

**BEFORE THE BOARD OF COUNTY COMMISSIONERS
LEWIS COUNTY, WASHINGTON**

IN THE MATTER OF:

RESOLUTION NO. 19-318

APPROVING A CALL FOR BIDS FOR ONE (1) VAC
TRUCK FOR THE PUBLIC WORKS ROAD
MAINTENANCE DIVISION

WHEREAS, the Lewis County Public Works Fleet Division has determined a need for one (1) Vac Truck for the Public Works Road Division; and

WHEREAS, the Vac Truck will be purchased with available FEMA funds; and

WHEREAS, the Board of County Commissioners wish to issue a call for bids for one (1) new Vac Truck.

NOW THEREFORE BE IT RESOLVED that the Department of Public Works is instructed to prepare a call for bids and contract specifications for one (1) new Vac Truck.

Bids for this proposal shall be submitted to the Clerk of the BOCC (351 N.W. North Street, Room 210, CMS-01, Chehalis, Washington 98532) by or before 11:00 a.m. on Tuesday, November 26, 2019 and will be opened on or after 11:00 a.m. on November 26, 2019, subject to official proposal addenda that establishes an alternate bid due date or opening time..

DONE IN OPEN SESSION this 4th day of November, 2019.

APPROVED AS TO FORM:
Jonathan Meyer, Prosecuting Attorney

BOARD OF COUNTY COMMISSIONERS
LEWIS COUNTY, WASHINGTON

Kevin McDowell
By: Kevin McDowell,
Deputy Prosecuting Attorney

Robert C. Jackson
Robert C. Jackson, Chair

ATTEST:



Gary Stamper
Gary Stamper, Vice Chair

Rieva Lester
Rieva Lester,
Clerk of the Lewis County Board of County
Commissioners

Edna J. Fund
Edna J. Fund, Commissioner

CALL FOR BIDS

ONE NEW VAC TRUCK (COMBINATION SEWER/CULVERT CLEANER)

TO:

LEWIS COUNTY HISTORIC COURTHOUSE
BOARD OF COUNTY COMMISSIONERS OFFICE
351 NW NORTH STREET
CHEHALIS, WASHINGTON 98532

BID OPENING:

WHERE: Lewis County Historic Courthouse
Board of County Commissioners Meeting Room
351 NW North Street
Chehalis, Washington 98532

DATE: November 26, 2019

TIME: On or after 11:00 AM

BID PACKET CONTENTS

1. CALL FOR BIDS
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1.

CALL FOR BIDS

CALL FOR BIDS

NOTICE IS HEREBY GIVEN that the Board of County Commissioners of Lewis County, Washington will open sealed bids and publicly read them aloud on or after 11:00 a.m. on November 26, 2019, at the Lewis County Historic Courthouse – 2nd floor, Board of County Commissioners Meeting Room, 351 NW North Street, Chehalis, Washington, for furnishing one new Vac Truck.

SEALED BIDS MUST BE DELIVERED BY 11:00 A.M.

(Lewis County official time is displayed on Axxess Intertel phones in the office of Board of County Commissioners.)

Sealed bids must be delivered to the Lewis County Commissioner's Office (Lewis County Historic Courthouse, 2nd Floor, 351 NW North Street, Chehalis, WA 98532) by 11:00 a.m. on the date specified for opening and in an envelope clearly marked **"SEALED BID FOR ONE NEW VAC TRUCK" - TO BE OPENED NOVEMBER 26, 2019 ON OR AFTER 11:00 AM.**

Specifications and bid forms may be obtained from Lewis County Department of Public Works Fleet Division located at 476 W. Main St., Chehalis, WA 98532, telephone 360-740-1194 or from Lewis County's website at www.lewiscountywa.gov.

The Lewis County Public Works Department in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.S.C. 2000d to 2000d-4 and Title 49, Code of Federal Regulations, Department of Transportation, subtitle A, Office of the Secretary, Part 21, nondiscrimination in Federally assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises as defined at 49 CFR Part 26 will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin, or sex in consideration for an award.

The Board of County Commissioners reserves the right to reject any or all bids and to waive all informalities in the bidding.

DATED this 4th day of NOVEMBER, 2019.

