacturing specifications are referred to, such specifications shall be deemed to be an integral part hereof, as if duly set out herein.

All products, equipment, merchandise, and miscellaneous material bid shall comply with applicable requirements and standards of the Occupational Safety and Health Act and applicable Mississippi codes.

Bidder may be required, at no expense to the City, to make available for test/demonstration, material or equipment equal in all aspects to the bid, and/or equal material or equipment that may be seen under operating conditions in the East Mississippi area.

**1.16 SUBSTITUTIONS**

A. Brands, other than those listed, may be acceptable with prior approval of the City.

**1.17 UNIT PRICES**

A. **All charges shall be included in the unit price.** The total bid price should be the actual sum of the extension of unit prices. In the event of any discrepancy between a unit price(s), extended price(s), and/or total price(s), unit prices will govern and the bid will be refigured accordingly.

**1.18 WARRANTY**

A. All warranty services shall be provided at no cost to the City during the warranty period. Warranty service shall include, but not be limited to labor, repair parts, equipment, time, and travel.

Per the manufacturer’s published warranty, the sweeper shall be warranted to be free of defective materials and workmanship for a period of 36 months or 3,600 hours, whichever occurs first from the date of delivery. No exceptions.

The sweeper auxiliary engine shall be warranted for not less than 24 months or 2,000 hours, whichever occurs first from the date of delivery.

The vendor shall provide the written and precise terms of the warranty, with his bid.

**PART 2 - INSTRUCTIONS TO BIDDERS**

**2.1 BID SUBMITTAL**

A. The City of Meridian will accept competitive sealed bids until **11:00 AM, Friday,** **June 16, 2023** at City Hall Purchasing, 601 23rd Avenue, Meridian, MS 39301, for the purpose of purchasing a new Street Sweeper.

If City Hall is closed for business at the time bids are due, for whatever reason, sealed bids will be accepted and opened on the second business day of the City, at the originally scheduled hour.

B. Bids shall be submitted on the bid form provided, sealed in an envelope with the following plainly marked on the outside of the envelope:

1. Company Name and Address

2. Bid Name and Number

3. Opening Date

“**Bid on STREET SWEEPER – BID #23-23 – JUNE 16, 2023”**

C. Return the entire Bid package. **DO NOT** remove any part. All Bids must be signed by an authorized officer or agent of the company submitting the bid. **All signatures shall be in blue ink. DO NOT** **fax the bid submittal**.

D. All bids will be considered improper and rejected which contain bids not asked for, which do not bid on all items or subdivisions, or which do not contain prices in words and figures for all items given. In case of discrepancy, the amount in words will govern.

E. All prices and notations must be printed in ink, typewritten, or computer generated. No erasures permitted. Errors may be crossed out and corrections printed in ink or typewritten adjacent, and must be initialed in ink by the person signing the bid. Discounts other than the "time" discount offered should be deducted from the unit price. Bid prices must be net.

**2.2 SPECIFICATIONS**

A. Specifications may be obtained by contacting Eugene Perry. All procedural and technical questions, or if the attached specifications are incomplete, not clear, or not standardized, shall be made in writing and addressed to:

**Procedural Questions Technical Questions**

City of Meridian City of Meridian

Brandon Bridges, Purchasing Agent Anthony Dorman

601 23rd Avenue 311 27th Avenue

Meridian MS 39301 Meridian MS 39301

Ph 601-485-1940 Ph 601-485-1971

Fx 601-485-1979 Fx 601-485-1864

[brandonbridges@meridianms.org](mailto:brandonbridges@meridianms.org) [anthonydorman@meridianms.org](mailto:anthonydorman@meridianms.org)

Any bidder who finds a discrepancy in or omission from the specifications, or is in doubt as to their meaning, or feels that the specifications are discriminatory, shall notify the City Purchasing Agent in writing not later than five (5) days prior to the scheduled opening of the bid. Exceptions taken do not obligate the City to change the specifications.

B. This piece of equipment shall comply with all federal, state, and local laws binding upon this type of equipment.

C. Brands, other than those listed, may be acceptable with prior approval of the City. Any reference to manufacturers’ makes or series of equipment stated in the following specifications is intended only to establish an acceptable standard and is not intended to limit the bidding.

