ADVERTISEMENT FOR BID

City of West Wendover
801 Alpine Street
P. O. Box 2825
West Wendover, Nevada 89883
775-664-3081

The City Clerk of the City of West Wendover Public Works Department is accepting sealed bids for the purchase of a new Hydraulic Sewer Jetting Machine. Specifications are available upon request at the City of West Wendover Offices at the address listed above or online at www.westwendovercity.com under Council Agenda, Minutes & Legal Notices. Any questions concerning the bids can contact the West Wendover City Offices at 775-664-3081. All sealed bids must be received no later than 2:00 p.m. mountain time on June 12, 2007. Bids will be publicly opened and read at this time.

City of West Wendover
Specifications for Hydraulic Sewer Jetting Machine

1. General

1.1 It is the intent of these specifications to describe the minimum requirements for a high pressure hydraulic sewer cleaner designed to use high velocity water jets in storm, sanitary and combined sewers, pipe drains and other conduits to remove obstructions, sand, solidified grease, roots and other materials. The unit, including all necessary equipment, shall be complete and ready for use. All parts not specifically mentioned which form part of the complete unit shall conform in design, strength and quality of material and workmanship to the highest standards of engineering practice.

1.2 The high-pressure sewer-cleaning unit shall be the manufacturer's standard as may be modified to meet the specifications. It shall be equipped with the manufacturer's equipment and accessories, which are the advertised and published literature for the unit.

2. Pump

2.1 The pump shall be of ceramic plunger design and capable of continuous operation at maximum designed pressure and capable of running dry

without damage. The pump will produce 3000 PSI and a flow of 25 gpm. Crankshaft speed on the pump shall not exceed 800 rpm.

2.2 The pump shall contain three (3) cylinders and have a stainless steel manifold incorporating a safety relief disc system. Pump run dry feature requires no clutches or low water systems.

2.3 The pump shall be high torque driven and requires no lubrication on the drive system. (No gearbox or couplings are accepted). The pump shall contain three (3) cylinders and the fluid end shall be of stainless steel construction. Cast iron or carbon steel pump heads are not acceptable. Pump plungers must be precision ground ceramic.

2.4 Pump should have an air gap between crankcase and plunger to prevent water from entering crankcase. Delivery valves failure must under no circumstances result in water entering the crankcase.

2.5 Pump shall be capable of pumping fresh, salt, and brackish water as well as specified chemicals without damage to the pump.

2.6 Pump shall be rated for temperatures of not less than 160 degrees in continuous duty operation.

2.7 City reserves the right to have manufacturer provide certification of actual flow at working pressure and horsepower requirement for the unit.

3. Tank

3.1 The unit shall contain two rotational molded polyethylene water tanks, the capacity of which shall be no more than 300 gallons each. Minimum of 24 minutes running time.

3.2 Construction shall be of heavy duty plastic with UV light protection.

3.3 An overhead type tank filing assembly with a 2" fire hydrant fitting shall be located on the curbside. An adaptor to convert from 2" hydrant fitting to ¾" garden hose shall also be supplied. A positive air gap anti siphon system shall be incorporated to protect the portable water supply.

3.4 Tank shall contain a 1-1/4" brass ball valve to enable easy gravity draining of water.

3.5 The tank shall be vented and shall have a removable lid to permit inspection and access into the tank.

4. Trailer

4.1 Tandem axle trailer with 12,000 lbs. GVW.

4.2 Equipped with 750-16 16.00 x 6.75 6H Spk Trailer Tires capable of handling the total GVW.

4.3 Hydraulic brakes with easy lube bearings and free backing brakes.

4.4 All necessary clearance and running lights shall be included.

4.5 Furnished with a 2 5/16" hydraulic actuator hitch and quick disconnect electrical connector.

4.6 Trailer fenders must have checker plating on front to prevent rocks and road debris from chipping paint.

4.7 Trailer must have rear tag light.

4.8 Trailer wheels rims shall be chrome or white.

4.9 Axles shall have rubber torsion with balanced suspension.

4.10 No springs or leafs will be acceptable.

4.11 Wheels must have independent suspension.

4.12 Axles must have 5-year minimum warranty.

5. Control

5.1 Control panel must be completely digital. All digital display and engine control functions will be managed by software programmable micro controllers.

5.2 Safety shutdown functions must include engine oil pressure sensor and engine temperature shutdown.

5.3 Unit shall be equipped with automatic glow plug function.

5.4 All controls must have fuse protection for beacon light, utility light, remote foot control, wireless remote, water selector valves, and digital display board.

5.5 Control panel must be equipped with twist lock connections for easy removal.

5.6 All gauges, switches, levers, etc. necessary for the operation of the unit shall be on the curb side of the unit adjacent to the hose reel so that the operator has complete control of the cleaning operation while working from one location.

5.7 The following instruments and controls shall be included as standard.

- **i)** Keyed engine ignition switch, charging light, oil pressure light and throttle.
- **ii)** Pressure gauge for water system must not freeze.
- **iii)** Engine hour meter, analog.
- **iv)** High pressure/Recycle Selector Control Valve.
- **v)** Level for controlling the speed and direction of the reel when moved backwards or forwards from a central position.

