

BID INVITATION

STANDARD CONDITIONS

M-03-195H

1. **ACCEPTANCE AND REJECTION:** The Arkansas State Highway and Transportation Department (AHTD) reserves the right to reject any or all bids, to accept bids in whole or in part (unless otherwise indicated by bidder), to waive any informalities in bids received, to accept bids on materials or equipment with variations from specifications where efficiency of operation will not be impaired, and to award bids to best serve the interest of the State.
2. **PRICES:** Unless otherwise stated in the Bid Invitation, the following will apply: (1) unit prices shall be bid, (2) prices should be stated in units of quantity specified (feet, each, lbs., etc.), (3) prices must be F.O.B. destination specified in bid, (4) prices must be firm and not subject to escalation, (5) bid must be firm for acceptance for 30 days from bid opening date. In case of errors in extension, unit prices shall govern. Discounts from bid price will not be considered in making awards.
3. **BID BONDS AND PERFORMANCE BONDS:** If required, a **Bid Bond** in the form of a cashier's check, certified check, or surety bond issued by a surety company, in an amount stated in the Bid Invitation, must accompany bid. **Personal and company checks are not acceptable as Bid Bonds.** Failure to submit a Bid Bond as required will cause a bid to be rejected. The Bid Bond will be forfeited as liquidated damages if the successful bidder fails to provide a required Performance Bond within the period stipulated by AHTD or fails to honor their bid. Cashier's checks and certified checks submitted as Bid Bonds will be returned to unsuccessful bidders; surety bonds will be retained. The successful bidder will be required to furnish a **Performance Bond** in an amount stated in the Bid Invitation and in the form of a cashier's check, certified check, or surety bond issued by a surety company, unless otherwise stated in the Bid Invitation, as a guarantee of delivery of goods/services in accordance with the specifications and within the time established in the bid. **Personal and company checks are not acceptable as Performance Bonds.** In some cases, a cashier's check or certified check submitted as a Bid Bond will be held as the Performance Bond of the successful bidder. Cashier's checks or certified checks submitted as Performance Bonds will be refunded shortly after payment has been made to the successful bidder for completion of all terms of the bid; surety bonds will be retained. Surety bonds must be issued by a surety company authorized to do business in Arkansas, and must be signed by a Resident Local Agent licensed by the Arkansas State Insurance Commissioner to represent that surety company. Resident Agent's Power-of-Attorney must accompany the surety bond. Certain bids involving labor will require Performance Bonds in the form of surety bonds only (no checks of any kind allowed). In such cases, the company issuing the surety bond must comply with all stipulations herein and must be named in the U. S. Treasury listing of companies holding Certificates of Authority as acceptable sureties on Federal Bonds and as acceptable reinsuring companies. Any excess between the face amount of the bond and the underwriting limitation of the bonding company shall be protected by reinsurance provided by an acceptable reinsuring company.
4. **TAXES:** The AHTD is not exempt from Arkansas State Sales and Use Taxes, or local option city/county sales taxes, when applicable, and bidders are responsible to the State Revenue Department for such taxes. These taxes should not be included in bid prices, but where required by law, will be paid by the AHTD as an addition thereto, and should be added to the billing to the AHTD. The AHTD is exempt from Federal Excise Taxes on all commodities except motor fuels; and excise taxes should not be included in bid prices except for motor fuels. Where applicable, tax exemption certificates will be furnished by the AHTD.
5. **"ALL OR NONE" BIDS:** Bidders who wish to bid "All or None" on two or more items shall so stipulate on the face of bid sheet; otherwise, bid may be awarded on an individual item basis.
6. **SPECIFICATIONS:** Complete specifications should be attached for any substitution or alternate offered, or where amplification is necessary. Bidder's name must be placed on all attachments to the bid.
7. **EXCEPTIONS TO SPECIFICATIONS:** Any exceptions to the bid specifications must be stated in the bid. Any exceptions to manufacturer's published literature must be stated in the bid, or it will be assumed that bidder is bidding exactly as stated in the literature.
8. **BRAND NAME REFERENCES:** All brand name references in bid specifications refer to that commodity or its equivalent, unless otherwise stated in Bid Invitation. Bidder should state brand or trade name of item being bid, if such name exists.
9. **FREIGHT:** All freight charges should be included in bid price. Any change in common carrier rates authorized by the Interstate Commerce Commission will be adjusted if such change occurs after the bid opening date. Receipted common carrier bills that reflect ICC authorized rate changes must be furnished.
10. **SAMPLES AND LITERATURE:** Samples or technical literature must be provided within 14 days of AHTD request unless AHTD extends time. Failure to provide samples or literature within this period may cause bid to be rejected. When required, samples of items must be furnished free of charge, prior to or after the opening of bids, and, if not destroyed, will be returned upon request at the bidder's expense. Each individual sample must be labeled with bidder's name and item number. Request for return of samples must be made within 10 days following submission of sample. Samples from successful bidders will be retained for comparison with items actually furnished.
11. **GUARANTY:** Unless otherwise indicated in Bid Invitation, it is understood and agreed that any item offered or shipped on this bid shall be newly manufactured, latest model and design, and in first class condition; and that all containers shall be new, suitable for storage or shipment and in compliance with all applicable laws relating to construction, packaging, labeling and registration.
12. **BACKORDERS OR DELAY IN DELIVERY:** Backorders or failure to deliver within the time required may constitute default. Vendor must give written notice to the AHTD, as soon as possible, of the reason for any delay and the expected delivery date. The AHTD has the right to extend delivery if reasons appear valid. If reason or delivery date is not acceptable, vendor is in default.
13. **DEFAULT:** All commodities furnished will be subject to inspection and acceptance by AHTD after delivery. Default in promised delivery or failure to meet specifications authorizes the AHTD to cancel award or any portion of same, to reasonably purchase commodities or services elsewhere and to charge full increase, if any, in cost and handling to defaulting vendor. Applicable bonds may be forfeited.
14. **ETHICS:** *"It shall be a breach of ethical standards for a person to be retained, or to retain a person, to solicit or secure a State contract upon an agreement of understanding for a commission, percentage, brokerage, or contingent fee, except for retention of bona fide employees or bona fide established commercial selling agencies maintained by the contractor for the purpose of securing business."* (Arkansas Code, Annotated, Section 19-11-708).

ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

SPECIFICATION 03-64-3119

FOR

TRAILER MOUNTED SEWER FLUSHING MACHINE

1. **General:** This specification is intended to cover a trailer mounted high velocity water machine, designed to remove grease, grit and other materials from storm sewer pipes, to be used for the purpose of cleaning highway underdrains and small culverts. Unit shall be capable of cleaning 4" to 36" metal and/or plastic pipe underdrains filled with roots, rodent or insect nests, and soil sediment. Complete unit shall consist of a flusher pump driven by a liquid cooled diesel engine, water tank(s), and rotating dual hose reel assembly with hose, all mounted on a tandem axle trailer.

The manufacturer shall be experienced in the manufacturing of sewer flushing machines, and the flusher pump, water tank and trailer package bid shall be production items in use in the United States for at least three (3) years. The machine and components must meet all federal and state safety regulations

2. **Engine:** Liquid cooled diesel developing a minimum of 115 gross horsepower at rated RPM. Shall be equipped with 12 volt electric system including starter, battery, alternator and ammeter or charge indicator. Shall have electric hour meter, tachometer, approved type air cleaner, oil and fuel filters, approved type governor and muffler. Shall be equipped with oil pressure gauge, water temperature gauge and fuel level gauge. Shall be equipped with an automatic shutdown system which senses low oil pressure or high coolant temperature. Fuel tank shall have a capacity for no less than eight (8) hours of operation. Cooling system shall have anti-freeze protection to -20° F, or lower.
3. **Clutch:** A clutch shall be provided to disengage the high pressure water pump without affecting the operation of the hydraulic system to allow operation of the engine and hose reel without running the water pump. The clutch shall be a heavy duty, lever actuated, over center PTO type. Control lever shall be located on the operating end of the unit to engage and disengage the clutch.
4. **Water Pump:** Shall be a heavy duty, positive displacement triplex type pump with an enclosed oil bath crankcase providing a minimum of 60 gpm at no less than 2,000 psi. The water pump shall be equipped with drain valves for protection during freezing conditions. The pump shall be driven by means of a power band belt and sheaves on the engine and pump. Belt adjustment to be accomplished by water pump movement in guide bars without allowing misalignment of the sheaves.
5. **Water Tank(s):** Shall have a minimum liquid capacity of 600 gallons and be equipped with an access opening, internal baffles and method for draining and cleaning the tank(s). The tank(s) shall be constructed of UV stabilized polyethylene with a minimum thickness of 3/8". If multiple tanks are used, vents shall be supplied to allow air pressure equalization.
 - A. **Access Opening:** Tank(s) shall be equipped with access opening(s) having a minimum diameter of 15". The opening(s) shall have a threaded cover the full diameter of the opening and a smaller lid threaded into the cover.
 - B. **Water Fill System:** The fill system shall be operable from the outside of the unit. The fill system shall have a quick-disconnect fitting for 2-1/2" hose and be complete with a minimum of 20' of fill hose with quick-disconnect fitting at machine and 2-1/2" N.S.T. swivel fitting for hydrant connection. The fill system shall be an approved air gap, anti-siphon design to protect the potable water supply. The fill hose, fire plug wrench and all equipment and tools necessary for filling the water tank(s) shall be provided. The trailer shall be equipped with internal storage for all components and tools for the tank fill system.