Clerk of the Board of County Commissioners
Lewis County, Washington

PUBLISH: The Chronicle – November 5 & 12, 2019
Lewis County Web Site @ www.lewiscountywa.gov/

2.

ADVERTISING PLAN

ADVERTISING PLAN

The Call for Bids will be advertised in the following publications:

- The Chronicle - Tuesday, November 5 & 12, 2019

Bid information will also be available on the Lewis County website at www.Lewiscountywa.gov

3.

BID FORM

**LEWIS COUNTY PUBLIC WORKS DEPARTMENT
FLEET SERVICES DIVISION
476 W. MAIN ST.
CHEHALIS, WA 98532**

The Board of Lewis County Commissioners will open sealed bids and publicly read them aloud at the Lewis County Historic Courthouse-2nd floor, Board of County Commissioners Meeting Room, 351 NW North Street, Chehalis, Washington, on:

TUESDAY, NOVEMBER 26, 2019 ON OR AFTER 11:00 A.M.

For the following specified items:

ONE NEW VAC TRUCK

Sealed bids must be delivered to the Lewis County Historic Courthouse – 2nd Floor, Board of County Commissioner's Office, 351 NW North Street, Chehalis, Washington, 98532, by 11:00 A.M. on the above-specified date in a sealed envelope clearly marked:

SEALED BIDS FOR: ONE NEW VAC TRUCK

TO BE OPENED: TUESDAY, NOVEMBER 26, 2019 ON OR AFTER 11:00 A.M.

BID FORM

SEE ATTACHED CONDITIONS AND SPECIFICATIONS

- | | |
|-------------------------------|------------|
| 1. ONE (1) NEW VAC TRUCK | \$ _____ |
| 2. WASHINGTON STATE SALES TAX | + \$ _____ |
| 3. PURCHASER PAYS THIS AMOUNT | = \$ _____ |

Guaranteed delivery shall be within one hundred and twenty (120) days of bid award.

Bidder

Authorized Signature

Date

Firm Address

Title of Person Signing

City, State

Zip

Telephone Number

4.

BID DOCUMENT CHECK LIST

The following items must be returned in the completed bid package:

1. _____ BID FORM (Pg. 9)
2. _____ WARRANTY INFORMATION (B-T-B and Power Train)
3. _____ TERMS, CONDITIONS, & SPEC Acknowledgement (Pg. 15)
4. _____ LIST OF REFERENCES
(Complete name, address and phone number of three customers who have purchased similar equipment within the last two (2) years.)
5. _____ SPECIFICATIONS SHEET (Complete Check-List on Pg. 17-18)
6. _____ ITEMIZED OPTIONS (Pg. 18) with BROCHURE

5.

GENERAL CONDITIONS

GENERAL CONDITIONS

BID CONSIDERATION:

The Board of Lewis County Commissioners reserves the right to reject any or all bids, waive informalities, and to contract as the best interest of the County may appear. This bid will be compared to bids received on the Washington State Contract. Commissioners reserve the right to award to the most advantageous bid to the County.

DOCUMENT FORM:

The bidder shall completely fill in the information required in all the blank spaces provided and shall return all forms and other documentation requested when submitting bid forms. Information may be obtained from the Department of Public Works, Maintenance & Operations Division, 476 W. Main St., Chehalis, WA 98532, telephone 360-740-1194 or Lewis County's website at www.lewiscountywa.gov.

PROPOSAL SHEET:

Vendors not meeting specifications must list all exceptions and note by placing an "X" beside the respective number associated with the particular specification. Any exceptions are subject to inspection, testing, and approval prior to acceptance by Lewis County.

Truck shall be a new model and shall:

1. Conform to or exceed the minimum specifications listed.
2. Conform to the current Motor Vehicle Laws/Codes of the State of Washington.
3. Comply with the current Federal Motor Vehicle Safety Standards.
4. Shall meet the manufacturer's standard specifications and shall be further equipped as stated in these specifications whether considered standard or not.

PAYMENT:

Payment will be made by Lewis County on or about 30 days following date of delivery, providing billing invoice is in the office of the Lewis County Fiscal Department, 351 NW North Street, Chehalis, WA 98532 prior to the 10th of the month.

PRE-DELIVERY:

All items shall receive dealer factory pre-delivery service before being delivered. Transportation damage shall be repaired by dealer prior to delivery. All equipment will be in turnkey condition and subject to inspection prior to acceptance.

