

ADDENDUM NO. 1

**RFP #201819-01
Clean Diesel Regenerative Air
Sweeper**

Dated: 11/20/18



Issued by: Rosa Hernandez, Procurement Services Manager
CITY OF MADERA
Purchasing – Central Supply
1030 South Gateway Drive
Madera, CA 93637

The foregoing documents are amended in the respects as herein set forth. This addendum and the amendments herein shall become part of said documents and of any contract entered into pursuant to said documents.

Title of RFP – Replace “8 Cubic Yard Clean Diesel Regenerative Air Sweeper” to “Diesel Regenerative Air Sweeper”. Note that all references in the RFP to the previous title will adhere to the new title as amended in this Addendum.

Submission deadline has been extended from November 27, 2018 to December 11, 2018.

Deadline for Questions and suggestions has been extended from November 19, 2018 to December 3, 2018.

Section 1.0 added to Section 1. INSTRUCTIONS AND CONDITIONS as follows:

- O. An award under this RFP will not be based solely on the lowest price. Proposals will be evaluated by a committee and each proposer will be scored on a point system. If an award is made, it will go to the bidder with the highest score.

Each proposer will be scored on the following point system, with a maximum of 100 points.

Price	45 points
Delivery Date	20 points
Conformity to Specification	35 points

Section 2. A & B in it's entirety to be replaced with the following updated Specifications:

SECTION A - CHASSIS

CHASSIS 2018 or newer Model Year.

Compliance

- _____ 1. Chassis will be conventional design with a minimum 33,000 GVW rating. State chassis make, model and point of manufacture
- _____ 2. Chassis wheel base shall be configured to provide sufficient turning radius to allow efficient sweeping access to cul-de-sacs, turn lane nose-outs and other curved curbed areas. Manufacturer may be required to demonstrate turning radius capabilities.
- _____ 3. For safety, the rear of the sweeper shall be equipped with a rear panel to provide under ride protection. When dumping debris, material shall not be discharged on top of the rear panel.
- _____ 4. Two frame mounted front tow hooks shall be provided
- _____ 5. Unit to have the capacity to carry 50 gallons of onboard diesel fuel in one or two tank configurations. All tanks shall be easily accessible without raising or shifting any components. A fuel gauge, in cab, shall be supplied. Sight tube is not acceptable.
- _____ 6. Diesel emissions shall be EPA 2018, with on-board diagnostics (OBD) and have a minimum capacity of 3 U.S. gallons diesel emissions fluid

CHASSIS ENGINE:

- _____ 1. Truck engine shall be 2018 California Air Resources Board Emission Compliant, turbocharged diesel, approximately 200 HP @ 2300 RPM, 520ft-lbs. @ 1600 RPM.
- _____ 2. Truck engine shall be equipped with a single vertical or horizontal exhaust system. Exhaust shall not extend above top or sides of sweeper housing.
- _____ 3. Engine shall be equipped with block heater.
- _____ 4. Radiator fan shall be viscous drive type.

AUXILIARY ENGINE: (OPTIONAL)

- _____ 1. If equipped, auxiliary engine to be mounted on sweeper for easy access and to minimize noise levels in cab during sweeping operation.
- _____ 2. The sweeper power unit shall be a diesel fueled, water cooled, CARB tier 4 Final emissions certified, industrial engine.
- _____ 3. If equipped, auxiliary engine shall incorporate a diesel fuel system that is B20 diesel compatible.
- _____ 4. 12-volt ignition, electric starter and minimum 90 amp alternator with charge indicator gauge mounted on control console in cab.
- _____ 5. Electric linear actuator/revolution limiter for power unit throttle control.
- _____ 6. A suitable size work platform will be provided to allow safe access to auxiliary engine area if the auxiliary engine placement, chassis wheelbase, and sweeper configuration provides sufficient area to allow a work platform to be installed.
- _____ 7. Access will be accomplished from the ground level by steel steps covered with anti-skid grating and proper size grab handle to insure maximum safe entry and exit from work platform.
- _____ 8. Work platform, if installed, will have suitable safety rails to provide a safe work area.

