

INVITATION TO BID

Sealed bids will be received by the City of Auburn, until 10:00 a.m. local time, on June 27, 2006 in the Office of the City Manager, 144 Tichenor Avenue, Auburn, Alabama, and then publicly opened and read for furnishing the following:

ONE (1) CRACK SEALER

Bid specifications are attached. The City is requiring bid prices on one (1) Crack Sealer being bid. Please direct any questions to Ray Pratt (334) 501-3095. Bids must be submitted on the attached form within a sealed envelope addressed:

City Manager, City of Auburn
144 Tichenor Avenue, Suite 1
Auburn, Alabama 36830

Envelope must be plainly marked on the outside as follows:

BID: One (1) Crack Sealer
OPENING: 10:00 a.m., local time
DATE: June 27, 2006

The City of Auburn reserves the right, as the best interest of the city may require, to award the purchase contract from any of the bids, to reject any or all bids, and to waive any informalities in bids received. Bid will be good for ninety (90) days after being opened by the City of Auburn, Alabama. The City reserves the right to revert to the State of Alabama Contract if the bid price is higher than the contracted amount through the State.

The successful bidder will note that the City pays by invoice on each Friday of the month. Invoices must be received by accounts payable at least seven working days before the scheduled check write. If you have any questions concerning billing, contact our accounts payable office at (334) 501-7237.

CITY OF AUBURN

Karen S. Broome
Purchasing Office

CITY OF AUBURN
AUBURN, ALABAMA
MINIMUM BID SPECIFICATIONS
CRACK SEALER

It is the intent of these specifications to describe a Crack Sealer. These specifications describe and state minimum requirements of this equipment. Bids submitted on equipment not meeting these minimum requirements will be subject to rejection.

The following are intended as guidelines, all equivalent or comparable units will be considered.

All bidders must fill in all blanks: **YES** if meeting or exceeding specifications and **NO** if exceptions are taken. Any exceptions taken must be explained in written detail on bidder's letterhead and attached to the bid submitted. Bidder must attach a copy of factory warranty for Crack Sealer.

YES **NO** **OFFERED**

A. GENERAL

The purpose of these specifications is to describe a double-boiler type melter applicator that is specifically designed for and shall be capable of heating and applying all grades of asphalt rubber sealant, fiber modified asphalt sealant and specification joint sealant along with Thermofix concrete repair product without further equipment modification. It may be used for the application of resinous, colored sealant and fillers. This unit shall be the manufacturer's current production model manufactured in the United States of America. The machine shall be capable of starting at ambient temperature and bringing the sealant material up to application temperature in one hour or less. The material should be in a kettle or melter constructed as double boiler, with space between the inner and outer shells filled with oil or other heat-transfer medium. Thermostatic control for the heat-transfer medium shall be provided and shall have sufficient sensitivity to maintain sealant temperature within the manufacturer's specified application temperature range. Temperature indicating devices shall have internals no greater than 5°F (2.8°C) and shall be calibrated as required to assure accuracy. The melter shall have continuous sealant agitation and a mixing system to provide uniform viscosity and temperature of material being applied. Do not attempt to apply 2-component or PVC coal tar products with this unit.

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	<u>YES</u>	<u>NO</u>	<u>OFFERED</u>
B. REQUIRED SAFETY FEATURES			
1. The unit shall have a safety shut-off on lid that automatically stops the agitator when the lid is opened.	_____	_____	_____
2. The applicator wand shall be equipped with an automatic shut-off feature that will stop the flow of sealant when the handle is released or dropped.	_____	_____	_____
3. The sealant line pressure will automatically cease when the sealant flow is stopped. The operator shall not be required to perform any additional activity other than releasing the wand trigger switch to cease sealant line pressure. There shall be no valves in the line to allow interruption of sealant flow from the pump to the wand end. The heat transfer oil shall adequately and efficiently bring the sealant material to application temperature without the use of a heat transfer oil circulation pump. This eliminates the potential exposure of personnel to pressurized hot heat transfer oil.	_____	_____	_____

C. TOWING FRAME AND JACK

This unit shall be trailer mounted. 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 5 inches (12.70 cm) web, 3/16 inch (.48 cm) thickness with 1.75 inch (4.5 cm) 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. The tongue shall be equipped with an appropriate heavy duty ball or pintle hitch and shall be adjustable in height above ground level from a minimum of 14 inches (35.6 cm), to a maximum of 32 inches (81.3 cm), permitting practically level towing with a wide range of towing vehicles. The towing hitch shall be bolted to the hitch plate for easy height adjustment and/or conversion to other type hitches. A crew-post tongue jack shall be furnished. It shall be a heavy duty type with a load capacity of 7,000 pounds (3,175 kg) and it shall be side mounted and swing away for positive road clearance while under tow.

