

## SPECIFICATIONS

019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

- I. GENERAL MIXING TRAILER SPECIFICATIONS:
  - A. INTENT STATEMENT
  - B. WEIGHT DISTRIBUTION
  - C. MIXING TRAILER COMPONENTS
    - 1. BODY / STORAGE ENGINE COMPARTMENTS
    - 2. BRAKES
    - 3. CLEAN OUT / WASH DOWN
    - 4. CONTROLS
    - 5. CONVEYOR
    - 6. ELECTRICAL
    - 7. ENGINE & GENERATOR
    - 8. EXHAUST
    - 9. FLOCS
    - 10. HITCH
    - 11. MATERIAL HOPPER
    - 12. LIFTING LEGS
    - 13. LIQUID SYSTEM
    - 14. MIXER WALKWAY
    - 15. MIXING CHAMBER
    - 16. SUSPENSION
    - 17. TANK-FUEL
    - 18. TIRES/WHEELS
    - 19. TRANSIT LGHTING
    - 20. PAINT
    - 21. SAFETY
- II. DRAWINGS
- III. MANUALS
- IV. TRAINING
- V. WARRANTY

August 1, 2017 GAW

## SPECIFICATIONS

019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour

C-C4-FJI. GENERAL MIXING TRAILER SPECIFICATIONS:A. INTENT STATEMENT:

NOTE: 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 required per Department of General Service PCID NO. 1075 Section "G". All units must be delivered within **180** days after receipt of the purchase order by the successful bidder.

The purpose of these specifications is to describe a portable asphalt mixing plant, self-contained complete with diesel powered generator system, Mixing trailer will support the Commonwealths Recycled Asphalt Pavement (RAP) program. Mixing plant trailer shall be self-supporting and self-stowing, site setup shall include the pugmill trailer being elevated for the mixing chamber discharge to load Departments tandem and tri-axle dump trucks. Site setup may include a (separately purchased) electric cement silo with weight hopper and auger to deliver cement at the mixing chamber, therefore mixing trailer shall have provision for introducing Portland cement into the mixing chamber.

Trailer shall be equipped with king pin fifth wheel hitch to be road portable with Departments low boy road tractor(s).

Ref. Kolberg Pioneer 52, Midland T-4100 and Pugmill Systems 750BT.

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. 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.

It shall be the sole responsibility of the successful vendor to ensure compatibility with the Department's tractor(s), to include not surpassing the overall length ruling and meeting all bridge formulas. The vendor shall, prior to bid, inspect the Department's tractor/s to ensure this compatibility. For tractor location contact the Fleet Management Division at 717-783-2371.

SPECIFICATIONS

019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

B. WEIGHT DISTRIBUTION:

It is understood that the components specified are minimum and if the mixing trailer manufacturer's Engineering Department recommends or deems necessary, due to their particular weight distribution, a larger component or a larger GAWR totally, the burden of responsibility is hereby placed upon the Manufacturer's Engineering Department to supply a unit that is totally engineered.

- 1. Frame
- 2. Axle
- 3. Tires
- 4. Rims
- 6. Suspension
- 7. Brakes
- 8. Any other items as required

The dynamic and static loads created by the unit, plus operational stresses, must be reviewed to ensure the Commonwealth of a properly designed/engineered unit.  
The following information must be supplied with the pilot model:

ACTUAL TRAILER WEIGHT: (LB)

Chassis only	_____	Front Axle
	_____	Rear Axle
	_____	Total

GAWR's as Built (LB)

	<u>Front GAWR</u>	<u>Rear GAWR</u>
Axle	_____	_____
Tires	_____	_____
Springs	_____	_____
Rims	_____	_____

IDENTIFICATION:

Each unit shall bear the manufacturer's model number and shall incorporate a non-rusting metal individual serial number properly affixed.

A decal stating the light weight of the trailer shall be attached on the road side near the lift handle for dolly legs. The decal shall be approximately 1.50 inches high and 3 inches long and read L.W. \_\_\_\_\_ LB.

## SPECIFICATIONS

019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

I. GENERAL MIXING TRAILER SPECIFICATIONS: (Continued)C. MIXING TRAILER COMPONENTS:

Manufactures standard with the following exceptions;

NOTE: LUBRICANTS FOR AXLE HUBS, SHALL MEET OR EXCEED ALL APPROPRIATE MIL AND SAE SPECIFICATIONS FOR SYNTHETIC LUBRICANTS AND SHALL HAVE ALL PLUGS IDENTIFIED AS SYNTHETIC OR PAINTED RED.

(The OEM shall provide written exemption if synthetic oil is not installed.)

