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SPECIFICATIONS  
**023111**

**TRUCK MOUNTED, HIGHWAY, DEBRIS PUSHER**

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January 4, 2023, GAW

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**TRUCK MOUNTED, HIGHWAY, DEBRIS PUSHER**

I. GENERAL EQUIPMENT SPECIFICATIONS:

A. INTENT STATEMENT:

This specification describes minimum requirements for a truck mounted road debris pusher to be installed and work in combination with the department's 2020 F-550 19,500 GVWR chassis equipped with a wrecker body. Unit shall be capable of being lowered to the road surface for removing debris from roadways while traveling at speeds below 20 MPH. Unit shall be capable of pushing disable vehicles from road travel lanes in the stowed position. Ref. Lane Blade

Pennsylvania Department of General Services, PCID No. 1075, "General Requirements for Bidding PennDOT Vehicles/Equipment", most current version effective at the time and date of bid opening is included as a part of this specification. PCID No. 1075 may be reviewed and downloaded from the Department of General Services website, <http://www.dgs.state.pa.us>. Delivery as re-quired per Department of General Service PCID NO. 1075 Section "G". All units must be delivered within **120** days after receipt of the purchase order by the successful bidder.

Awarded OEM vendor shall be responsible for contacting the Specification Section of the Fleet Management Division at (717) 787-1567 to set up a pre-build meeting for all chassis and body mounting component locations prior to chassis build. Any deviations to the specification must be granted in writing by the Chief of the Specification Section, previous acceptance will not be considered pre-approved. It shall be understood that any discrepancies/deviations between the specification and the completed unit(s), chassis or body up-fitter related, must be addressed and corrected prior to the delivery deadline and the Departments acceptances.

If applicable: Unit shall be delivered clean, with current PA state Inspection and a full tank of fuel. MSO/ Certificate of origin, and MV 1 to be supplied to the Department at time of delivery.

**It is understood that the components specified are minimum. The burden of responsibility is hereby placed on the manufacturers engineering department to supply a unit that is totally engineered and installed.**

Fabrication and assembly shall conform to the latest engineering techniques and shall meet the specification requirements of the following

American standard limits and fits

American society for testing materials

Society of automotive engineering

American institute of steel construction

Steel structure painting council

American welding society d2-0-69 sub section 303 (fit and assembly)

American welding society d2-0-69 section 3 (welding workmanship and quality)

All welding shall be accomplished by one or a combination of the following processes: gas metal arc, flux cored arc and or submerged arc welding procedures.

Before welding, all components must be positioned on precision engineered mechanical positioners (jig) in order to assure the best possible fit.

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I. GENERAL SPECIFICATIONS: (continued)

B. Truck Mounted Road Debris Pusher:

1. Control system:

Unit shall be controlled with safety limiter for deployment, to ONLY allow unit to be lowered under a maximum speed of 20MPH. Controller shall not interfere with operation, in any way of the host vehicle.

Operator control shall be a handheld ergonomically designed remote within the operator cab, with the following functions:

1. Dash indicator for stowed/up position
2. Enable "Float" mode
3. Indicator light for "Float" mode
4. Power button, on/off
5. Raise/lower button
6. Remote control cradle
7. Wings forward/rearward simultaneously with one (1) button

2. Design / Mounting:

Awarded vendor shall be responsible for upfitting unit to a 2020 model year F-550 truck chassis with a wrecker body within the state of Pennsylvania. Arrangement will be made for truck to be delivered after award.

Unit shall be of a heavy-duty modular steel design.

Unit shall be capable of pushing roadway debris up to including 150 pounds at 20 MPH in the lowered position. Frame stops shall be included to push disabled vehicles in the raised/stowed position.

Complete system shall be designed and tailored to be installed on a 2020 Ford F-550 chassis. Mounts shall be bolted directly to vehicle frame, with a quick disconnect feature for servicing and maintenance of host vehicle. All hinge/pivot points shall be built heavy duty and greaseable.

Blade/moldboard and wings shall have complete rubber face "contact" pad, minimum 3/4 inch thick. Replaceable, bolt-on blade wear edge(s). Front replaceable bolt-on side (Right & Left wings) and center (top of moldboard) deflectors to prevent debris from deflecting to the sides or over the top onto vehicle hood. Rear replaceable bolt-on deflectors shall contour to vehicle in the stowed position and deflect debris away from vehicle in the forward/extended position. Moldboard design shall provide air flow to vehicle radiator, for proper cooling. Wings shall stow/retract to provide maximum clearance when not in use.