DELIVERY OF EQUIPMENT PURCHASES:

Packing and transportation expenses are the responsibility of the bidder. All prices quoted must be F.O.B. Destination, Freight Prepaid and Allowed, delivered and unloaded at the delivery address below.

*Lewis County Motor Pool
476 W. Main St.
Chehalis, WA 98532*

LITERATURE:

Descriptive brochure with reasonably detailed specifications for the unit offered must be enclosed with the bid documents.

COOPERATIVE PURCHASES:

Lewis County has entered into Interlocal Purchase Agreements with other governmental agencies pursuant to RCW 39.34. Successful bidder, if agrees, can sell additional items at the bid price, terms and conditions to other governmental agencies. Lewis County accepts no responsibility for the payment of the purchase price by other governmental agencies.

PROPOSAL:

The undersigned hereby certifies that he/she has read and thoroughly understands and agrees to the terms, conditions, and specifications of this document for furnishing the item(s) listed to Lewis County and hereby submits the proposal on page 9.

Firm Name (Type or Print)

Authorized Signature

Date

Title of Person Signing

Telephone Number

Address

City, State, Zip Code

6.

SPECIFICATIONS

I. Specifications Check-List:

Vac Truck shall include chassis and vac system (combination sewer/culvert cleaner) and shall be new (2019 or newer), in turn-key condition, and delivered. ("Delivery address listed on page 14")

Please include brochure with model bid.

Make _____
 Model _____
 Year _____

Minimum Specification Required	List Specification Provided
TRUCK CHASSIS	
<u>ENGINE:</u>	
Shall be a Cummins L9 Diesel engine, producing a minimum of 370 HP @ 2000 RPM, and 1250 ft/lbs @ 1400 RPM	
Cruise control speed limit shall be the same as road speed limit	
PTO mode engine RPM limit – 1200 RPM	
PTO mode throttle override – Limit to 1400 RPM	
Cummins exhaust brake integral with variable geometry turbo with on/off dash switch	
<u>TRANSMISSION:</u>	
Shall be an Allison 3000 (or 4000) RDS Automatic transmission with PTO provision	
Shall have the ability to mount a Chelsea 277 series PTO	
Push button electronic shift control dash mounted	
Transmission oil check and fill with electronic oil level check	
<u>FRONT AXLE & EQUIPMENT:</u>	
Detroit DA-F-20.0-5 20,000# FL1 71.0 KPI/3.74 Drop single front axle	
Vented front hub caps with window, center and side plugs – oil	
Standard spindle nuts for all axles	
Standard King Pin Bushings	
TRW THP-60 Power steering with RCH45 aux. gear	

FRONT SUSPENSION:	
20,000# Flat leaf front suspension	
REAR AXLE & EQUIPMENT:	
RT-46-160 46,000# R-Series tandem rear axle	
5.63 Rear axle ratio	
(1) Interaxle lock valve for tandem axles	
REAR SUSPENSION:	
Hendrickson RT463 @ 46,000# rear suspension	
54 inch axle spacing	
WHEELBASE & FRAME:	
6700MM (264") Wheelbase	
2275MM (90") rear frame overhang	
12" Integral front frame extension	
Back of Cab to rear suspension (CA): 177"	
Frame length – Overall: 393"	
Length of available space for deckplate: 181"	
TIRES:	
Front tires: 425/65R22.5 20 Ply Radial	
Rear tires: 11R22.5 14 Ply Radial	
CAB EXTERIOR:	
Expected gross vehicle weight capacity: Approximately 66,000 lbs.	
Stationary grille	
Fiberglass hood with access hatches	
Door locks and ignition switch keyed the same with 4 keys	
Halogen (or LED) composite headlamps with bright bezels	
LED aerodynamic marker lights	
Daytime running lights – low beam only	
LED stop/tail/turn lights	
LED backup lights	