TRANSMISSION, AXLES, WHEELS & BRAKES:

- _____ 1. An automatic transmission shall be provided. Transmission to be fitted with an external spin-on type filter
- _____ 2. Sweeper shall include a rear axle having a gear ratio properly suited for engine/chassis configuration and capable of maintaining speeds appropriate for maximum sweeping efficiency.
- _____ 3. Front axle shall be minimum 12,000 lb. and be equipped with taperleaf front suspension and shock absorbers.
- _____ 4. The rear axle shall be 21,000 lb. or greater.
- _____ 5. For safety, and to allow the emergency interchange of tires at a job site, the front and rear tires and rims shall be interchangeable.
- _____ 6. Tires shall be tubeless radial tires 14 ply 11R 22.5 "G" load rated. The rear axle shall include dual tires for load capacity; singles will not be

acceptable.

- _____ 7. Rims shall be 10-hole steel hub piloted 22.5 x 8.25
- _____ 8. Parking brake shall be spring applied rear wheel drum and shoe.
- _____ 9. Brakes shall be full air brakes S Cam with 18.7 CFM capacity compressor, with automatic slack adjusters and ABS.
- _____ 10. Air system shall include an air dryer with heater.

CAB:

- _____ 1. Maximum visibility, forward line of sight from the chassis front bumper to the point on the ground visible to the operator shall not exceed 8 feet for an SAE 98th percentile size operator.
- _____ 2. Steering shall be full power with dual operator controls.
- _____ 3. Seats shall be adjustable, high back, covered with cloth for air circulation and include 3 point seat belts. Seats shall be air ride on both sides.
- _____ 4. Sweeper shall include two (2) remote control, outside west coast type mirrors with lower 8-inch convex lens for easy viewing of the side broom during sweeping.
- _____ 5. To maximize operator visibility of the curb and sweeping gear, a 12" outside RH and LH fender mirror shall be mounted forward of the front wheels.
- _____ 6. For safety during night sweeping, switches shall be illuminated so that they can be readily identified without the use of the cab dome light.
- _____ 7. Switches shall be clearly identified by name and symbol.
- _____ 8. Cab interior environment shall be fully air-conditioned including a fresh air heater/ventilator/defroster.
- _____ 9. Cab shall have full flow through ventilation for optimal temperature control and operator comfort.
- _____ 10. Wipers shall have intermittent feature.
- _____ 11. Interior of cab shall have acoustical insulation for low operating noise, automotive type trim, and center sweeper console.
- _____ 12. All glass shall be tinted safety glass.

- _____ 13. Each operator position shall have adjustable sun visor.
- _____ 14. Doors shall be equipped with keyed alike locks.
- _____ 15. Door windows shall be roll up type.
- _____ 16. Side windows shall have defogger.
- _____ 17. Cab shall include two 12V power supplies
- _____ 18. Radio shall be factory AM/FM with standard speakers.
- _____ 19. Dual Electric horns shall be provided.
- _____ 20. Adjustable tilt steering wheel

INSTRUMENTS:

- _____ 1. Chassis left side operator instrument panel shall be chassis OEM, full vision illuminated with tachometer, speedometer, odometer, trip odometer, hour meter, fuel gauge, water temperature gauge, oil pressure gauge, transmission temperature gauge, air pressure gauge, and volt gauge.
- _____ 2. Chassis right side operator instrument panel shall be chassis OEM, full vision illuminated with tachometer, speedometer, fuel gauge, water temperature gauge, oil pressure gauge, transmission temperature gauge, air pressure gauge, and volt gauge.
- _____ 3. Chassis engine instruments shall include warning light and chime for low coolant level, low oil level, and high coolant temperature to warn the operator of a potential problem before any damage to the engine occurs.
- _____ 4. Console shall have left/right primary driver switch.
- _____ 5. Hydraulic functions shall be controlled by rocker switches located in the cab mounted control panel.
- _____ 6. Truck instruments shall include warning lights for battery.
- _____ 7. All console switches including transmission controls and all gauges shall be illuminated.
- _____ 8. Intake mounted air restriction indicator with graduations.

