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It is the purpose of these specifications to describe a new self-contained, trailer mounted spray-injection patching machine. All parts not specifically mentioned which are necessary to provide a complete unit or which are normally furnished as standard equipment shall be furnished by the successful bidder and shall conform in strength, quality of material, and workmanship to what is provided by the industry in general. The following specifications cover a high performance trailer mounted spray-injection patching machine designed for street and road maintenance.

	<u>Comply</u>	<u>Does Not Comply</u>
1. GENERAL SPECIFICATIONS		
A. This machine will be the manufacturer's current production model.	_____	_____
B. The machine will use compressed air to clean cracks and work area surfaces.	_____	_____
C. The machine will spray heated emulsion over an area to provide a tack coat.	_____	_____
D. The machine will provide adequate control and workability to ensure that application of material is at grade level and proper patch density is achieved.	_____	_____
E. Approximate ship weight is 6,400 LB with dimensions of 203" long, 89" wide and 85" high.	_____	_____
F. Unit shall be capable of operating at temperatures down to 10°F.	_____	_____
2. WORKING AREA		
A. Shall be a minimum of 1,275 square feet.	_____	_____
B. Other _____	_____	_____
3. BOOM		
A. Shall be a low-effort, rear mounted tri-fold articulating boom with fully counterweighted arm.	_____	_____
B. Radius: Minimum 20 feet, 10 inches.	_____	_____
C. Vertical Stroke: 5 feet above to 2 feet below pavement level.	_____	_____
D. Counterweighted Arm: To be fully self-supporting, capable of remaining in position anywhere within the vertical stroke without any operator pressure.	_____	_____

	<u>Comply</u>	<u>Does Not Comply</u>
E. Operator Controls: Boom mounted to contain asphalt, aggregate, throttle, hydraulic, and horn controls.	_____	_____
F. Operating Position: Shall be minimum of 6 feet from material spray.	_____	_____
G. All emulsion lines shall be heated by circulating transfer fluid and fully insulated from the asphalt emulsion tank to the spray nozzle.	_____	_____
Other: _____ _____	_____	_____

4. DISCHARGE NOZZLE AND COATING SYSTEM

A. Atomized asphalt spray shall be capable of 100% coating of the aggregate prior to discharge.	_____	_____
B. Coating system shall have 90 to 100 PSI pressure and internal spray ring at the nozzle to create a high pressure spray bath to achieve full coating.	_____	_____
C. Shall have a machined aluminum nozzle and internal spray ring with ten evenly spaced emulsion openings for full and even coating. Nozzle to be tapered to accelerate material flow.	_____	_____
D. Unit must be capable of placing up to 7 tons of patching mixture per hour.	_____	_____
Other: _____ _____	_____	_____

5. TANKS

A. Shall have a minimum 250 gallon pressurized, (ASME coded Vessel) completely insulated asphalt emulsion tank with steel cover and safety pressure relief valve and certified for 650°F.	_____	_____
B. Emulsion Tank: To be tested to 300 PSI with a coded ASME approved working pressure of 200 PSI.	_____	_____
C. Insulation: Emulsion storage tank shall have minimum R-Value 19 insulation.	_____	_____
D. Emulsion, flush and tack wand controls to be rear mounted for operator convenience.	_____	_____
E. Overnight heaters must be thermostatically controlled from 1500-watt @ 120V standard or 6,000-watt @ 240V optional electric heating elements positioned inside tank.	_____	_____

	<u>Comply</u>	<u>Does Not Comply</u>
F. Heating element housing shall be in an ASME pressure tested-tube. Heating element shall not be in direct contact with the asphalt emulsion to allow for heating element removal without draining tank and to prevent charring of asphalt.	_____	_____
G. Must have minimum 30 gallon pressurized flush tank.	_____	_____
H. Flush Tank: To be tested to 300 PSI with a coded ASME approved working pressure of 200 PSI for safety.	_____	_____
I. Emulsion to be pressure fed to nozzle eliminating the use of a mechanical feed pump.	_____	_____
J. Emulsion tank and lines shall be heated with transfer fluid circulated directly from diesel engine.	_____	_____
K. Emulsion tank shall have 8-inch easy access lid, and 2-inch bottom discharge gate valve for clean out.	_____	_____
Other: _____ _____	_____	_____

6. COMPRESSOR

A. Unit shall contain minimum 13.2 CFM direct drive with governor regulator control and have capabilities to piggyback a hydraulic pump.	_____	_____
B. Maximum pressure 150 PSI.	_____	_____
C. Compressor shall be able to pressurize ½ full emulsion tank from 0 to 100 psi in no more than 11 minutes.	_____	_____
Other: _____ _____	_____	_____

7. AGGREGATE DELIVERY SYSTEM

A. Hydraulic powered tailgate feeder 68 inch screw mounted in an adjustable tailgate. Gravity flow aggregate feed system not acceptable.	_____	_____
B. Aggregate receiver hopper shall be minimum 1440 square inches of receiving area.	_____	_____
C. Must be capable of consistently feeding aggregate all times when truck is positioned on curves, corners and hills.	_____	_____
D. Aggregate receiver must contain a 140 inch screw to deliver aggregate to the rear mounted power flow, positive air lock.	_____	_____