Used, prototype, re-manufactured, or otherwise rebuilt equipment shall not be bid.

D. Factory literature must be submitted with the bid to verify compliance with the specifications.

E. TEST / DEMONSTRATION: Bidder may be required, at no expense to the City, to make available for test/demonstration, material or equipment equal in all aspects to the bid, and/or equal material or equipment that may be seen under operating conditions.

**REFERENCES**

**STREET SWEEPER**

**BID #23-23**

Company Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Our company has successfully supplied street sweepers to the following entities:

1. Company Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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E-mail Address \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Company Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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4. Company Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**BID FORM**

**STREET SWEEPER**

**BID #23-23**

We are pleased to submit the following bid for

MAKE AND MODEL # \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

DELIVERY DATE: ­­­­­­­­­­­­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**TOTAL BID IN:**

**NUMBERS $\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**WORDS**

**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Dollars\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Cents**

**Amounts are to be shown in both figures and words.**

**In case of discrepancy, the amount in words will govern.**

**The price (s) quoted** **- shall be firm for 60 calendar days from the bid opening date.**

This checklist is for the Bidder’s use in preparing his bid. It is not intended that it include all details necessary to prepare a bid nor is it intended as a substitute for the requirement of the Specifications. Use of this checklist does not relieve the Bidder from the responsibility of meeting all requirements of the Specifications concerning the preparation of an acceptable bid.

**FAILURE TO PROVIDE EACH OF THE FOLLOWING ITEMS, 1 THROUGH 5,**

**WITH BID OFFERING, MAY RESULT IN THE BIDDER BEING DISQUALIFIED**

1. Entire Bid Packet - Pages 1 – 19

2. Warranty – Page 6

3. Literature – Page 7

4. References - Page 17

5. Addendums, if any

COMPANY NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MAILING ADDRESS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CITY, STATE, ZIP: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

CONTACT FOR BIDS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

E-MAIL ADDRESS: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

TELEPHONE NO: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

FAX NO: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Signature of Authorized Officer or Agent – (Blue Ink):**

SIGNATURE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_TITLE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**[ ]** We wish to submit a "NO BID" at this time but request that our com

**CITY OF MERIDIAN, MISSISSIPPI**

Diesel Powered 7.3 minimum Cubic Yard Volumetric Capacity

Municipal Street Sweeper

It is the intent of these specifications to describe a street sweeper in sufficient detail to assure that product reliability, design integrity, technical soundness and sweeping performance is provided. The unit provided shall be new, of current manufacture, and the model and series must have been in production a minimum of ten (10) years. 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 and quality of material and workmanship to what is normally provided to the trade in general.

The unit shall be delivered completely assembled, serviced and ready to operate. The bidder shall have a qualified service representative in attendance with the sweeper during startup operation to make any adjustments and give instructions to assure proper operation of the sweeper.

The sweeper shall be warranted to be free from defective materials and workmanship for a period of **three (3) years or 3,000 hours** from date of delivery.

The unit bid shall be a diesel-powered regenerative air sweeper mounted on a truck chassis.

COMPLIANCE TO SPECIFICATIONS

The bidder shall indicate their compliance with a “**YES**” or non-compliance with a “**NO**” for each line item specification. Any space left blank shall be considered non-compliance. Any **EXCEPTIONS** to these specifications must be clearly cited in writing and attached on a separate sheet of paper by the bidder. No deviations below “minimum” or above “maximum” specifications will be accepted.

SERVICE AGREEMENT (SWEEPER AND CHASSIS):

Winning bidder to perform scheduled maintenance “on site” every 90 days for three (3) years. Bidder shall provide complete and detailed description of all services to be performed at each 90 day service (ex: fluid and filter replacements, inspections, adjustments, etc.).

MANUALS/TRAINING

The bidder shall supply one printed sweeper operator’s and one printed sweeper parts and service manual and one set on CD with each unit.

Manufacturer shall have available certifiable training course for complete maintenance and operation of sweeper. Manufacturer must have scheduled a minimum of 25 training courses per year for convenience of customers scheduling.

Bidder shall provide operator school for 2 employees, 2 travel flights, 2 hotel rooms and rental car or shuttle from airport.

Bidder shall provide operator instruction/safety/maintenance procedures on DVD with the unit.