ELECTRICAL:

- _____ 1. Batteries should be located in an enclosed accessible environment for long life and ease of service.
- _____ 2. Chassis shall have maintenance free batteries rated at not less than 1850 CCA total, 12-volt.
- _____ 3. Chassis engine shall have a minimum 160 amp alternator
- _____ 4. Chassis lighting shall include sealed multi-beam halogen head-lights, stop lights, tail lights, backup lights, license plate lights, clearance lights, signal lights, illuminated gauges and instrument panel, and directional lights with hazard switch.
- _____ 5. Chassis lighting shall include gutter broom spot light on each side, and two rear mounted work lights.

OTHER CAB ACCESSORIES:

- _____ 1. Unit to include 17" Catwalk behind cab to facilitate access to auxiliary engine, if applicable.

SECTION B – SWEEPER MODULE:

SWEEPER GENERAL:

Compliance

- _____ 1. Sweeper shall be new PM-10 certified regenerative air street sweeper.
- _____ 2. The sweeper shall be equipped with a variable speed device (Single engine models only). The variable speed device uses the chassis engine to power the chassis propulsion and the sweeper components.
 - _____ a. The variable speed device shall be located between the chassis engine and the transmission for maximum efficiency.
 - _____ b. The variable speed device shall be capable of directly driving hydraulic pumps without the use of auxiliary Power Take Off's (PTO's) or belt drive systems.
 - _____ c. The variable speed device shall be a planetary gearbox design; varies the input to output ratio. The system provides variable sweep speed operation through the chassis transmission and

also directs engine powered PTO for the sweeper components.

- _____ d. The variable speed device "speed" control pump shall operate directly off the chassis engine coupling in all modes - "Work Mode" or "Road Mode". This pump shall provide variable operating flow - managing the ratio of input to output - for the variable speed device. The system shall include an electronic control module which manages pump flow.
- _____ e. The variable speed device shall operate directly off of the chassis engine coupling in all modes - "Work Mode" or "Road Mode". For the sweeper, the variable speed device PTO shall power a blower drive and sweeper pump through a conventional drive shaft.
- _____ 3. To accommodate both easy access and sound attenuation, the front cowling shall be enclosed on both sides by two access doors, one on each side of the sweeper body. These doors provide access to serviceable items without tilting the hopper.
- _____ 4. Front cowling and access doors shall use acoustical insulation to sustain minimal ambient noise levels.

BLOWER:

- _____ 1. Blower shall be hydraulically or belt driven. Hydraulically driven blowers shall be directly coupled to its motor to maximize efficiency. Minimum operating speed of the fan must be at least 3,300 RPM. Belt driven blowers shall be driven by a "V" groove power belt for maximum performance and simplicity of construction, with manual tension adjustment not requiring repositioning of the engine.
- _____ 2. The blower housing shall be constructed of 10-gauge steel and lined for maximum extended wear in abrasive environments.
- _____ 3. Blower housing shall have an inspection door for quick inspections without removing the blower housing or looking into the air exhaust opening.
- _____ 4. Blower housing shall not be an integral part of the hopper. Replacement of the blower housing must be possible without any cutting and/or welding of the housing and or hopper.
- _____ 5. The blower must not be directly exposed or open to the dust separator to preclude carry-over of material from the separator into the blower and

blower housing.

- _____ 6. The (optional) single-engine system, driven by the variable speed device, shall provide all horsepower for blower speed to effectively convey the bulk of material into the debris hopper; debris types such as but not limited to trash, sand, gravel, dirt, leaves and other organics.
- _____ 7. Blower shall be a closed face turbine type, constructed of steel for optimal combination of hardness and abrasion resistance for maximum service life. An open-faced blower is not acceptable.
- _____ 8. The blower shall be mounted and supported on both sides by heavy-duty greaseable bearings. Greasing of the bearings must be possible from ground level, without tilting the hopper. Only greaseable bearings are capable of tolerating the blower speeds required to produce simultaneous high air flow and high vacuum levels.