Unit shall be tagged with a non-rusting metallic tag containing the manufacture serial number, model number and weight, and be affixed on the upper right backside of the unit as viewed from the rear.

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I. GENERAL SPECIFICATIONS: (continued)

B. Truck Mounted Road Debris Pusher: (continued)

3. Dimensions / Clearance:

1. Approximately 41-inch from bottom of blade to top of grille protector.
2. Approximately 650 lbs. weight, installed.
3. Clearance stowed shall be a minimum 8-inch from ground level to bottom of blade. Minimum 5-inch from body fender. Minimum 2-inch from truck grille. Blade shall be built to provide adequate air flow to truck radiator.
4. Minimum overall installed width shall not exceed 98-inch.
5. Maximum overall width fully deployed shall not exceed 105-inch.

4. Hydraulic System:

1. 12-volt DC electric over hydraulic pump, motor minimum 2 HP.
2. Crossover relief valve on wing circuit, to return to stowed position.
3. Raise/lower valve shall be proportional.
4. System pressure rating approximately 2000 psi. hoses and components shall be rated a minimum 500 psi higher.
5. Vented reservoir approximately one (1) gallon capacity.

5. Paint:

OEM standard powder paint process:

- All metal components shall be white metal blasted prior to paint.
- Powder-coat must be minimum 2.5 mils in film thickness.

Paint shade OEM white.

6 Safety:

Camera system shall be mounted forward facing in the down position to view debris directly in front of the entire (no blind spots) moldboard and wings.

- Minimum 170-degree wide angle lens, high resolution with external infrared camera.
- Minimum seven (7) inch color high definition in cab monitor with audio.

High visibility plow style markers shall be installed to the upper outside of each left and right wing visible for operator in the lowered position.

All corners and edges shall be angled or rounded for safety.

All welding shall be in accordance with standard welding practices as set forth by the American Welding Society.

All welds with full penetration, no stitch welding.

All mounting procedures shall be in accordance with NTEA standards.

Manufactures standard safety decals.

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II Manuals

The successful vendor shall furnish all applicable manuals per unit:

- 1 Operator's
- 1 Parts
- 1 Service
- 1 Complete set of manuals for any additional items/equipment added to a piece of equipment.

The manuals listed shall be official O.E.M. publications supplemented with technical manuals for all components as published by sub-vendors/manufacturers.

Parts Manual presented must be a relative to "all" items utilized to build these units, with appropriate part numbers.

All manuals shall be supplied on thumb drive in PDF format that can be loaded to a dedicated website.

Paper manuals may be supplied if available from manufacture. Paper manuals do not relieve the requirement for the thumb drives.

**Delivery of manuals shall be completed with the delivery of each unit.**

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III. TRAINING:

Mechanic:

The successful vendor shall provide services of qualified factory trained technicians for not more than 1 training sessions of not more than 2.0 hours at 1 PENNDOT locations to train personnel for in-depth preventive maintenance, and review of the proper usage of parts and service manuals, as well as component/system adjustments that need to be monitored at specified service intervals.

Operator:

The successful vendor shall provide services of qualified factory trained technicians for not more than 1 training sessions of not more than 2.0 hours at 1 PENNDOT locations to train personnel in the proper operation, safety, and servicing of the equipment.

**The successful vendor shall submit a training plan to the Fleet Management Division for approval within 45 days after receipt of the Purchase Order. The training plan shall consist of course outline and class schedule.**

**All training must be completed within 60 days after the dates established in the approved training plan unless an extension is mutually agreed to in writing by the Chief of the Fleet Management Division.**

**All training shall be coordinated with the District Equipment Managers, with the exception of Asphalt related training, which must be coordinated with the Statewide Training Coordinator (717) 787-4836, Fax (717) 783-4438.**

IV. WARRANTY:

Per PCID No. 1075

Warranty shall not be voided due to Department operation as explained in the Intent Statement. It is understood that the components specified are minimum and if the manufacturer's Engineering Department recommends or deems necessary a more robust component, other than specified, be installed to meet the vehicles intent statement and to not void the warranty, it shall be the bidders/vendors responsibility.

1 year starting from the Department's in-service date.

The warranty start-up date shall be defined as the date of transfer from the PennDOT Fleet Management Division to the designated county location. This will be considered the date of delivery to the county and NOT the date of delivery by the successful bidder to the Department. The PennDOT Fleet Management will supply the actual start-up date, equipment number, and serial number of the machine, via email, to the successful bidder. It is the responsibility of the successful bidder to ensure that the equipment manufacturer recognizes and applies the Department's actual warranty start-up date in their database.