Dual West Coast bright finished heated mirrors with LH & RH remote	
H & RH 8" bright finish convex mirrors mounted und primary mirrors	
Standard side/rear reflectors	
Tinted windshield, and LH & RH door glass	
<u>CAB INTERIOR:</u>	
Gray vinyl interior	
Black floor mats	
Forward roof mounted console with upper storage compartments	
In-dash storage bin	
(2) cup holders LH & RH dash	
Heater, defroster, and air conditioner	
Dome light with 3-way switch activated by LH & RH doors	
LH and RH electric powered windows and door locks – (switches on doors)	
Basic high-back air suspension driver & passenger seat with mechanical lumbar and integrated cushion extension	
Adjustable tilt and telescoping steering column	
Driver & passenger interior sun visors	
<u>INSTRUMENTS & CONTROLS:</u>	
Low air pressure indicator light and audible alarm	
Electronic cruise control	
Manual remote engine stop/start with PTO re-engage	
Engine oil pressure gauge	
Transmission oil temperature gauge	
Engine & trip hour meters integral within driver display	
Dash mounted AM/FM radio	
Electronic engine tachometer	
One valve parking brake system with dash valve control	
<u>COLOR:</u>	
White	

COMBINATION SEWER/CULVERT CLEANER	
<u>GENERAL:</u>	
<p>Machine shall be capable of removing stones, grit, grease, sludge and other debris from sanitary sewer and/or storm drain lines by the flushing action of high-pressure water. The high-pressure sewer cleaner operates independent of the vacuum system.</p> <p>Machine shall include an air conveying vacuum system to provide for the simultaneous removal of the debris flushed to the manhole by the high-pressure water system or for the removal of debris from sewers, sumps, catch basins, digesters, wet wells, bar screens, etc.</p> <p>Machine must be capable of being operated by one person, with all operating controls for high-pressure water pump, hose reel, and vacuum, located at the front of the machine for safety.</p>	
<u>DEBRIS BODY:</u>	
<p>Debris storage body shall have a minimum usable liquid capacity of 11 cubic yards.</p> <p>The body shall be round for maximum strength and constructed of 3/16-inch ASTM A242 Corten A steel for enhanced corrosion resistance.</p> <p>Rear door shall be dished and flanged for maximum strength, full opening, hinged at the top with low profile and adjustable style hinges maintaining a 12" maximum overall height. There shall be a 6" diameter liquid drain valve, knife and screen welment inside for removing excess liquids. Drain will have 10 feet of 6-inch lay flat hose.</p> <p>Rear door shall be supplied with a debris deflector shield located inside the debris tank that encompasses 75 percent of the rear door. The debris deflector shield shall deflect material from rear door and aid in draining off excess liquids. A rear door safety prop shall be provided.</p> <p>For ease of maintenance there shall be no hydraulic components located inside the debris body or rear door.</p> <p>Debris body shall have five (5) externally mounted door locks that lock hydraulically. One manual T bolt shall be installed for operator safety. A hydraulic grabber shall be installed and controlled by one hydraulic cylinder externally mounted for ease</p>	

of service. Hydraulic locks and grabber shall be operated by one (1) sequential control. In order to allow the operator to control the discharging of liquids from the debris tank by cracking open the door prior to the dumping procedure, hydraulic grabber shall engage the door at the bottom of the door from 0" - 6". Beyond the 6" stroke, grabber shall automatically disengage the door, allowing for the dumping of the debris tank.

Dual steel weldments with stainless steel screen 8" x 28" each providing up to 1200 square inches of added filtration for the vacuum system shall be provided inside the debris tank. These weldments shall be removable and require no cutting or welding.

A double acting power up/power down hydraulic scissors lift mechanism will be provided to raise body to a minimum 50-degree angle. Scissors lift mechanism shall be designed to support a minimum of 24 inches of the debris tank width to provide stability and when dumping on uneven ground. Lift capacity of hydraulic scissors lift cylinder shall be approximately 56,000 lbs.

Dump controls shall be located on curbside mid-ship of the unit, well forward of the dumping area for operator safety. A manual override system shall be provided.

Debris body shall have a five-year warranty (minimum). A copy of manufacturer's warranty statement shall be enclosed with bid. If pro-rated so state:

An internal polyethylene float device with external indicator shall be supplied to show when body is loaded to capacity.

AUTOMATIC VACUUM BREAKER:

The automatic vacuum breaker assembly shall be located inside the body.

The automatic vacuum breaker assembly shall be controlled by an electric over hydraulic circuit. The entire system shall be replaceable via a bolt on assembly. The assembly shall consist of a 12" inlet and two 8" ports that provide air flow to the vacuum system.