PICKUP HEAD:

- _____ 1. The pickup head is a spring-supported, all steel fabricated pickup head with separated upper and lower chambers where pressurized air is blasted from the upper chamber through an elongated blast orifice, to the lower vacuum chamber.
- _____ 2. The pickup head shall not be less than 90 inches wide and 30 inches long for a total area of 2700 square inches.
- _____ 3. The pickup head shall have a minimum of 14-inch diameter pressure hose that connects the blower outlet with the pickup head.
- _____ 4. The pickup head shall have a minimum 12 3/4 inch diameter suction hose with a quick disconnect coupling at the lower end near the pickup head. The quick disconnect enables the operator to inspect the suction hose as well as the inlet area of the pickup head without tilting the hopper.
- _____ 5. The pressure side shall be equipped with a pressure relief valve/vacuum enhancer/leaf bleeder, for optimum leaf and light debris sweeping.
- _____ 6. The front and rear debris curtains shall be removable without removing the pickup head from the unit.
- _____ 7. Minimum sweeping paths:

Pickup head only = 87 inches

One side broom and pickup head = 117 inches

Two side brooms and pickup head = 144 inches

- _____ 8. The pickup head shall be equipped with side mounted adjustable steel runners with carbide inserts with a minimum width of 1 1/8 inches for long life
- _____ 9. The pickup head shall be raised and lowered hydraulically by a rocker switch on the control panel inside the cab.

BROOMS:

- _____ 1. The right and left side broom shall be a free floating trailing arm design intended to prevent damage when sweeping and encountering a fixed obstacle.
- _____ 2. The side brooms shall be 42-inch diameter minimum, with hydraulically driven rotation.
- _____ 3. Brooms shall be pneumatically or hydraulically raised, lowered and suspended.
- _____ 4. Adjustable, tilt, and down pressure shall be controlled by the operator from the cab in order to maintain proper surface contact consistently during vertical broom travel.
- _____ 5. The broom hydraulic motor drive shall provide not less than 6045 in-lbs. of torque for superior digging power and speed.
- _____ 6. The side broom assemblies shall have greaseable pivot pins.
- _____ 7. The side broom assemblies shall be held in the storage position by a positive means to support broom during travel.
- _____ 8. Each side broom shall be controlled from in the cab by rocker switches.
- _____ 9. When extended, brooms shall not exceed 60 inches from center of **FRONT** hub to center of broom head as measured along a line between the front and rear hubs oriented perpendicular to the front and rear axles. If compliance with this specification item is not achievable, manufacturer may be required to demonstrate units turning radius.

HOPPER:

- _____ 1. Volumetric capacity shall be at minimum 7.3 cubic yards class hopper.
- _____ 2. Hopper shall be constructed of 10-gauge steel sides, and ¼ in. steel floor.
- _____ 3. The hopper floor angle when dumping shall be a minimum of 50°. Dumping shall be accomplished by tilting the hopper. Dump cylinder must have capacity to tilt and dump with full hopper.
- _____ 4. The hopper floor angle shall be a minimum of 10 ° to assist in easy dump-off of debris.
- _____ 5. The hopper shall have an external hopper prop. No exception to this feature shall be accepted.
- _____ 6. The hopper rear door shall be hinged at the top and opened by means of a hydraulic cylinder. The hopper door shall open first prior to tilting the hopper. The hopper rear door should open at a minimum angle of 90 ° and be perpendicular to the hopper opening for maximum dumping action.
- _____ 7. Hydraulic cylinder movement shall be controlled by two hydraulic valve levers located on the right-hand side of the hopper to view discharging of debris out of the hopper during dumping for maximum safety.
- _____ 8. The rear hopper door shall have an external door prop. No exception to this feature shall be accepted.
- _____ 9. The hopper rear door shall include an automatic lock mechanism for a tight fit and optimal sealing between the hopper and the rear door.
- _____ 10. The rear door seal shall be a water resistant heavy-duty reinforced D style rubber seal for optimal sealing. Foam seals that can absorb moisture and freeze are not acceptable.
- _____ 11. Screens of not less than 11- gauge steel shall be installed to allow air to move freely from the hopper into the centrifugal dust separator. The hopper screens shall be hinged and easily lowered for cleaning and inspection without tools or pin's removal.

