

# Regional Water Resource Agency

## Request for Proposal

|                           |                                     |
|---------------------------|-------------------------------------|
| Bid Name                  | Truck Mounted Sewer Jet Rodder      |
| Bid Number                | 2019-16                             |
| Bid Opening Date and Time | Tuesday July 24, 2018 at 2 PM (CST) |
| Bid Type                  | Public Opening- Open and Read Aloud |

**TO ALL PROSPECTIVE BIDDERS:**

You are hereby invited to submit a bid for the item(s) specified within.

All Bidders are responsible for reading and complying with the attached specifications.

The Bidder certifies that all exceptions and conflicts to these contract documents have been detailed on the "Bidder's Exceptions, Conflicts and Clarifications" on page 3 of this document.

Pages contained within this bid package shall not be electronically altered. Failure to comply with these instructions may result in the rejection of the Bidder's proposal.

**BIDDER'S INFORMATION:**

Company's Legal Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State & Zip Code: \_\_\_\_\_

Telephone Number: \_\_\_\_\_

Fax Number: \_\_\_\_\_

Authorized Email Address: \_\_\_\_\_

Authorized Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

**Bidder's Exceptions, Conflicts and Clarifications**

If there are no exceptions taken, please CHECK and INITIAL the line below.

NO EXCEPTIONS: \_\_\_\_\_

If exceptions are taken to the bid, please complete the following page, identifying each exception.

The Bidder certifies that he agrees to all provisions of the bid documents, unless exceptions are specifically and clearly listed on the attached pages of this document and identified as exceptions.

Exceptions to the bid specifications should be noted by number on the appropriate specification sheet and those exceptions are to be explained in the attached pages.

Any and all exceptions to the bid proposal must be spelled out in writing on the attached pages; this includes any exception in the Bidder's "Terms and Conditions". The Bidder's printed "Terms and Conditions" are not considered specific exceptions.

Exceptions NOT listed on the attached RWRA Document will not be taken into consideration; this includes the Bidder's attachments, documents, and/or terms and conditions.

Any reference to "See attached exceptions" will not be considered, EXCEPTIONS must be listed on the attached RWRA document.

Copies can be made of the RWRA Exceptions document if additional space is needed.

Bidder acknowledges that ALL exceptions have been included on the "RWRA Specifications" page(s).

Date: \_\_\_\_\_

Company Name: \_\_\_\_\_

Company Representative: \_\_\_\_\_

**Bidder's Exceptions, Conflicts and Clarifications**

Any reference to "See attached exceptions" will not be considered, EXCEPTIONS must be listed on the RWRA provided document. Copies of this page may be made if additional space is needed.

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**Vendor's Statements Pursuant to KRS 45A.343 and KRS 45A.395**

KRS 45A.343:  
The undersigned, as a duly authorized officer of \_\_\_\_\_ pursuant to KRS 45A.343 states:

1. To the best of my knowledge, information and belief, \_\_\_\_\_ has not been finally determined to have violated any of the provisions of KRS Chapters 136, 139, 141, 337, 338, 341 or 342 that apply to it within the five year period preceding this statement.
2. \_\_\_\_\_ acknowledges that it will be required to be in compliance with those provisions of KRS Chapters 136, 139, 141, 337, 338, 341 and 342 that apply to it for the duration of the contract to be entered into with Regional Water Resource Agency.
3. \_\_\_\_\_ acknowledges that if it fails to reveal any final determination of violation of KRS Chapters 136, 139, 141, 337, 338, 341 or 342 or to comply with the applicable provisions of those statutes for the duration of the aforesaid Contract, such shall be grounds for Regional Water Resource Agency to:
  - a. Cancel its contract with \_\_\_\_\_, and
  - b. Disqualify \_\_\_\_\_ from eligibility for future contracts awarded by Regional Water Resource Agency for a period of two years.

KRS 45A.395:  
The provisions of KRS45A.395 require that any bidder or offeror submit a sworn statement in conformity with such statute as a prerequisite to a determination that such bidder or offeror is a responsible bidder. The undersigned, individually and as the \_\_\_\_\_ (title) of \_\_\_\_\_ (bidder or offeror) states under penalty perjury that neither he (she), not, to the best of his (her) knowledge, anyone acting on behalf of Bidder or Offeror, has knowingly violated any provision of the campaign finance laws of the Commonwealth of Kentucky and that the award of a contract to the Bidder or Offeror will not violate any provision of the campaign finance laws of the Commonwealth. "Knowingly" means, with respect to conduct or to a circumstance described by a statute defining an offense, that a person is aware or should have been aware that his conduct is of that nature or that his conduct is of that nature or that circumstance exists.