- C. Tank Drain: Provisions shall be made for a gate valve or ball valve, reachable from the outside of the unit, in order to drain and clean the tank(s).
 - D. Water Level Indicator: A water level sight gauge to show the amount of water in the tank(s) shall be mounted at, or be visible from, the operator's station.
6. Dual Hose Reel Assembly: The hose reel assembly shall be a dual reel system located at the rear of the unit. Shall consist of one (1) large reel sized for 1" hose and one (1) small reel sized for ½" hose. The large reel shall have a minimum capacity of 450' of 1" ID high pressure hose. The small reel shall have a minimum capacity of 600' of ½" ID high pressure hose. The machine shall be delivered with 450' of 1" ID high pressure hose with a minimum burst rating of 5,000 psi mounted on the large reel and with 600' of ½" ID high pressure hose with a minimum burst rating of 8,500 psi mounted on the small reel. Both hoses will be equipped with appropriate connectors.
- A. Reel Construction: The hose reels shall be constructed with rolled formed, one piece reel flanges and be designed to prevent hose damage from contact during all normal working conditions. The sewer hose shall be connected to the reels on the outside, allowing changing sewer hose without disassembly of the reel inner drum core. The hose reel assembly shall be designed to rotate a minimum of 180° for ease in operational and positioning performance and shall lock in a minimum of four positions. The reel assembly shall be securely mounted to a steel platform and rotate on a heavy duty bearing. Rotating reels using plastic material for swivel action are not acceptable.
 - B. Level Wind Guide: Each reel shall be equipped with a hose level winding guide. The guide shall be hinged and will separate to allow sewer hose to be positioned in the assembly between the rollers after the operator has made the proper setup in the manhole.
 - C. Footage Meter: The hose reel assembly shall be equipped with a footage meter to indicate the amount of hose in use.
 - D. Hose Reel Drive: The reels shall be powered in both directions by hydraulic motors, either with or without the water pump in operation. The hydraulic drive shall have sufficient power to retract the hose when fully extended into the pipe with the cleaning nozzle in operation. A hose reel hand crank, mounted on the trailer for easy access, shall be provided to retrieve the hose in case hydraulic power is lost.
 - E. Hydraulic System: The hydraulic pump for the hose reel hydraulic system shall be driven by the engine either directly or by a drive belt. If the pump is belt driven, a belt tension adjustment shall be provided. The hydraulic pump shall have a minimum rating of 8 gpm at approximately 1,800 psi. The hydraulic system shall be equipped with built-in overload relief, hydraulic oil reservoir, filter and hydraulic hose rated for maximum system pressure. Direction control valves and speed control valves for the hose reels shall be provided at the operator's station. All hydraulic lines shall be shielded from the operator for safety.
7. High Pressure Hand Gun: A high pressure hand gun with a "dead man" trigger shall be furnished. Hand gun shall be complete with a minimum of 25' of no less than ½" ID high pressure hose with quick disconnect fitting. One (1) replaceable orifice shall be installed on the gun. The piping for the hand gun system shall be an integral part of the water pump system and include a quick disconnect fitting located on the outside of the control panel. A relief valve, independent of the sewer cleaning relief valve, shall be included to regulate pressure through the hand gun. Relief valve shall be repairable and adjustable type, set at a maximum of 800 psi for operator safety at full throttle. A high pressure side siphon injector to inject liquid wash detergent shall also be included.
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8. Water System Piping: The pump suction and low pressure return lines shall be standard weight with malleable fittings. A stainless steel strainer shall be installed in the pump suction line, located for easy cleaning. All high pressure piping and hose shall provide a minimum 2,000 psi working pressure, but must equal or exceed designed working pressure of machine furnished. A relief valve, adjustable from 0 to no less than 2,000 psi, shall regulate pressure to the cleaning nozzle. This valve shall be the repairable type. A single three-way flow control valve, controlled by one lever at the operator's station and allowing for water flow directly to the hose reel or recirculating back to the water tank, shall be provided. Water shall be supplied to the hose reels through a 90° water swivel constructed with a straight swivel nipple body and a 90° cast metal swivel body. A holding nut shall be threaded into the 90° body providing initial compression on the packing, take-up on worn packing, and disassembly for re-packing. The swivel nipple shall rotate on a minimum of two (2) rows of chrome alloy steel balls and be equipped with an Alemite fitting.
 9. Nozzles and Accessories: The following nozzles and accessories shall be furnished:
 - 1 ea. - ½" x 15° Standard Nozzle
 - 1 ea. - ½" x 30° Standard Nozzle
 - 1 ea. - 1" x 20° Storm Drain Nozzle ("Big Pete" style)
 - 1 ea. - 1" x 30° Missile Style Nozzle With Forward Jet
 - 1 ea. - 1" Aluminum Sand Nozzle, 15°/35° orifice
 - 1 ea. - 1" Finned Style Nozzle Extension
 - 1 ea. - 1" x 25' Leader Hose
 - 1 ea. - BB Hose Guide