1. BODY / STORAGE ENGINE COMPARTMENTS:

All engine, control panels, storage cabinets and fluid fills shall be lockable and keyed alike, two (2) sets.

2. BRAKES:

Full air with antilock in compliance with the most current FMVSS requirements. The service brake shall be a two-line system with an emergency breakaway feature conforming to ICC and Commonwealth of Pennsylvania Specifications. The complete system shall include necessary tubing, glad hands connectors at the front of the gooseneck, reservoir(s), (minimum 1500 cubic inch capacity), remote drain cock.

The brake shoes shall be the two (2) shoe internal expanding type with molded block lining 16.5 inch x 7 inch 4S, 3M ABS anti-lock system. 16.50 inch x 7 inch "S" cam rear brakes with quick change type single or double pin. (No substitute - standardization).

There shall be a spring 30/30 (no substitute) parking brakes installed on two (2) trailer axles.

Air chamber shall be mounted parallel to or below the axles.

All drum brakes shall have automatic slack adjusters, and they shall be clearance sensing type only, for each brake drum **(no substitute)**.

3. CLEAN OUT/WASH DOWN:

There shall be minimum 30-gallon solvent tank attached to the pugmill frame, complete with necessary plumbing to the inlet side of the oil pump, for flushing the pump and nozzles. Water pump shall include a "garden hose" connection with necessary plumbing to outlet side of pump.

If plumbing is to include a shutoff valve, they shall be replaceable, quarter (¼) turn ball valve design.

4. CONTROLS:

Electric drive with fully automatic proportioning. A belt weight scale shall be installed on collecting conveyor. Touch screen control panel to operate variable frequency drives for conveyors, asphalt oil pump and water pump. Control system shall include integrated wireless "field grade" remote electronic tablet. Controls system shall have manual override for independent function for use if touchscreen and tablet are unusable.

Controls shall include a minimum of three (3) pre-sets for an automatic shut off for the material hopper(s), material conveyor and liquid pump when a predetermined amount of finished product is reached, mixing chamber shall continue to run with this feature.

Control station shall have manufactures standard audible signaling device.

Provisions shall be included for future software updates, or programming / operating systems to be added if needed, such as an updated tablet or additional pugmill controlled equipment.

Provisions shall include the ability to add a separately purchased electric cement silo and electric weigh hopper with dispensing auger to the operator panel and controller and electrical load to the pugmill generator.

## SPECIFICATIONS

019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

I. GENERAL MIXING TRAILER SPECIFICATIONS: (Continued)C. MIXING TRAILER COMPONENTS: (Continued)5. CONEVYORS:

Collecting conveyor belt shall be a minimum 36-inch-wide, with belt scale. Feed bin belts shall be a minimum 36-inch-wide, with belt scrapers.

All conveyors shall be provided with safety shields to protect personnel from contacting belts and protection from falling material.

6. ELECTRICAL:

Heavy duty 12 volts, group 31 top stud, maintenance free batteries.

Alternator: Delco 36SI (No substitute, Standardization) 160 A minimum, high performance, solid state (brushless).

Starter motor: Delco 39 MT (No Substitute, Standardization) with thermal over-crank protection and high torque capacity. Suitable for the diesel engines offered as per starter manufacturer's recommendation. Battery cable from battery negative terminal to starter motor.

Note: Starter shall have OCP (over crank protection).

Circuit-breaker-equipped electrical system shall be in an easily accessible location. Fused circuit(s) in battery box, acceptable if so identified by manufacturer as safety factor and must be permanently labeled.

Electrical wiring: wiring harness shall be protected at areas prone to cause chafing by installing convoluted plastic conduit and clamped using steel band clamps with rubber inserts.

There shall be no splices, other than OEM, outside of a sealed box or fixture.

7. ENGINE and GENERATOR:

Acceptable engine manufactures, Caterpillar, Cummins, Deere and Perkins.

Manufactures standard inline six (6) cylinder liquid cooled diesel engine, sized to meet the intent statement. Manufactures standard control panel.

Replaceable heavy-duty, full-flow type fuel filter(s) and oil filter(s) as recommended by the engine manufacturer, bearing a legible OEM part number.

Cooling system: The largest factory available capacity. With overflow recovery system and visual level indicator.

Radiator core and shell: Heavy-duty design with full width and length field removeable screen protection.

The oil dipstick must have tubing and dipstick of sufficient length to provide reasonable access for checking the oil level.

Air cleaner: Air cleaner shall be manufacturer's heaviest duty air cleaner that meets all the requirements of the engine warranty.