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature) (Title)

\_\_\_\_\_  
(Typed or printed name)

This the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_.

## **Prohibition of Conflicts of Interest, Gratuities, Kickbacks and Use of Confidential Information**

Kentucky law prohibits conflicts of interest, gratuities, kickbacks and the use of confidential information with regard to any public contract or a solicitation or proposal therefore. The prohibitions are set for in KRS 45A.455 which provides:

1. It shall be a breach of ethical standards for any employee with procurement authority to participate directly in any proceeding or application; request for ruling or other determination; claim or controversy; or other particular matter pertaining to any contract or subcontract, and any solicitation or proposal therefore, in which to his knowledge:
  - a. He, or any other member of his immediate family has a financial interest therein; or
  - b. A business or organization in which he or any member of his immediate family has a financial interest as an officer, director, trustee, partner, or employee, is a party; or
  - c. Any other person, business or organization with whom he or any member of his immediate family is negotiating or has an arrangement concerning prospective employment is a party. Direct or indirect participation shall include but not be limited to involvement through decision, approval, disapproval, recommendation, preparation of any part of a purchase request, influencing the content of any specification or purchase standard, rendering of advice, investigation, auditing or in any other advisory capacity.
2. It shall be a breach of ethical standards for any person to offer, give or agree to give any employee or former employee, or for any employee or former employee to solicit, demand, accept or agree to accept from another person, a gratuity or an offer of employment, in connection with any decision, approval or disapproval, recommendation, preparation of any part of a purchase request, influencing the content of any specification or purchase standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any proceeding or application, request for ruling or other determination, claim or controversy, or other particular matter, pertaining to any contract or subcontract and any solicitation or proposal therefore.
3. It is a breach of ethical standards for any payment, gratuity, or offer of employment to be made by or on behalf of a subcontractor under a contract to the prime contractor or higher tier subcontractor or any person associated therewith, as an inducement for the award of a subcontract or order.
4. The prohibition of conflicts of interest, gratuities and kickbacks shall be conspicuously set forth in every local public agency's written contract and solicitation therefore.
5. It shall be a breach of ethical standards for any public employee or former employee knowingly to use confidential information for his actual or anticipated personal gain, or the actual or anticipated personal gain of any other person (Enact. Acts 1978, ch. 100, S 92, effective January 1, 1980; ch. 250, S 16, effective April 9, 1980.)

Violation of the statute may result in a fine and/or imprisonment under the provisions of KRS 5A.990.

RELEASE AND INDEMNITY AGREEMENT

WHEREAS \_\_\_\_\_ (hereinafter referred to as "First Party") shall be performing duties or activities on property owned by the Regional Water Resource Agency (hereinafter referred to as "RWRA");

NOW, THEREFORE, in consideration of these premises, the First Party acknowledges covenants and agrees as follows:

The First Party agrees to assume any and all responsibility and liability for the negligent acts and/or omissions of their agents, servants, and/or employees. The First Party shall be responsible for its employees and shall exercise all dominion, control, and authority over the means/methods used by its employees to perform any work for RWRA or while on RWRA property;

The First Party further covenants to comply with all federal, state, and local occupational safety and health laws and regulations, and local, state, and federal laws and regulations for "Maintenance and Control of Traffic During Construction".

First party further covenants and agrees that the RWRA shall not be liable to the First Party under any circumstances, for loss of life, injury, damage to property, or pecuniary loss occasioned by the use of RWRA property, facilities, tools and materials.

First Party covenants and agrees to release, acquit, discharge, and hold RWRA harmless from any and all claims, costs, attorney fees, or judgment by any third party arising out of the negligent acts and/or omissions of the First Party's employees, agents, or servants.

First Party agrees to indemnify and hold the RWRA harmless from any and all expenses incurred in connection with the defense of any action which may be brought against the RWRA, its employees, agents, and servants and will further indemnify RWRA to the extent and in the amount, of any claim, attorney fees, costs, and judgment established against the RWRA, and any agent thereof, their employees, agents, or servants, arising from any cause herein above set forth.