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YES NO OFFERED

D. RUNNING GEAR

The unit shall be equipped with a dual independent rubber tensional suspension having a safe load capacity of 7,000 pounds (3,175 kg), electric brakes, modular wheels and ST 205/75R 14-8 tubeless tires (Load Range C). This suspension eliminates springs and shackles that rust and reduce ground clearance. The melter shall have dual taillights, stop lights and turn signals. Light shall be JCC approved. A license plate holder shall be attached to the driver's side taillight. All melter fluid tanks shall be positioned no lower than the deck level and be mounted on top of the channel frame members to assure proper ground clearance. The unit shall also be equipped with two safety chains not less than 48 inches (121. cm) of .38 inch (.97 cm) coil proof chain, attached to the tongue with a drilled type clevis pin on the end attached to the frame and screw type clevis pin on the opposite end. Total shipping weight is approximately 4,020 pounds (1,823 kg). _____

E. HEATING TANK

The material heating tank shall be a minimum of 37 inches (93.98 cm) diameter by 28.75 inches (73.02 cm) deep having a minimum capacity of 133.75 gallons (506.3 l) at ambient temperature. The tank will have a rear discharge from the pump and a rear plug outlet. A double boiler type jacket shall create a reservoir that shall hold a minimum of 34.8 gallons (129 l) of heat transfer oil at 70°F (21.1°C). (Note: at 500°F (260°C) the heating oil will expand approximately 18%). The jacket shall wrap around 100% of the outside area of the circular material tank and bottom and allow for complete circulation of the heated transfer oil. The tank and jacket shall be made of not less than 3/16 inch (.94 cm rolled sheet steel). There shall be one plug to allow the entire heat transfer oil system to be drained. The heat transfer oil shall be of ISO grade 68. _____

F. EXPANSION TANK

A sealed expansion tank for heat transfer oil shall be provided to minimize oil oxidation and prevent moisture condensation into the heat transfer oil. **Overflow down tubes are unacceptable.** _____

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YES NO OFFERED

G. HYDRAULIC SYSTEM

The hydraulic system shall incorporate a single hydraulic pump to power the agitation and pumping system. All valves shall be solenoid operated by toggle switch and wand handle switch. The controls will allow for bi-directional operation of the sealant pump. A flow control valve will be mounted on the rear of the unit to allow the operator to adjust the pump operational speed. The minimum 32 gallon (121 l) hydraulic tank will be equipped with an internal 10-micron full flow filter. The filter shall be equipped with a restriction indicator to indicate the need for service. A sight gauge level indicator equipped with a thermometer to measure oil temperature will be mounted on the tank and located where it is easily viewed.

H. INSULATION

The heating tank shall be insulated with a minimum of 1 inch (2.54 cm) thick high temperature ceramic insulation and covered by a 22 gauge (.07 cm) steel outer wrapper. **Fiberglass or rock wool insulation is unacceptable due to their moisture retention properties resulting in a significant loss of their insulating value over an eighteen month period.**

I. LOADING HATCH

A low profile angled lid opening for loading shall be required at the top of the material tank and shall not exceed 59 inches (149 cm) for correct ergonomic lifting and fume exposure. This will allow the operation of the equipment, including sealant loading, from curbside. **Loading systems that require the operator to step onto the melter are unacceptable.** The opening shall have a minimum area of 252 square inches (1,625 square cm), while not exceeding 275 square inches (1,774 square cm) in order to prevent heat loss, and shall be hinged to allow placement of a block of sealant onto lid and closure of lid for easy, anti-splash loading.

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J. HEATING SYSTEM

The heat transfer oil is heated by one 12-volt, 250,000 BTU high efficiency forced air diesel fired burner directly at the bottom of the heat transfer oil tank. The total area exposed to the burner shall be a minimum of 5,244 square inches (33,832 square cm). The material tank shall have a minimum of 4,267 square inches (27,529 square cm) of contact with the heat transfer oil. No other mechanical circulation of the heat transfer oil by pump shall be accepted. This provides for a melt rate of 1,000 pounds (450 kg) per hour.