Engine shall be equipped with an hour meter that records only when the engine is running.

Integral within instrument panel. Ref: DATCON or equal. Hour meter shall be illuminated.

NOTE: Unit shall have a neutral safety starting switch, with startup warning alarm.

Generator shall be a minimum 175Kw. Capable of powering complete pug mill and a separately purchased combined electric cement silo and electric weigh hopper with auger.

## SPECIFICATIONS

019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

I. GENERAL MIXING TRAILER SPECIFICATIONS: (Continued)

C. MIXING TRAILER COMPONENTS: (Continued)

7. ENGINE and GENERATOR: (Continued)

All standard instruments shall be supplied, properly identified and dash-mounted, including but not limited to the following:

1. Oil pressure gauge.
2. Water temperature gauge.
3. Fuel gauge.
4. Voltmeter/ammeter.
6. Hour meters that work only when engine is running.

Engine Heater: Immersion in-block type for cooling system with waterproof plug flush-mounted in an accessible location, 115 volt, 3-prong plug. The electrical cable from the heater to plug shall be one piece and waterproof.

8. EXHAUST:

Exhaust system shall be installed to provide adequate clearance to all frame components and personnel. All exhaust pipe(s), DPF that personnel can come in contact with shall be shielded.

9. FLOCS:

All engine power systems (truck, air compressor, generator, etc.) shall be equipped with a fast lube oil change system (FLOCS). This FLOCS system shall be installed with all fittings, brackets, clamps and hoses. Hose from oil pan to FLOCS fitting shall be hydraulic hose with a 100R2 rating and properly secured. The system shall be compatible with all fittings presently used by the Department. The final placement of the male half of the snap coupler, on the equipment to be approved prior to build. Ref: EQN-351A.

10. HITCH:

Unit shall be equipped with a king pin fifth wheel hitch to be road portable with Department road tractor.

11. MATERIAL HOPPERS:

Hopper shall be a self-relieving bottom opening design for dense material to eliminate bridging. Main hopper shall include a removable divider. Unit shall include additional blending hopper in line with main hopper. Main and secondary hopper shall have a sufficient opening to provide material requirements of the intent statement. Material hoppers shall have a minimum of eleven (11) feet wide and minimum six (6) feet deep top opening.

All hoppers, excluding discharge hopper shall include adjustable metering doors and removable oversizing grate.

12. LIFTING/SUPPORT LEGS:

Manufactures standard hydraulic or electric lifting legs shall be included, minimum two (2) per side. Lifting legs shall have 36-inch stroke minimum travel. Dolly legs shall be manual, legs shall have skid pads. Dolly legs with rollers will not be accepted.

## SPECIFICATIONS

019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

I. GENERAL MIXING TRAILER SPECIFICATIONS: (Continued)C. MIXING TRAILER COMPONENTS: (Continued)13. LIQUID SYSTEM:

Water pump: shall be electric variable frequency with magnetic meter. Connection shall be a female two (2) inch cam lock to spray bar. Water system shall be capable of a minimum 140 gallons per minute. Galvanized or stainless steel plumbing.

There shall be garden hose connection on pressure side of water pump, for wash down.

Asphalt oil pump: electric variable frequency total displacement control oil pump meter, with strainer. Spray bar with replaceable stainless steel nozzles, coupler shall be three (3) inch aluminum male cam lock.

There shall be provision for solvent hose connection, for flushing pump and nozzle.

If plumbing is to include a shutoff valve, they shall be replaceable, quarter (¼) turn ball valve design.

14. MIXER WALKWAY:

Steps: steps, railing and walkway shall be provided on the right side to access mixing chamber.

Egress for steps shall be forward of the trailer axle wheels. The outer step edge must be serrated in lieu of plain, Overlay is not acceptable. Step design and material must be the same for entire unit. Ref: Bustin No. NST4 full size, Ohio Grating No. JA21195G4 serrated.

Walkways: all walkways and steps shall be built to provide "Three Points of Contact", the top of the first step shall be approximately 21 inch above the ground. Walkway and steps shall include toe plates. Walkway shall provide access prior to end belt roller to the end of mixing chamber.

Grab handles/railings: shall be supplied on all entry locations. "Three Points of Contact" shall be achievable at all entry locations. Grab handles, handrails and walkways shall be coated with non-skid paint (non-skid tape is unacceptable), non-skid paint must extend the full length.

Safety warning decals: Steps and walkway shall be stenciled with contrasting paint stating weight capacity.