DUST SEPERATOR:

- _____ 1. Dirt separation from the air stream shall be accomplished by means of a Labyrinth style dust separator that is installed at the air outlet of the hopper. The separator shall be designed so that it will not plug with debris.

- _____ 2. To allow inspection and cleaning of the separator interior, the dust separator shall have minimum of two hinged inspection doors. Both doors are self-opening when tilting the hopper.
- _____ 3. To allow automatic discharge of debris when tilting the hopper, the dust separator shall have a self-opening door made of abrasion resistant steel. Cable or other manual/mechanical means required for discharging the separator are not allowed.

SPRAY WATER SYSTEM:

- _____ 1. The water tank shall be a removable, 240 gal. total capacity. Constructed of rust-proof polyethylene.
- _____ 2. A minimum 16 ft. fill hose with NST coupling with strainer shall be supplied.
- _____ 3. A water level gauge shall be provided on the control console within the cab.
- _____ 4. All water lines shall be color coded for easy identification.
- _____ 5. The water filter must be accessible and cleanable from ground level without tilting the hopper. A ball valve must be provided at the filter inlet to allow cleaning of the filter without the loss of water from the water tank.
- _____ 6. All water piping shall be external to the operator cab. No water lines capable of leaking or bursting shall be within the cab.
- _____ 7. Three (3) water spray nozzles are located at each side broom for optimal dust control. A pivoting bracket is provided to allow for optimum positioning of the side broom spray nozzles.
- _____ 8. Seven (7) easily removable water spray nozzles are located inside the pickup head. Water spray nozzles that spray only on the outside of the pickup head are not acceptable.
- _____ 9. Three (3) removable water spray nozzles are located at the lower portion of the suction hose for lubrication of the suction hose and to further enhance dust control.
- _____ 10. Electric 12-volt, diaphragm type pumps will provide a capacity for 8 GPM @ 40PSI to the pickup head, the suction hose and the side brooms.
 - _____ a. One water pump is dedicated to supplying water to the pickup

head and the suction hose for dust control.

- _____ b. One water pump is dedicated to the side brooms for dust control.
- _____ 11. Each water pump must have two flow rates, selectable by the operator from within the cab and capable of running dry without damage.

HYDRAULIC SYSTEM:

- _____ 1. Hydraulic pump shall be a gear driven, gear style pump for maintenance free operation, having a minimum flow capacity of 22.5 GPM @ 3400 RPM. This shall be used for the sweeper brooms, hopper dump, and pickup head raise/lower system.
- _____ 2. Reservoir capacity shall be not less than 20 gallons and have an exterior sight gauge. The reservoir must be located for quick inspections without tilting the hopper.
- _____ 3. All hydraulic circuits shall have quick disconnect pressure check ports for ease of maintenance.
- _____ 4. Hydraulic oil cooler shall be standard to provide adequate cooling with fresh air intake and accessible without raising the hopper. The hydraulic system shall operate below 200°F.
- _____ 5. To minimize the hazards of potential leakage, all high-pressure fittings shall be O-Ring Face Seal (ORFS) type.
- _____ 6. Hydraulic system shall have 10-micron spin on filter.

PNEUMATIC SYSTEM:

- _____ 1. There shall be a PR4 protector type pressure protector for the chassis air system
- _____ 2. A separate air tank for the sweeper air components shall be provided.
- _____ 3. All pneumatic cylinders shall be interchangeable.
- _____ 4. Each cylinder shall be controlled by a single, two position, solenoid valve mounted on a manifold with common input and exhaust.
- _____ 5. There shall be a filter with a polycarbonate bowl to filter out contaminants down to 5 microns to prevent contamination in the air system.