K. IGNITION OF BURNER

The burner shall be lit by a constant duty high voltage transformer powering an electric spark igniter. This igniter shall work in conjunction with a sensor that detects a lack of burn or ignition and shuts down the fuel supply. The thermostat control is located on the curbside of the machine for operator safety.

L. INTEGRATED CONTROL SYSTEM

The melter applicator shall have electronic thermostat controls that will automatically regulate hot oil, material and hose temperatures and in turn display these temperatures on digital readouts. The controls shall operate at temperature ranges needed for proper application of sealant. They shall be activated by a single power switch, which will then turn on the agitator and pump at the proper time by use of interlock for the agitation system will not allow the agitator to be activated until the material temperature reaches 275° and the interlock for the pumping system will not allow the pump to be activated until the hose temperature reaches 325°. All temperature controls shall be contained in a single weatherproof control box. This control box shall also contain the engine ignition controls, hour meter and any engine gauges.

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M. DRIVE AND DRIVE CONTROLS

The motive force to the agitator and material pump shall be hydraulic motors driven by a single hydraulic pump. The drive controls governing the rotational speed of the agitator and material pump shall be controlled by adjustable hydraulic valves. The drive controls governing the speed of the material pump shall be controlled electronically from the rear of the machine. The material pump will have infinite speed control and is electrically actuated by a toggle switch on the control panel or a switch on the hand wand. Material pump can be reversed as required.

N. AGITATION

The sealant material shall be mixed by a hydraulically driven, full sweep vertical agitator with two opposing horizontal paddles and vertical risers attached to the ends. This feature ensures that material remains in complete suspension and that the hot material stays in the lower area of the tank and does not get splashed or thrown to the upper areas of the tank. The agitation system shall be chain driven from the hydraulic motor to the agitator. The agitator rotates in both directions. For additional safety the agitator will shut off automatically when the loading hatch is opened.

O. BI-DIRECTIONAL VARIABLE SPEED PUMPING UNIT

A hardened steel gear pump is located in the center of the material tank attached to the bottom of the tank. Pumping of material is controlled by a switch on the hand wand and output is controlled hydraulically. The pump and agitator drive shaft stands vertically attached to two motors on the top surface of the tank. One motor rotates and axial tube having radial mixing blades at the chamber bottom. The second motor drives a coaxial shaft running through the tube to the pump. Sealant pumping shall be on demand. When pumping stops, all line pressure and sealant flow shall stop. **No external plumbing or recirculation back into the tank is acceptable.** No internal or external valves shall be used in the pumping and sealant delivery system. The pump shall be capable of delivering sealant at a rate that exceeds the melt rate of the unit.

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<p>P. ACTIVE PUMP PROTECTION</p> <p>The pump shall be completely encircled by a protective screen. The screen shall not allow anything larger than ½ inch (1.27 cm) in size to pass from the sealant tank into the pump suction port. The screen shall continuously rotate 360° around pump whenever the sealant agitator is engaged. The active screen will protect the pump from foreign object damage and will self-clean as it rotates around the sealant pump and suction port.</p>	_____	_____	_____
<p>Q. SEALANT HOSE AND APPLICATOR WAND</p> <p>1. Both the hose and wand are heated by low voltage electric current and are temperature regulated. Due to weight and safety considerations, an oil-jacketed hose is unacceptable. The hose shall be specifically manufactured for handling liquid asphalt products up to 500° F (260° C) at 500 psi (34.47 bar) working pressure. Hose shall not be less than 18 feet (5.48 m) in length. For maximum operator safety it shall be made of stainless steel braid with a ¾ inch (1.91 cm) inside diameter and shall be Teflon lined. Further, it shall be heavily insulated to prevent hot material from leaking out. Total diameter of the hose shall be not greater than 2¼ inch (5.72 cm). The total weight of the hose shall not exceed 20 pounds (9.07 kg). The hose is to be wrapped with a minimum of three electrical wires with terminal ends. The wires will be capable of heating the hose to 400° F (204° C) in less than 45 minutes and have variable temperature control capability. The hand wand shall be constructed of steel with sufficient strength to withstand normal day-to-day operation. Material flow is controlled by a trigger switch. For greater operator mobility, the connection between the wand and hose shall be through a 360° swivel. There shall be no obstruction or valves between the material pump and the wand end.</p>	_____	_____	_____
<p>2. The hose is supported by a 6 ft. (1.83 m) boom, which swivels side to side on dual pillow block bearings. The is centered at the rear of the machine.</p>	_____	_____	_____