15. MIXING CHAMBER:

Ten (10) feet minimum length. Twin shaft with replaceable (bolt on), reversible, adjustable flight and high wear abrasion paddles. Electric, V-belt drive motor(s) with timing gear. Motor(s) shall be placed on side, end or above mixing chamber for accessibility. Hydraulically actuated bottom cleanout access door(s) shall be supplied. Cleanout door(s) shall incorporate a "pinned close" feature, and activated from ground level at the control station.

Mixing shafts(Logs) shall have heavy wear guards or hard facing at throat area (end of material belt).

Minimum of eight 8 feet of clearance from ground to bottom of mixing chamber.

Mixing chamber shall have auger port for introducing Portland cement with cap/plug for when not in use.

16. SUSPENSION:

Manufactures standard air ride suspension, with automatic suspension dump valve with release of air supply.

17. TANK - FUEL:

Safety-type fuel tank meeting all FMVSS standards.

100-GAL minimum useable capacity. Accessible fill pipe and lockable.

Tank shall be aluminum or stainless steel, unpainted, with minimum 2 in wide heavy duty aluminum or stainless steel mounting straps with rubber shims/liners.

## SPECIFICATIONS

019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

I. GENERAL MIXING TRAILER SPECIFICATIONS: (Continued)C. MIXING TRAILER COMPONENTS: (Continued)18. TIRES/WHEELS:

The trailer shall be provided with steel belted radial tubeless tires 255/70R 22.5 (H) 16 ply rating mounted on 22.5 x 8.25 hub piloted steel disc rims, Accuride PN# 28828 (no substitute).

Rims shall be painted gray. The wheel ends shall be equipped with the Accuride part number 5903-wheel guard separator as follows: Axles -between the inner dual and the brake drum and between the inner and outer duals.

The hubs shall be ten (10) stud, hub-piloted type and made of cast ductile iron.

19. TRANSIT LIGHTING:

Lighting shall be a 12-volt system. All lights shall be L.E.D. mixing trailer shall be furnished with shock proof running lights, directional signals reflectors and sealed wiring harness fully complying with ICC minimum requirements, and with the Motor Vehicle Laws and Regulations of the Commonwealth of Pennsylvania. All lights shall be recessed or otherwise provided with adequate guards to prevent accidental damage.

A 7-way "Pin Type" receptacle shall be provided, Ref. **EQN-80A**

Manufacture to provide marker and ICC lighting, wiring shall be Grote, Trucklite or preapproved equal.

All harness pass-through locations shall be protected by a grommet.

All wiring shall be of adequate capacity and protected within a frame-rail, metal enclosure or conduit, and secured every two (2) feet of run. Wiring shall not be exposed within a wheel-well. There shall be no connections outside of a sealed box, unless connections are soldered and properly sealed with heat shrink. 3M type (Scotch Lock) crimp connectors will not be accepted. All electrical connection shall be coated with dielectric grease. A color-coded electric wiring chart and schematic shall be provided.

20. PAINT:

Pricing shall include manufactures standard paint color.

Pricing shall also include the entire unit(s) being painted PennDOT yellow Ref: DuPont F9885, PPG 85246, Sherwin Williams 73266, Sikkens 4017 and NAPA 73266 for shade only, except for glass, rubber and those metallic accessories or fixtures constructed of rust-resistant or plated material not normally painted.

Filters and hoses shall not be painted over and shall display the OEM part number(s) and all component tags must be readable.

The sides and rear shall have conspicuity tape striping Ref. EQN-127A.

## SPECIFICATIONS

019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

I. GENERAL MIXING TRAILER SPECIFICATIONS: (Continued)C. MIXING TRAILER COMPONENTS: (Continued)21. SAFETY:

Safety shields: All conveyors and drive belts shall be provided with safety shields to protect personnel from contact.

All units shall be equipped with manufactures standard emergency shut down device.

The vehicle shall meet all the requirements set for the in EQN-118.

There shall be conspicuity tape applied per EQN-127A.

Exterior Grab handles shall be supplied on all entry locations. Three points of contact shall be achievable at all cab entry locations. Handrails shall be coated with non-skid paint (non-skid tape is unacceptable), non-skid paint must extend the full length of the grab handle.

Steps: The outer step edge must be serrated in lieu of plain. (Overlay is not acceptable). Step design and material must be the same. Ref: Bustin No. NST4 full size, Ohio Grating No. JA21195G4 serrated. Top of the first step shall be approximately 21 inch above the ground.

Fire extinguisher: Ref. 3A:40BC (20 LB). Rechargeable with mount. Placement to be approved prior to build.

There shall be a permanent decal, 2-inch-high red letters on white back ground affixed by the driver side of the king pin area stating the overall maximum travel height of the completed and unloaded unit.