A full indication activates an automatic vacuum breaker shut down system that completely shuts down the airflow to the vacuum system to prevent overfilling and wastewater discharge into the atmosphere.

<p>The vacuum breaker system shall automatically be activated (closed) when the parking brake system is released to eliminate carryover during transit.</p> <p>The system shall be controlled/activated, at the front hose reel control station. This enables the operator to pick up large debris with boom and place debris on the road surface. This system can be used for safety in the event suction must be shut off in case of an emergency.</p>	
<p><u>CENTRIFUGAL COMPRESSOR:</u></p>	
<p>The centrifugal vacuum compressor shall be of 3-stage construction (i.e. 3-27" minimum diameter fans in tandem). The centrifugal compressor system is operated independent of the high-pressure water system.</p> <p>Compressor shall be driven by the chassis engine via a closed loop hydrostatic system using a variable piston pump and motor. System shall include a heat exchanger for extreme ambient conditions and to maintain the pump suction oil temp at 160 deg. F. max. Heat exchanger shall be protected by a 30-micron filter and cold weather bypass valve. Hydrostatic loop filtration shall be accomplished by a 10 Beta micron return filter and a 10-micron Absolute (no bypass) charge filter.</p> <p>To maximize long term durability by reducing the load on one side of the compressor, compressor shaft shall extend through the compressor and shall be additional stabilized by using two high speed bearings, one at each side of the shaft. No exceptions will be allowed to this requirement.</p> <p>A means of starting, stopping and varying the vacuum suction from operator station at the front of the machine shall be provided. A centrifugal separator located in the inlet chamber to the fans with cleanout box shall be provided. The separator removes particles from the air stream, thus enabling unit to vacuum wet or dry material. Separator shall be separate from the debris body. The centrifugal compressor (fan) system shall be capable of producing 90% vacuum with no airflow. This feature allows material to be vacuumed under the water surface, i.e. lift stations, plugged manholes, etc. System shall be capable of vacuuming under water 16.6' (200") without air induction. A manometer/vacuum test may be required to demonstrate the system performance.</p>	

The centrifugal compressor shall have a 5-year non-prorated warranty.	
<u>VACUUM PICKUP HOSE:</u>	
<p>Shall be front loading, attached at the front of the machine in order to provide ease of positioning the machine over the manhole, as well as afford maximum safety for the operator. The boom will be 8" diameter pipe and will be mounted on a boom that will provide a minimum of 18' vertical lift utilizing dual hydraulic cylinder and 230 degree of boom rotation powered hydraulically for non-interrupted smooth movement. Boom shall have a lift capacity of 500 lbs. at the front bumper.</p> <p>The boom shall be powered by an electric over hydraulic system: up/down by dual lift cylinders. The right/left movements shall be hydraulic via worm gear rotation.</p> <p>Control of the boom shall be a joystick control at the operator's station, requiring no cables at operator's feet for boom operation.</p> <p>Boom shall hydraulically telescope a minimum of 10 ft. forward from the operator's station. Height of the boom shall not change while the boom is being telescoped.</p> <p>A manual override system shall be provided for right/left, and up/down functions in case of system failure.</p> <p>A boom coverage chart shall be provided stating the square feet the boom covers.</p> <p>8-inch diameter pipe extensions with clamps shall be provided and carried on the truck as follows:</p> <p>(1) 6-1/2' Catch Basin Nozzle (1) 6' Aluminum Pipe Extension (1) 5' Aluminum Pipe Extension (1) 3' Aluminum Pipe Extension</p>	
<u>WATER SUPPLY:</u>	
The water tank shall have a minimum usable capacity of 1300 U.S. gallons.	