PAINT - COLOR

The entire unit shall be painted with manufacturers standard white paint applied over a suitable primer. Pick-up head, gutter brooms and truck frame shall be painted black.

REGENERATIVE AIR SWEEPER

POWER UNIT - DIESEL

The sweeper power unit shall be a diesel fueled, water-cooled, charge air-cooled, turbocharged electronic Final Tier 4 emissions John Deere 4.5L industrial engine, Model 4045t or equal Engine displacement shall not be less than 275 cubic inch developing not less than 99 HP @ 2200 RPM and 315 ft. lbs. torque @ 1600 RPM.

Cylinder construction shall be wet sleeve type.

Engine shall be equipped with a radiator fan, auxiliary drive, and engine mounted exhaust filter

Spin on replacement type oil filter remote mounted for easy access

Unit shall have a fuel/water separator and fuel filter remote mounted for easy access with water-in-fuel monitoring that will display a warning in the cab of the sweeper.

12-volt ignition, electric starter and minimum 90-amp alternator

Engine electronics shall use John Deere ECU module and CAN SAE J1939 or equal data link for communication.

Engine ECU shall be programmed to provide automatic engine monitoring and shutdown when engine problem is detected such as high coolant temperature, low coolant level, or low oil pressure.

All engine controls shall be located inside cab.

Unit shall share a 51-gallon fuel tank and batteries with chassis engine.

Unit shall have a heavy-duty dry type air cleaner with replaceable Power Core® element, safety element, scavenge vacuum hose, and integral precleaner.

Air cleaner restriction must be displayed to operator from control panel including air cleaner restriction percentage and filter service warning.

Engine shall be programmed for isochronous governor feature for engine speed control.

A heat exchanger assembly will provide adequate cooling for three different systems: engine coolant system, engine intake charge air and hydraulic system oil. It must be modular in design for ease of maintenance with each cooler located side-by-side rather than stacked in series. Air will be circulated through the heat exchanger assembly by an engine mounted fan.

A 5.4-gallon (volumetric), 3.8-gallon (useable), left rear mounted DEF tank shall supply diesel exhaust fluid to Selective Catalytic Reduction (SCR) system.

DUST SEPARATOR

Separation of the dirt and refuse from the air stream shall be accomplished within the hopper by means of a multi-pass cylindrical centrifugal single chamber dust separator with a minimum size of 20" diameter and 61" width. The separator shall be designed so that it will not plug with normally encountered debris.

The dust separator shall have a minimum 24" x 61" curved, easy to open door allowing inspection and cleaning of the interior. The door shall have an abrasion resistant bonded rubber lining material for long life.

The dust separator shall incorporate a chamber to accumulate the separated material.  The chamber shall be a minimum 16” x 8” x 61”.

The entire dust separator inlet area shall be lined with a bolt-in replaceable, wear resistant rubber liner for long life.

A 61" x 84" steel screen of not less than 13 gauge shall be provided to allow air to move freely from the hopper into the centrifugal dust separator.

Filters and baffles not acceptable due to increased cost of replacement and cleaning.

HOPPER

Hopper size to be approximately seven and three tenths (7.3) cubic yard volumetric measurement with an operating load capacity of not less than 6 cubic yards.

Dumping shall be accomplished by means of hydraulically actuated cylinders attached to a rear door which shall have a minimum opening of 84" x 44" with a raker bar moving inside hopper as door is opened and closed to dump debris behind the rear wheels.

Hydraulic cylinder movement shall be controlled with the use of an electric toggle switch located on the side of the hopper so discharging of debris may be viewed during dumping for maximum safety.

The hopper floor shall be sloped for easy dumping.

Hopper door shall be opened and closed hydraulically and be held in the closed position by means of a lock valve located in the hydraulic dump circuit.

A 9.75"x 29" inspection door shall be provided on both left and right side of the hopper for easy viewing inside hopper and insertion of large debris.

Hopper shall be maintained airtight through use of rubber seals on all doors and openings.

Hopper suction inlet roof area shall have a bolt on replaceable Ultra High Molecular Weight (UHMW) wear resistant liner 3/8"x11"x10'.

An SAE Class 1 or equal compliant amber LED beacon light shall be mounted on the rear of the sweeper hopper. The beacon light shall have a protective limb guard.