(Example) HT-\_\_' \_\_" Ref. EQN-552.

There shall be a permanent decal, "Three Point Contact" located at each entry point and at each ladder area per EQN-552-1.

NOTE: All grating, chutes, covers etc. shall be securely fastened to the vehicle with a restraining device to prevent its movement or shifting during transit.

There shall be two sets of wheel chocks per unit with holder, Ref. buyers or equal with a rope. Mounting location will be determined at pre-build meeting. Ref: EQN-82C.

10  
SPECIFICATIONS  
019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

II. DRAWINGS:

EQN-80A	dated	Rev.	08-02-16	1 sheet	WIRING DIAGRAM/ 7 WAY CONNECTOR
EQN-80B	dated	Rev.	00-00-00	1 sheet	WIRING DIAGRAM / 7 WAY ROUND PIN MALE CONNECTOR
EQN-84	dated	Rev.	07-22-15	1 sheet	TRAILER FRONT END SPECIFICATIONS
EQN-82C	dated	Rev.	07-22-15	1 sheet	CHOCK AND HOLDER
EQN-118	dated	Rev.	06-26-09	1 sheet	UNDER RIDE PROTECTION
EQN-127A	dated	Rev.	01-02-09	1 sheet	CONSPICUITY TAPE STRIPING REQUIREMENTS
EQN-351A	dated	Rev.	06-19-13	2 sheets	FAST LUBE OIL CHANGE SYSTEM
EQN-552	dated	Rev.	05-29-13	1 sheet	MAX. TRAVEL HEIGHT
EQN-552-1	dated	Rev.	12-20-16	1 sheet	THREE POINTS OF CONTACT

The above referenced drawings shall become part of these specifications.  
These drawings reflect the intent of the Department and any discrepancies shall be resolved at the line setting ticket meeting between the vendor and the Equipment Chief, or the pre-production inspection of the unit.

**DRAWINGS APPEAR AT THE END OF THE SPECIFICATIONS.**

11  
SPECIFICATIONS  
019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

III. MANUALS:

The successful vendor shall furnish all applicable manuals per unit:

- 1 Operator's
- 1 Parts
- 1 Service
- 1 Engine
- 1 Body and Sub-frame (Parts and 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.

Manuals shall accompany each unit at time of delivery.

Manuals may be supplied on CD Disc or Thumb Drive in lieu of paper manuals.

12  
SPECIFICATIONS  
019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

IV. TRAINING:

**Mechanic/Operator:**

The successful vendor shall provide services of qualified factory trained technicians for not less than 1 training session of not less than 7.5 hours at 1 PennDOT location to train personnel for in-depth preventive maintenance, 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.

The successful vendor shall provide services of qualified factory trained technicians for not less than 1 training session of not less than 15.0 hours at 1 PennDOT location to train personnel in the proper operation, safety and servicing of the equipment.

**Operator/Mechanic(optional):**

The successful vendor shall provide services of qualified factory trained technicians for not less than 1 training session of not less than 15.0 hours to train personnel on equipment functions while unit is performing a live operation.

**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 must be coordinated from the receiving district to the supplying vendor prior to operation of equipment. If mutually agreed due to delivery timeframe, startup/safety training may be completed separately prior to the "live" operation training.**

**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.**

## SPECIFICATIONS

019901, Mixing plant, Trailer Mounted, Large, 400 Tons Per Hour  
C-C4-FJ

V. WARRANTY:

Per PCID No. 1075. Section E.1.A. The construction and agricultural equipment manufacturers service and warranty program for full machine ("bumper to bumper") shall be for a minimum of two (2) years or four thousand (4,000) hours whichever first occurs.

And the additional specific warranty items stated below.

This warranty is in effect as follows, starting from date of acceptance by the Department. 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/vendor's responsibility.

**NOTE:** Warranty repairs shall be completed at the manufacture's location or in-house field repair completed by PENNDOT. It shall be the Departments discretion to repair internally or transport the unit to the dealership, following the OEMs in-house warranty repair guidelines. The manufacture shall reimburse in-house warranty repairs at the Departments hourly labor rate for the duration of the warranty period, the labor rate shall be mutually agreed upon between the department and the vendor/bidder. All in-house warranty documentation shall be delivered with the initial model.

The complete unit shall be warranted for a period of 2 years. Warranty shall cover all parts, labor, shipping and travel required to repair the unit. If the unit needs returned to the vendor's or sub-vendor place of business for warranty repairs, it shall be the sole responsibility of the vendor to pick up & return the unit to the PennDOT location.