 - 1 ea. - Upstream Pulley Guide
 10. Enclosure and Storage: The operating components, other than the water tank(s), shall be fully enclosed by a sheet metal enclosure to protect mechanical and electrical parts from weather, dirt and vandalism. Shall have air intake grill in front of engine radiator to allow proper cooling of engine. Access doors shall be provided for access to the engine, water pump, piping, valves, hydraulic components and accessories. All access doors shall have lockable latches and be keyed alike. A minimum of one (1) lockable tool storage area of suitable size to contain commonly used tools or any special tools necessary to operate and/or maintain the unit shall be provided. There shall be at least one (1) storage box which is sealed from the weather for storing manuals and other items which need to be kept in a dry location.
 11. Controls: All controls shall be within easy reach of the operator to allow control while standing at one location. Controls to be positioned in a way to allow cleaning to be done by one person. Controls, gauges or indicators provided shall include, but shall not be limited to, the following:
 - Keyed ignition switch and locking vernier type throttle
 - Engine oil pressure gauge
 - Engine coolant temperature gauge
 - Tachometer, hour meter and fuel level gauge
 - Ammeter, voltmeter, or charge indicator
 - Water system pressure gauge
 - Hose reel rotation direction control
 - Hose reel speed control
 - Water level sight gauge
 - Water control lever
 - Washdown gun fitting
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12. Trailer: Shall be four (4) wheel, tandem axle trailer with spring or torsion type suspension and of durable, heavy duty construction specifically designed to accommodate the sewer flushing machine and equipment. Shall be capable of transporting the assembled unit with filled water tank(s) at normal highway speeds. The completed unit shall distribute the tongue and axle weights over the frame in such a manner as to insure proper towing characteristics and structural integrity.
 - A. Wheels & Tires: Shall have steel disc wheels no less than 15" in diameter equipped with radial tires of adequate size and load range to handle fully assembled unit. A spare wheel and tire shall be provided.
 - B. Tongue: The trailer tongue shall be equipped with a 2-5/16" captive ball type hitch. A locking device shall be included to prevent the tongue from separating from the ball unintentionally.
 - C. Brakes: Shall be equipped with hydraulic surge brakes acting on all wheels. The surge brake system shall include a free backing feature to allow the unit to move freely in reverse.
 - D. Lights & Additional Equipment: Shall have steel fenders, tongue jack, safety chains with hooks, combination stop, tail and turn signal lights and reflectors to meet DOT and ICC regulations, and be complete with six pole round trailer connector including plug for trailer and receptacle for towing vehicle.
 13. Color: All exposed metal shall be properly primed and painted Arkansas State Highway and Transportation Department Omaha Orange, Sherwin Williams No. F1E 4143 Kem Transport Enamel, or equal.
 14. Warranty: Units purchased under this specification shall be warranted against defects in material and workmanship for a minimum period of twelve (12) months (365 days) from date unit is placed in operation by AHTD. Warranty shall include all parts, labor and transportation costs to the location of equipment. If equipment cannot be repaired on location, warranty shall include cost of transport to the facility where the repair work will be done. It will be the responsibility of the successful bidder to insure that repairs are completed in a timely manner.
 15. Manuals: The successful bidder shall furnish an Operator's Instruction Manual with each unit delivered and one (1) copy each of Shop Repair Manual and Parts Book (for engine as well as sewer flusher and related components) to each FOB point. In addition, one (1) copy each of Operator's Instruction Manual, Shop Repair Manual, and Parts Book (for engine as well as sewer flusher and related components) shall be furnished to Equipment & Procurement Division, P.O. Box 2261, Little Rock, AR 72203 (11302 W. Baseline Road, Little Rock, AR 72209, if shipping UPS).

The successful bidder may provide Shop Repair Manuals and Parts Manuals on computer media (CD ROM, Floppy Disks, etc.) in lieu of printed manuals.
 16. Training: Successful bidder shall furnish factory trained personnel to instruct Arkansas State Highway and Transportation Department personnel in the use, operation and maintenance of the sewer flushing machine provided.
 17. Units shall be assembled, adjusted and made ready for continuous operation at time of delivery.

All parts, accessories and tools necessary for satisfactory operation of units shall be furnished whether or not they are specifically mentioned in this specification (including standard equipment as regularly furnished by manufacturer as shown on printed literature and specifications - unless specifically excluded by this specification).
 18. The successful bidder shall maintain a representative inventory of replacement parts and service facilities for servicing equipment bid on.
 19. The Arkansas State Highway & Transportation Department reserves the right to require a demonstration, under actual working conditions, of the machine bid under this specification before award is made.
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