Two (2) work lights shall be mounted at the rear of the hopper to illuminate the dump area.

Two (2) amber LED flashing warning lights shall be mounted at the rear of the hopper.

Abrasion protection package shall be furnished with standard hopper screen with screen baffles; protective hopper wall liners; suction nozzle liner; pressure wear pads; heavy duty pressure hose.

Hopper Deluge System with high volume nozzles which attach to a fire hydrant to flush the hopper shall be furnished and shall include quick disconnect fittings on nozzle and filler hose.

HYDRAULIC SYSTEM

The hydraulic system shall be adequate for use within the design requirements of the sweeper. The system shall include a minimum 25-gallon reservoir, sight gauge, temperature gauge, high temperature automatic shutdown system controlled by BlueLogic, 80 mesh suction strainer, spin-on replaceable full flow oil filter, restriction indicator, hydraulic cylinders, gutter broom drive motors, control valves, relief valves, oil cooler, hydraulic hoses and standard fittings.

Mobil DTE 25 hydraulic oil or equal shall be provided for extended service life.

The hydraulic pump shall be driven by the auxiliary engine.

Pressure shall be 2500 PSI maximum for gutter brooms and 1500 PSI maximum for pick-up head and dump door.

An auxiliary hydraulic system shall be furnished which electrically operates the hydraulic system without running the auxiliary engine to raise/lower the gutter broom(s), pick-up head and open/close the dump door.

BLOWER

Heavy duty, wear resistant, high strength cast aluminum alloy turbine type open face blower computer balanced within 4 grams shall be provided to create air pressure and suction.

Blower wheel shall be covered with wear resistant rubber for long life.

Blower shall be mounted on self-aligning anti-friction bearings, sealed and lubricated for life. If bearings are not sealed, then an automatic lube system must be furnished.

Blower shall be driven from PTO off auxiliary engine by heavy duty power belt which shall be adjustable for tension.

Blower housing shall be a bolt on design and shall be lined with a bolt-in wear resistant, replaceable rubber liner for long life.

Blower not to exceed 3000 RPM to insure smooth efficient performance.

Pick-Up Head - Broom Assist (BAH)

A spring balanced all steel fabricated pick-up head with maximum length and width of 87" x 41" I.D. shall be provided.

The pick-up head shall have a separate upper and lower chamber where pressurized air is blasted from upper chamber through an elongated blast orifice to street surface.

Blast orifice flange shall be of bolt-on design so that flange is easily replaced and shall have adjustment mechanism so that blast orifice gap is easily adjusted without removing pick-up head from sweeper.

Pick-up head shall have a 14-inch diameter (minimum) pressure inlet ring located on left side of pick-up head.

A 14-inch diameter (minimum) pressure hose attached between pick-up head and blower housing shall be provided.

A bolt-on pressure inlet ring with turning vanes shall be provided for efficient performance and easy service.

A 14-inch diameter (minimum) suction hose, attached to a quick disconnect transition at the hopper, shall extend down to the right side of the pick-up head and shall be attached to the pick-up head suction nozzle ring which shall be constructed of 1/4-inch steel.

Suction hose shall have a minimum 3/8-inch wall construction for long life.

Pick-up head shall be equipped with 2" wide adjustable side mounted integral alloy steel and carbide runners for maximum pick up ability and long life. Skid runners to be warranted for 2 years/2,000 hours prorated. Runners shall be symmetrical for optimum life.

Pick-up head shall be raised and lowered hydraulically by a single switch on the control panel.

Pressure inlet ring shall be equipped with an adjustable pressure relief for optimum leaf and light debris sweeping; control shall be mounted inside cab.

A broom shall be mounted at the rear of the pick-up head and shall be fully enclosed.

Control of broom rotation and positioning shall be accomplished by a single toggle switch located on the control console in the cab.

The broom shall be driven hydraulically at 230 RPM. A separate hydraulic pump will be provided for all broom functions.

The broom shall be 79" long and 12" in diameter.

Broom pattern shall be easily adjustable by mechanisms on the top of pick-up head.

Nominal broom replacement time shall be 20 minutes.

Design of broom suspension shall provide automatic independent positioning of each broom end to conform to the surface being swept.

Two (2) hydraulic cylinders shall be incorporated to provide positioning and the independent suspension of the broom ends.