<p>Water tanks shall be constructed of non-corrosive, non-metallic, durable, cross-linked polyethylene to eliminate rust, corrosion, and stress cracking.</p> <p>Water tanks shall be mounted at and below the truck frame level to provide a low center of gravity for truck stability.</p> <p>A 2 ½" diameter x 25 feet long hydrant hose with hydrant wrench shall be supplied on the unit.</p> <p>An anti-syphon fill device shall be installed on the unit.</p> <p>Inspection ports shall be provided to fill or to add chemicals to the water system.</p> <p>A sight gauge to indicate water level shall be located within sight of the operator station.</p> <p>Water tanks shall be protected by a minimum of 11-gauge steel plating mounted below the water tanks for protection against road hazards when unit travels over the road, off the road or to landfills.</p> <p>Water tanks shall have a ten-year replacement warranty (min).</p>	
<u>HIGH-PRESSURE WATER PUMP:</u>	
<p>The high-pressure water pump shall be rated to deliver smooth continuous pressure and flow through the entire flow range of the pump. Pump must be a 3 piston pump and the pump shall have smooth continuous flow for both the high-pressure system and the handgun system.</p> <p>A continuous duty flow of 50 g.p.m. and 3000 p.s.i shall be provided.</p> <p>High-pressure relief valves shall be provided for both high-pressure system and handgun system.</p> <p>The water pump shall operate independently of the vacuum system and be powered by hydrostatics.</p> <p>Controls for starting and stopping the water pump and to vary the flow and pressure shall be at the front hose reel operator's station.</p>	

The high-pressure water pump shall be equipped with a cold weather drain valve. The valve allows the operator to completely drain the high-pressure pump.	
<u>HOSE REEL ASSEMBLY:</u>	
The hose reel assembly shall be mounted on the front of the vehicle. The hose reel shall have a minimum of 30" inside diameter with a capacity of 600' x 1" hose. The hose reel shall be hydraulically powered in both directions by means of a double chain and sprocket drive. The controls for operating the motor shall have a flow control device to regulate the rotational speed of the reel in both directions. All hydraulic hoses shall be located behind a steel housing to protect operator from hydraulic oil if a hose fails. The hydraulic motor, chain, and sprockets shall have a protective cover or mounted on the radiator side of the hose reel for operator safety. The hose reel shall articulate 180 degrees to the driver's side allowing operator to work in any position through this arc. This allows greater flexibility in truck placement for manholes located in tough areas and provides greater safety to the operator. Reel shall extend beyond the width of unit for greater flexibility for positioning reel over offset manholes, catch basins, etc. A hydraulically controlled outrigger leg shall be supplied that comes in contact with the ground at any one position. A warning light shall be located in the cab to warn the operator that the outrigger leg is not in its transported position prior to moving the unit. A manual bypass system for the hose reel assembly shall be provided to manually pull the reel assembly away from its transported position. This feature allows operator to check fluids without starting engines.	
<u>JET HOSE:</u>	
500' x 3/4" jet rodder hose shall be supplied rated for 3000 psi working pressure and 7500 psi burst pressure. A heavy duty hose guide with 25' of nylon rope shall be provided. Nozzles shall be hardened steel with replaceable ceramic orifices as follows: 1) Chisel head penetrator & 1) standard sanitary. 1 50 gpm Grenade nozzle	
<u>MANHOLE CLANING WATER SYS. (Hand Gun):</u>	
The high-pressure pump and independent water tank assembly supplied shall be used for manhole cleaning.	

<p>A smooth continuous flow of 20 g.p.m. and pressure of 600 p.s.i. shall be provided for ease of operation.</p> <p>A hand gun pressure relief valve set at 600 p.s.i. shall be provided.</p> <p>One full functioning hand gun with on/off hand control, replaceable nozzle tip, 12 inch extension, adjustable spray and 50' x 1/2" hose with retractable reel shall be provided.</p> <p>The hand gun shall attach to the system via a quick couple connection at the curbside of the unit. To avoid being coiled at the operator's station a hand gun holder shall be provided at the front bumper.</p>	
<u>HYDRAULIC SYSTEM & LUBRICATION:</u>	
<p>The hydraulic system shall have a 55-gallon capacity.</p> <p>The hydraulic system shall incorporate a main shut off valve in case of hydraulic failure.</p> <p>The hydraulic system shall incorporate hydraulic pressure relief valves and pressure gauges for ease of trouble shooting and maintenance.</p> <p>The unit shall be equipped on the passenger side, mid-section of the module, a permanent weatherproof white vinyl lubrication chart that points out lubrication points on the module and specifies what type of lubrication and hydraulic fluids are required. The chart shall also specify the frequency of each lubrication point.</p> <p>Remote plumbed grease fittings shall be provided for the vacuum compressor, boom rotation, and water pump drive areas.</p>	
<u>ACCESSORIES:</u>	
<p>A minimum twelve (12) month manufacturer's guarantee on the unit shall be provided.</p> <ul style="list-style-type: none"> 1 Debris body power flush out system 1 Rear splash guard, tank mounted (2 - 10 O'clock Position) 1 Cyclone style separator 1 Winter recirculating connection for low pressure circuit. 1 Winter recirculating connection for high pressure circuit. 	