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R. ENGINE			
The unit shall be equipped with a diesel engine complying with the following specifications:			
Electric Starter	_____	_____	_____
Three Cylinder 33.3 HP (24.83 kw) @ 3000 RPM	_____	_____	_____
3.62 inch (92 mm) Stroke	_____	_____	_____
Constant Speed Mechanical Governor	_____	_____	_____
91.3 inch ³ (1.49l) Displacement	_____	_____	_____
Full Flow Oil Filter	_____	_____	_____
3.27 inch (83 mm) Bore	_____	_____	_____
22 to 1 Compression Ratio	_____	_____	_____
Water Cooled	_____	_____	_____
The engine speed is preset at the factory for optimal alternator output to power the heated wand and hose.	_____	_____	_____
Engine Shutdown package (low oil pressure & high temperature).	_____	_____	_____
S. FUEL CAPACITY			
The melter shall have a 32 gallon (121 l) diesel fuel tank for operation of the entire unit. The unit will be capable of operating for minimum of 12 hours on one tank of fuel. The tank shall be equipped with full length sight gauges for fuel level indication protected in the steel cover.	_____	_____	_____
T. AIR COMPRESSOR			
The melter shall be equipped with a 53.8 cfm (1525l/m) @ 100psi (6.89 bar), Rotary Vane Air Compressor. The compressor shall be driven hydraulically and the air pressure is controlled by a continual intake valve modulation which adjusts the air flow to increase or decrease depending on the user's demands. The compressor has an integral toroidal cooler to maintain proper oil temperature, along with a high temperature shutdown switch for safety. The unit shall also be equipped with a self-contained air to oil hydraulic cooler with an electric switch to turn on/off the cooling fan. The noise level which the compressor puts out is 78 dba @ 1 meter.	_____	_____	_____

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U. PAINT			
All painted surfaces shall be coated with DuPont two-part epoxy primer and DuPont two-part urethane paint applied by DuPont certified painters.	_____	_____	_____

V. OPTIONS (Mark if to be included:)

- _____ 2 5/16 inch Ball Hitch
- _____ 2 inch Pintle Hitch
- Sealant Tip Adapter
- 3 inch Pintle Hitch
- V-shaped Squeegee (Qty.)
- _____ 3 inch Applicator Disk
- _____ Cold Air Lance
- 1/2 inch Round Sealing Tip
- _____ Extra Electric Hose
- _____ Hot Air Lance
- _____ Lockable Battery Cover
- _____ Extra Hydraulic Filter
- _____ Auto Loader
- _____ Lockable Engine Cover
- Fire Extinguisher Mounted on the Trailer Frame
- Hydraulic Oil Sight Gauge
- Mast Mounted Strobe light
- Tool Box
- _____ Self-Propelled Power Wheel
- _____ Overnight heater
- _____ Custom Paint
- _____ Hitch Extension, 29"
- Hitch Extension, 34"

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W. OTHER GENERAL SPECIFICATIONS

1. Standard equipment not mentioned is to be included.
2. Equipment other than new, unless specified, will not meet specifications.
3. The manufacturer shall warranty the equipment for one year or as otherwise noted in the manufacturer's standard warranty policy.
4. All qualified bidders must have and maintain a complete inventory of repair parts and have experienced, factory-trained service personnel for this equipment. Successful bidder must be capable of performing own warranty work in his maintenance department.
5. Include one copy of repair/maintenance manual and/or CD.
6. A comprehensive safety manual and an operational/maintenance CD shall be supplied with unit. A factory - trained person shall be made available for initial start-up and training in the operation of the melter.

X. DELIVERY

1. Unit to be delivered to the following address:
356 North Donahue Drive
Auburn, Alabama 36832
2. Bid price will F.O.B. Auburn and includes title application.
3. **The city must be sent a copy of the confirmation order within 24 hours after receipt of order.**