Down pressure and broom pattern shall be hydromechanically controlled to provide maximum broom performance and life.

Reverse Pick-Up Head System shall allow unit to back up without damage to pick up head.

Hydraulic pick-up head front curtain lifter shall be provided to give the pick-up head the ability to sweep a large volume of light debris such as leaves, grass, paper, etc. without causing excessive debris accumulation at the pick-up head inlet. It shall be hydraulically controlled with a switch within the cab of the truck.

GUTTER BROOM(S)

Twin gutter brooms shall be 43-inch minimum diameter, steel wire filled vertical digger type for removing debris from gutter area.

Gutter broom(s) shall be hydraulic motor driven and shall be positioned laterally and vertically by one hydraulic cylinder.

Gutter broom down pressure shall be automatically adjusted to load by a pressure sensing sequence valve in line with gutter broom torque motor.

Each gutter broom shall have adjustment for bristle contact pattern and wear.

Each gutter broom shall have lateral flexibility to swing rearward 15" when encountering the impact of an immovable object thus avoiding damage to the broom assembly.

Each gutter broom shall have a spring adjustment to allow downward compensation for bristle wear and shall be free floating to follow street contour.

Each gutter broom shall be held in the up and transit position by use of an electric lock valve attachment. Upward motion of gutter broom shall be regulated by an adjustable flow control valve.

Each gutter broom shall be controlled from inside the cab by a single electric toggle switch.

Left and right gutter brooms shall additionally incorporate a hydraulically 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).

Gutter broom shall be variable speed and controlled from operator console inside the cab.

DUST CONTROL WATER SYSTEM

Water tanks shall be 220 gallons total capacity, constructed of recyclable polyethylene for strength and puncture resistance, be 100% rustproof, be of bolt-in design for easy removal, and have a water level sight gauge.

Water from tank to be filtered by 80 mesh cleanable filter located between tank and water pump.

A belt driven Cat 290 piston or equal water pump delivering up to 3.5 GPM with a 55 PSI system relief pressure and with an electronic solid-state liquid level sensor to automatically shut off pump and turn on low water warning lamp when water is depleted.

Hi/low pressure wash down system with self-contained water supply; 25' high pressure, low volume wash down hose, a belt driven Cat 290 piston water pump or equal (delivering up to 3.5 GPM with a 1000 PSI working pressure); a wand with trigger control and two interchangeable lance lengths of 36" shall be furnished.

Electric solenoid water control valves shall be cab controlled. Spray system shall include spray nozzles to be located as follows: minimum of 4 on outside of pick-up head; 2 for each gutter broom; 1 inside hopper. Water nozzles to be located on outside of pick-up head and suction tube for easy inspection and superior dust control.

Water tank shall have anti-siphon/anti-pressure filler neck with air gap.

Flexible 20 foot (minimum) long water fill hose with 2½ inch coupling for filling water reservoir and hose storage rack shall be provided. Water fill hose shall include a stainless 100 mesh cleanable filter.

High output water system shall be furnished with additional nozzles and deflectors strategically located to control extreme dust.

Air purge system shall be furnished to facilitate purging dust control system during freezing conditions.

Hydrant wrench shall be furnished.

HAND HOSE EQUIPMENT

Heavy Duty Auxiliary Hand Hose with Hydraulic Boom and Remote Control to control the boom (up/down), the auxiliary engine speed (up/down) and stop the auxiliary engine utilizing a wireless control system. It shall include a receiver mounted in the truck cab and two (2) transmitters; one is a hand-held fob and the other is a box mounted on a quick release handle on the hand hose nozzle.

AUTO SWEEP INTERRUPT (ASI)

System designed to interrupt sweeper functions when several parameters are met. When set in Auto mode, the transmission gear placed in reverse and the “ASI RESET” switch being engaged are two of several parameters that can engage ASI. Auto sequence of operations as follows for equipped and active features: 1) Auxiliary engine is idled and gutter brooms are stopped 2) Dust control system is turned off. 3) Left gutter broom is raised. 4) right gutter broom is raised. 5) Pickup head is raised. The “ASI RESET” switch will reposition all functions to prior settings and can be used as a one button start/stop switch during sweeping to interrupt/resume all sweeping functions. Several ASI features are configurable and can be enabled/disabled through the Blue Logic display under the PIN protected “User Settings” tab. Some of these features are: Overspeed interrupt, Reverse Trigger Bypass, RPM Return

OPERATING CONTROLS

All operating controls for sweeper (including dump control) shall be mounted inside truck cab and readily accessible to the operator in either right or left driving position.