ELECTRICAL SYSTEM:

- _____ 1. Sweeper shall have an electronic back-up alarm for additional warning and safety when chassis is in reverse.
- _____ 2. Sweeper shall have a top beacon, four corner strobes, traffic advisor with control head.
- _____ 3. Sweeper lighting shall include rear identification lights and rear clearance lights.
- _____ 4. Sweeper warning lights shall include hopper up, hopper door open and hopper full load.
- _____ 5. Sweeper wiring harnesses shall be color-coded and "function stamped" with appropriate circuit name every four inches, i.e. "Ignition", "Side Broom" on each wire.
- _____ 6. All electrical circuits must be protected by automotive style blade fuses.
- _____ 7. All lights should be LED style.

CONTROLS:

- _____ 1. All sweeper controls shall be mounted on a stationary central console that allows for use and visibility from either right or left positions.
- _____ 2. The controls shall include sweep, spray water and lighting functions.
- _____ 3. The controls for sweeping, spray water, and lighting functions shall be rocker switches.
- _____ 4. Controls for sweep system shall include sweep/resume feature; allowing the automatic raise of side brooms and pickup head when chassis transmission gear selector is put into reverse, or with push of one button in cab.

INSTRUMENTS:

- _____ 1. If applicable, sweeper engine instruments shall include tachometer, hour meter, oil pressure, fuel, voltage, and coolant temperature for complete information for the operator on the condition of the auxiliary engine, visible from both operator positions.

- _____ 2. Sweeper engine instruments shall include an auxiliary engine air intake restriction gauge for ease of maintenance.
- _____ 3. Sweeper instruments shall include diagnostic information for the sweeper engine and sweeper functional information to include water level, sweeping mode and transport mode.
- _____ 4. Sweeper instruments shall include a "raised" hopper indicator, an "open" hopper door indicator and a "full" hopper indicator to notify the operator.

PAINT:

- _____ 1. All visible exterior metallic surfaces shall be coated prior to assembly with polyester powder coat. The paint must be a minimum of 2 mils thick.
- _____ 2. Exterior color of cab and sweeper shall be factory white and the interior grey.
- _____ 3. Vehicle shall have an accent color of Grey or Black on the components and lower portions of the unit.

MANUALS:

- _____ 1. Two (2) copies of the operation manual shall be provided.
- _____ 2. A parts manual shall be provided (chassis, packer, hydraulic, electric systems).
- _____ 3. Maintenance manual, preferably in CDROM format if available.
- _____ 4. Two (2) copies of the lubrication chart.

WARRANTY:

- _____ 1. Manufacturer's warranty shall be not less than one (1) year on entire sweeper, including all parts and labor.
- _____ 2. Manufacturer's warranty shall be not less than three (3) years on chassis engine, including all parts and labor.
- _____ 3. Manufacturer's warranty shall be not less than lifetime protection against rust-through of the water tank.
- _____ 4. Documentation of all Warranty & Extended Warranties offered

SERVICE AND TRAINING:

- _____ 1. Vendors shall have a full parts and service facility within a reasonable distance from the City of Madera. State location and distance.
- _____ 2. A qualified technician shall provide complete training to City of Madera personnel at the City of Madera Public Works yard. Training shall include safety, operation, maintenance and service.

DELIVERY:

- _____ 1. Sweeper shall be delivered F.O.B. City of Madera in operating condition.
- _____ 2. Acceptance shall be subject to the inspection and approval by the City.

QUALITY:

- _____ 1. Sweeper shall be manufactured by a company with a registered quality standard no less than ISO 9001.

OPTIONAL ITEMS:

The City of Madera may choose, at its sole discretion, to add any or all of the optional items to this purchase. Bidder shall state the amount to be added to the Bidder's Proposal, should each item be selected.

Cost

- \$_____ 1. Life Liner – hopper liner guaranteed for life of machine.
- \$_____ 2. Front spray bar
- \$_____ 3. Backup Camera
- \$_____ 4. Auxiliary hydraulic pump

Purchasing – Central Supply 559/661-5463 fax.- 559/661-0760

End of Addendum No. 1.