5.8 Control panel must be equipped with electronic diagnostic system with twist lock connection for quick removal.

5.9 All components and controls shall be mounted on a single control panel.

5.10 All electrical wiring must be color coded for quick disconnect.

5.11 Operational information shall also be provided in English and Spanish and will be visible for operator.

6. Hose Reel

6.1 The hose reel shall be designed to withstand maximum working pressure without distortion.

6.2 Capacity of the hose reel shall not be less than 500 ft. of 5/8" high-pressure plastic hose.

6.3 The outside diameter of the drum shall not exceed 31 ½".

6.4 The reel shall be driven by hydraulic power in both directions. The reel is to be directly driven by the hydraulic motor. No chains or couplings are acceptable. The hydraulic drive shall have sufficient power to retract the hose when fully extended into the sewer with the sewer cleaning jet in operation.

6.5 The unit shall be equipped with a 500 ft. continuous length of reinforced plastic hose.

6.6 Reel shall be direct drive with no internal fittings. All hose connections must be external to allow tightening without removing the hose. No chain drive will be accepted.

6.7 Reel must be equipped with a hose guide system.

6.8 Hose reel can pivot to either side on its own axis.

6.9 Manual or digital footage counter.

6.10 Hydraulic hose reel extension.

7. Hose Reel Drive System

7.1 The hydraulic power for powering the hose reel shall be by means of a pump directly driven from the auxiliary engine; hydraulic motor with direct drive to the hose reel; and oil reservoir; a direction and speed control valve and hydraulic hose rated to withstand the maximum system pressure.

7.2 The oil filter shall be the return type and have a replaceable cartridge.

7.3 The oil reservoir tank shall have a capacity of at least 6.5 gallons. The tank shall be metal construction. Plastic tanks not acceptable.

7.4 Hose reel shall be mounted in such a manner that debris does not create residue on other components (tool box).

8. Sewer Cleaning Hose

8.1 The hose shall have a minimal I.D. of 5/8", and minimum burst pressure of 14,000 psi.

8.2 The unit shall be equipped with a 500 ft. continuous length of reinforced plastic hose.

9. Piping

9.1 All piping subjected to high pressure shall have a minimum burst pressure of 14,000 psi.

9.2 The unit shall be equipped with a dual filtration system.

An 80-mesh clear water filter of the in-line type shall be installed in the suction line at a location permitting easy accessibility for cleaning. In addition to that an 80-mesh bag filter will be fitted in the water tank.

10. Engine – Auxiliary

10.1 The engine shall be a three cylinders, air or water-cooled industrial type diesel having a minimum capacity of 157 cubic inches.

10.2 The following accessories shall be furnished:

- **i)** 12 volt keyed ignition system with battery charging alternator and charging light.
- **ii)** Cable variable speed control throttle.
- **iii)** Centrifugal Governor.
- **iv)** Replaceable cartridge type oil filter.

10.3 Lubricating oil consumption shall be less than 0.75% of full load fuel consumption.

10.4 The engine shall have a continuous rating of 45 hp at 3,000 rpm.

10.5 The engine fuel tank shall have a minimum capacity of 19 gallons.

10.6 Engine must have high temperature and oil pressure shut down.

11. Painting

11.1 Before painting, all metal shall be blasted.

11.2 All components on the unit shall be primed and painted white.

11.3 All screws, bolts shall be rust proof or stainless steel throughout entire unit.

11.4 Paint must be Acrylic enamel.

11.5 Primer must be white based.

12. Toolbox - Storage

12.1 Single toolbox shall be located on each side of machine with a minimum of 12 cubic feet of open storage should be located at the rear of the unit, but not to interfere with operation. Toolbox shall contain nozzle holders.

12.2 Battery must be mounted in toolbox and completely enclosed.

13. Safety Equipment

13.1 Manhole floodlight and safety beacon are mounted on the unit.

13.2 Reflective safety tape will be mounted on rear and both sides of unit.

14. Pulsation System

14.1 The unit will feature an automatic pulsation system to induce an intermittent pulse into the hose so that it breaks the friction and allows the hose to travel long distances and negotiate multiple units.

14.2 The jet must be capable of climbing vertically 80 feet.

15. Standard Equipment

15.1 Two RPD drain jets in the following combinations:
i) 3 Rear, 1 Forward
ii) 6 Rear

15.2 One 9 drain jet extension

15.3 10 ft. orange leader safety hose – 14,000 psi min burst.

15.4 Tiger tail hose protector

15.5 Manufacturer to provide training on safety, operator use and maintenance. Minimum of one day.

15.6 Service and operations manual.

15.7 500 feet 5/8" hose.

15.8 Machine must be equipped with winterizing capability, preferably antifreeze type or air purge.

Total price F.O.B. West Wendover Nevada.

16. Options not included in bid price but would like a price for

i) Mini Jet kit for small lines, 150'
ii) Wireless remote
iii) 1 nozzle for cleaning storm drains and culverts.