All main electrical systems, i.e. ignition, lights, hydraulic and water shall be separately fused to isolate electrical problems to fused area and speed service.

All main sweeping functions shall be operated via a Blue Logic® (multiplex) control system with LED diagnostics and integral solid-state circuit protection.

Auxiliary engine controls shall be mounted on console panel.

A multi-function, high resolution, LCD, color touchscreen Blue Logic display shall be pedestal mounted on or near the console panel to display engine conditions consisting of, but not limited to engine RPM, percent load, engine torque, engine hours, engine oil pressure, coolant temperature, air filter restriction, battery voltage, fuel rate, and engine faults codes.

The display shall also provide On Board Sweeper Diagnostics that includes but is not limited to: CAN Network Diagnostics, Blue Logic Module Input/Output and Power Diagnostics, and Service Reminders.

The display shall provide visual indicator lights for several sweeper functions and warnings including, but not limited to, dust suppression water pump, low water, pick-up head down, etc.

The sweeper console shall incorporate resettable and non-resettable hour meters for the auxiliary engine; left hand, right hand and BAH brooms (if applicable); pick-up head; and blower for collecting data about sweeping route performance and maintenance. It will also store hydraulic system and engine service timers.

Standard sweeping function switches will be multiplexed with Blue Logic reducing the amount of wires in the control panel. Blue Logic switches will have multi-colored LED indicator lights providing enhanced operator feedback.

Standard sweeping functions switches shall consist of, but not limited to, right gutter broom, left gutter broom, pick-up head, engine rpm, and water system.

Miscellaneous and optional sweeper controls shall consist of, but not limited to, gutter broom tilt, beacon or strobe light, water system circuits, dump door, and work light lighted switches, and leaf pressure bleeder lever (if applicable).

\_\_\_\_\_\_ Audible alarms shall include, but are not limited to indications of the following: auxiliary engine fault codes and derates, high hydraulic oil temperature, low dust control water, exceeding maximum recommended sweeping speed, and other optional warning equipment.

All external wiring, harnesses and terminations shall be of a sealed, weather-tight design utilizing heat-shrinkable components. Additionally, where feasible, all connectors shall utilize solid, cold-formed, nickel-plated copper alloy contacts with gas-tight crimps (Deutsch) preferred or equal.

Dump control shall consist of a single weatherproof toggle switch located on the exterior of sweeper just above the left side fender well.

Auxiliary Fuse Panel isa +12VDC fused power source panel for any needed additional electrical components or accessories i.e. radios, warning lights, controls, etc.

Overspeed warning system shall be equipped to alert the operator when sweeping at an excessive speed and can be adjusted with PIN code with ranges from 5-20 mph.

Auto Sweep Interrupt (ASI) with Overspeed Interrupt shall be furnished. It is an electronic circuit that is designed to accomplish the following sequence of operations when the transmission gear selector is placed into reverse or when sweeping at an excessive speed with the ASI set in the Auto mode: 1) The auxiliary engine is idled. 2) The water system is turned OFF. 3) The gutter broom is stopped and raised. 4) The pick-up head is raised. A reset switch will reposition all functions to prior setting(s). The reset switch can be used as a one button start/stop switch during sweeping to interrupt/resume all sweeping functions. ASI Overspeed Interrupt can be adjusted with PIN code. From 5-20 mph the operator will receive a warning and at 8-25 mph the Auto Sweep Interrupt will engage depending on ranges set.

Dump Switch in Cab is located on the control panel to activate dump operation from inside cab.

REAR VISION CAMERA SYSTEM

Heavy duty rear infrared camera with 7” color monitor mounted in cab to

CHASSIS

GENERAL

Chassis/cab shall be conventional with a tilt hood. Frame to be straight full channel steel rails (80,000 PSI). Gross vehicle weight rating to be not less than 31,000 lbs. Curb weight with cab, fuel, water, oil and tires shall be approximately 9,300 lbs. Standard truck cab enclosed and equipped with tinted safety glass all around and two individual, adjustable, high back air seats with lumbar support and safety orange seat belts. (Sliding windows not acceptable.)