1	Artic Winter Recirculating System for rodder hose, includes plumbing to upper water tanks.	
1	Air purge system	
1	Pre-tank water filter (Y-type)	
1	1/4 turn ball valve water drain	
1	Vertical style, deck mounted pipe rack, holds 3 pipe	
1	Folding pipe rack to hold 3 pieces of pipe, tank mounted, drivers side	
1	Folding pipe rack to hold 3 pieces of pipe, tank mounted, curbside	
1	Storage box behind cab, 16" x 42" x 96"	
1	Storage box shall be provided with two roll out shelves	
1	Low water alarm with light	
1	Hose footage counter, curb side	
1	Rear mounted tow hooks	
1	Remote boom grease zerk assembly, (accessible from ground level)	
1	Remote debris tank grease zerk assembly (accessible from ground level)	
1	Nozzle rack	
1	Water pump remote oil drain	
1	Built in Body Prop - Rear Boom Support Mounted	
1	Winter Recirculation System - FOR USE WITH TRANSFER CASE DRIVEN WATER PUMPS ONLY	
1	Traffic Camera with Color Monitor	
1	Rear traffic camera	
1	Front hose reel camera - to view front of hose reel area	
1	Midbody strobe lights - frame mounted - Whelen 50A03ZCR - Amber	
1	Long handle storage/ (2) PVC	
1	Cone storage rack	
1	Cone racks, between bogies on tandem units	
1	Hydro excavation package shall include: 50' retractable handgun hose reel with 50' of 1/2" high pressure hose, HP/Quick disconnect, heavy duty HP unloader valve, main control ball valve, 72x1/2 Sch. 80 Lance w/ Quick Dcn., Sngl. Fwd. Spray Nozzle, Horiz. Hand.	
1	SHELLBACK BOOM ELBOW	
	LIGHTING:	
	The entire module electrical system shall be vapor sealed to eliminate moisture damage.	

<p>All wiring shall be color-coded, labeled and run in sealed terminal enclosures.</p> <p>All module circuits shall be protected by circuit breakers.</p> <p>Clearance lights and reflectors shall be furnished in accordance with D.O.T. requirements.</p> <p>2 Mirror mounted LED strobe light, with limb guard - Whelen L21HAP LED Beacon with Whelen BGH Branch Guard LED strobe light with limb guard, rear debris tank door</p> <p>2 mounted - Whelen L21HAP LED Beacon with Whelen BGH Branch Guard</p> <p>1 4 LED strobes - (2) front bumper, (2) rear bumper - Whelen 50A03ZCR - Amber</p> <p>1 LED Arrow stick - Whelen TAM85 Traffic Advisor</p> <p>1 LED Boom Mounted Flood Light - Whelen NP6BB Worklight</p> <p>1 LED Rear Mounted Flood Lights - Whelen NP6BB Worklight</p> <p>1 LED Flood Light - Level Wind Guide with Limb Guard - Whelen NP6BB Worklight</p>	
<u>PAINT:</u>	
<p>Unit paint surface shall be shot blasted, primed and sanded prior to paint. Unit to be painted:</p> <p>Painted steel upper water tank panels can, in lieu of standard aluminum diamond plate</p> <p>with DuPont Imron 5000 polyurethane paint.</p> <p>Unit shall have reflective white side and boom stripes and rear door chevrons</p> <p>Chassis shall be painted manufacturers standard white.</p>	
<u>TRAINING AND MANUALS:</u>	
<p>Operator training shall be conducted by a factory-trained representative for a minimum of one day at the time of delivery. 2 copy(ies) of the operating and maintenance manual for the sewer cleaner module shall be provided upon unit delivery. An operational video shall be provided with the unit.</p>	
<u>MOUNTING AND DELIVERY:</u>	
<p>The unit described will be mounted on a truck chassis acceptable to the body manufacturer at the factory of the body manufacturer.</p>	