	<u>Comply</u>	<u>Does Not Comply</u>
E. Aggregate screw must be hard surfaced with 1750 hardening alloy.	_____	_____
F. Airlock must be rear mounted.	_____	_____
G. Aggregate feed screw shall be hydraulically powered and operated by remote switch on operator's boom. Patching machine hydraulic system must operate independently of truck hydraulics.	_____	_____
H. Aggregate receiver must have 1.5" square mesh screen and safety switch to shut down machine when screen is removed or ajar.	_____	_____
I. Unit must have pressure compensated, dual flow control valve with built-in solenoid with calibrated knobs for regulating aggregate flow.	_____	_____
Other: _____ _____	_____	_____

8. BLOWER

A. Maximum output 486-CFM.	_____	_____
B. Unit shall have a high volume lobe type blower.	_____	_____
C. Unit must be equipped with heavy-duty silencer.	_____	_____
Other: _____ _____	_____	_____

9. HYDRAULIC SYSTEM

A. Unit shall have minimum 17 GPM vane pump.	_____	_____
B. Hydraulic oil reservoir shall be minimum 22 gallons.	_____	_____
C. All valves shall be solenoid operated by toggle switch on the operator's console. The controls will allow for bi-directional operation of the center auger and tailgate auger. A flow control valve will allow the operator to adjust both the auger operational speeds.	_____	_____
Other: _____ _____	_____	_____

10. ENGINE

A. Shall be minimum 80 HP water cooled diesel operated.	_____	_____
B. Unit shall be equipped with 1000 CCA battery.	_____	_____

	<u>Comply</u>	<u>Does Not Comply</u>
C. Unit shall have a 25 Gallon fuel tank.	_____	_____
Other: _____ _____	_____	_____

11. CHASSIS

A. The longitudinal side frames and tongue members of the trailer shall be on one continuous piece construction composed of hot rolled steel channel having the minimum dimensions of 6 inches (15.24 cm) web, .200 inch (.508 cm) thickness with 1.92 inch (4.877cm) flanges. The configuration of the channels shall be cold formed with the flanges on the outside resulting in a one-piece frame member with no cross welding of or on the flanges to avoid any possibility of flange stress cracking.	_____	_____
B. Shall have brake lights, tail lights, and directional lights with connections to meet FMVSS108.	_____	_____
C. Unit shall have two (2) 6,000 LB capacity torflex axles.	_____	_____
D. Tires shall be ST 225/75 R15 load range D.	_____	_____
E. Unit must have electric brakes.	_____	_____
F. Unit shall have adjustable 10,000 LB pintle hitch and retractable jack-stand.	_____	_____
G. Unit shall have adjustable hitch height of 20 to 33 inches from ground level in 2-1/4 inch increments.	_____	_____
Other: _____ _____	_____	_____

12. FILTERS

A. Engine: Dry type	_____	_____
B. Blower: Dry type	_____	_____
Other: _____ _____	_____	_____

13. HOSES

A. Material hose shall be 3 inch I.D. neoprene rubber that resists curling and twisting, is adequately reinforced and rubber lined.	_____	_____
B. Material hose length: Shall be 20 feet in length with metal extension.	_____	_____
C. Emulsion: 3/8 inch ID plastic, 25 feet in length.	_____	_____

	<u>Comply</u>	<u>Does Not Comply</u>
D. All pressure hoses shall have high-pressure fittings.	_____	_____
Other: _____ _____	_____	_____

14. COLOR

A. Shall be Nason two part urethane Crafcro Red, primer is a Dupont Corlar Epoxy-934S and the activator is Dupont Corlar - 936S.	_____	_____
Other: _____ _____	_____	_____

15. CRACK FILLING ATTACHMENT (OPTIONAL)

A. Unit shall come equipped with 25-foot emulsion hose on retractable reel with 4-foot hand wand. Must be rear mounted on unit.	_____	_____
Other: _____ _____	_____	_____

OPTIONS (X if to be included)

- _____ 3" Pintle Hitch (included as standard)
- _____ 2-1/2" Pintle Hitch
- _____ 24" Hitch Extension
- _____ 6" Hitch Extension
- _____ Strobe Light, Class II.
- _____ Strobe Light, Class I/CA Title 13
- _____ Water/fuel separator
- _____ Arrow board and control
- _____ Electric throttle
- _____ Crack filling attachment
- _____ 8ft Quick Flush Hose

MISCELLANEOUS

The successful bidder shall furnish at the time of delivery a copy of the parts and service manual. Bidders are required to submit detailed descriptive current literature covering the unit being bid. The lack of submitting said literature will be cause for rejection of this bid.

The _____ reserves the right to inspect the equipment tendered by the successful bidder to ensure that it conforms to the specifications herein before mentioned above.