WARRANTY

Total chassis coverage is 24-months/unlimited mileage.

Engine (diesel) coverage is 36-months/150,000 miles.

Drive train coverage is 24-months/unlimited mileage.

\_\_\_\_\_\_ Transmission coverage is 60-month/unlimited mileage.

Frame coverage is 60-months/unlimited mileage.

Cab corrosion coverage is 60-months/unlimited mileage.

(Warranty coverage is 100% parts and labor unless otherwise noted as provided by chassis manufacturer.)

WHEELBASE

Chassis shall have a maximum wheelbase of 165".

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AXLES

Front axle to be minimum of 10,000 lbs. with taper-leaf suspension of 10,000 lbs.

Rear axle shall be 21,000 lbs. suspension to be minimum of 31,000 lbs. vari-rate with 4,500 lbs. capacity multi-leaf auxiliary rubber spring.

STEERING

Dual operator controlled integral power steering with cruise control, tilt and dual gauge package.

Diameter of steering wheel will be minimum 18".

BRAKES

Service brakes to be full air with 18.7 cfm air compressor.

Air tank drain valve, manual with pull cable.

Front brakes shall be 15" x 4" and have front shock absorbers.

Rear brakes shall be 16½" x 7" with dust shields.

Shall have automatic slack adjusters front and rear.

Parking brakes shall be spring actuated, double diaphragm, Chambers air chambers, with warning light.

Brake chambers, spring relocated to rear of rear axle for maximum ground clearance.

4-Channel anti-lock brake system shall be provided.

An air dryer with heater shall be furnished.

CAB

Cab shall have in-dash chassis manufacturer's factory installed air conditioner for operator safety and comfort with a fresh air filter. After market air conditioners are unacceptable.

Cab to have individual driver and passenger air, high back adjustable seats with cloth inserts and lumbar supports.

Tinted glass shall be provided.

External grab handles on the left and right side with standard interior grab handles shall be provided.

Dual sun visors, coat hook, storage pocket on driver door, power source, electric horn, electric windshield washer and 2 speed electric wipers with intermittent wiper switch shall be provided.

Chassis shall be equipped with fresh air heater, defroster, dual 7" x 16" remote controlled heated electric powered mirrors, and two separate 10.5" diameter parabolic mirrors.

AM/FM stereo radio with clock and auxiliary input shall be provided.

Chassis Hour Meter shall record truck engine hour operation.

Power windows and door locks shall be provided.

Front tow hooks shall be front bumper mounted.

ELECTRICAL

Shall consist of two, multiple beam headlights with dash beam indicator, daytime running lights, instrument panel, taillights, stop lights, front and rear turn signals, and self-canceling signal switch, equipped for four-way flashing. Taillights, stop lights and signal lamps may be in combination.

Shall have two 12volt (1900 CCA total) maintenance free batteries.

Shall have a 160-amp alternator.

Battery disconnect switch shall be provided.

ENGINE/EXHAUST

Shall be In-Line Six turbocharged and air-to-air intercooled diesel with a minimum 200 HP at 2400 RPM, 6.7L, 520 lb./ft. torque @ 1600 RPM.

Horizontal aftertreatment device, right frame mounted. Includes single horizontal tail pipe.

Dual element dry type air cleaner with restriction indicator mounted on cleaner.

Automatic glow plug with indicator light shall be supplied.

Automatic shutdown/over temperature protection engine coolant.

A 6-gallon, DEF tank shall supply diesel exhaust fluid to Selective Catalytic Reduction (SCR) system.

An Engine Block Heater shall be furnished.

FUEL

A 51-gallon tank shall be supplied and shall supply fuel to both engines.

TIRES AND WHEELS

Heavy duty first line quality tubeless tires to be minimum 11R x 22.5, 14 ply rating with duals in rear for adequately carrying full load of sweeper and maximum stability.

Wheels to be 10-hole disc 22.5 x 8.25 DC.

TRANSMISSION

Shall be heavy duty Allison 2500 RDS or equal electronic, six-speed, automatic, with external oil filter.

A transmission temperature gauge shall be supplied.

Synthetic transmission oil shall be supplied.