The First Party through its duly-authorized representative designated below, states that said representative has carefully read the foregoing Release and Indemnity Agreement, knows the contents thereof, and signed same as their own free act and deed this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
(Signature of Representative)

\_\_\_\_\_  
Authorized Signature for First Party

COMMONWEALTH OF KENTUCKY  
COUNTY OF DAVIESS

SUBSCRIBED AND SWORN TO before me by \_\_\_\_\_, on behalf of \_\_\_\_\_, on this the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public, State-At-Large  
My commission expires: \_\_\_\_\_

|                            |
|----------------------------|
| <b>SUBMITTAL CHECKLIST</b> |
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The following completed documents should be included in your submitted proposal (originals and two copies). Indicate on the first page of each set of documents 'ORIGINAL' or 'COPY'. The original bid documents and the copies shall be submitted in one sealed envelope.

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|  | ADDENDA ACKNOWLEDGEMENT (IF APPLICABLE)  |
|  | INVITATION FOR PROPOSAL PAGE WITH BIDDER'S SIGNATURES AND CONTACT INFORMATION (first page)               |
|  | PRICING PROPOSAL (pg. 13)  |
|  | EXCEPTIONS, CONFLICTS & CLARIFICATIONS FORM(S) (page 3)  |
|  | VENDOR'S STATEMENTS PURSUANT TO KRS 45A.343 AND KRS 45A.395. (page 4)                                    |
|  | PROHIBITION OF CONFLICTS OF INTEREST, GRATUITIES, KICKBACKS AND USE OF CONFIDENTIAL INFORMATION (page 5) |
|  | RELEASE & INDEMNITY (page 6)   |
|  | INSURANCE CERTIFICATION (Sample on page 7)   |
|  | BIDDER'S W-9 FORM  |

**QUESTIONS:**

For all questions regarding these bid documents contact

Kristi Winkler  
Purchasing and Finance Manager  
270-687-8440  
[bids@rwra.org](mailto:bids@rwra.org) or [winklerkm@rwra.org](mailto:winklerkm@rwra.org)

**SUBMIT SEALED BID TO:**

KRISTI WINKLER  
Regional Water Resource Agency  
1722 Pleasant Valley  
Owensboro, KY 42303

**ALL BIDS MUST BE RECEIVED BY 2pm CST on Tuesday July 24, 2018 , if received after this time the bid will be returned to Bidder unopened.**

## Instructions to Bidders

### SCOPE

The Regional Water Resource Agency is seeking a reputable vendor to supply (1) one 2017 Ford Transit CC-CA 350HD Chassis and (1) Utility Van Service Body. Each item is separate from the other and can be awarded to one or two bidders. The Transit Chassis will have to be delivered prior to work beginning on the Service Body and the winning bidder of the Service Body will need to honor the bid price until the Transit chassis is delivered and utility body can be installed.

### Due Date and Time

All bids must be submitted as described within this document to **1722 Pleasant Valley Road, Owensboro, KY 42303, Attn: Kristi Winkler, Purchasing Manager, no later than 2:00 pm local prevailing time on Tuesday July 24, 2018 CST at this time all bids received will be opened and publicly read. Any bids received after the due date and time will be returned unopened.**

## General Compliance

Please read these instructions carefully.

### Bid Submission

All pages of the bid shall be signed in ink on the designated signature lines. Typed quotation sheets are preferred; however if hand written, the sheets must be legible and in ink. Any pricing information that is illegible may result in the rejection of the bid.

Quotations must be made on the form provided. An accompanying letter of explanation is acceptable if bidder deems it necessary, but only quotes made on the provided forms will be evaluated.

In case of a discrepancy in the extension of a unit price, the unit price shall govern over the total price.

Bidders must provide manufacturer's product literature if available and appropriate with the bid submission. Prices quotes shall remain firm and open to acceptance by the RWRA for a minimum period of ninety (90) days after bid opening and as additionally required by this specification.

The signed completed original bid package and copies must be sealed in an envelope with the bidder's name, the bid number, and the bid opening date clearly marked on the outside of the envelope. **The bids shall be addressed and delivered to Regional Water Resource Agency, Attn: Kristi Winkler, Purchasing Manager, David Hawes East Treatment Plant, 1722 Pleasant Valley Road, Owensboro, KY 42303.**

### Bid Copies

When submitting bids you must include the original signed bid, along with two (2) copies of the entire bid. Indicate on the first page of the bid "ORIGINAL" or "COPY". The original bid and all copies shall be submitted in one envelope.

### Taxes

All prices shall be quoted exclusive of any taxes. The RWRA is exempt of all Federal excise, transportation and/or Kentucky sales tax. Any items supplied directly to RWRA from a supplier/manufacturer are exempt from sales tax.



Any items purchased by a contractor that will be used in the fulfillment of a contract are not exempt from sales tax.

Bidder's Qualifications

Bidders must demonstrate to the satisfaction of RWRA that he has adequate equipment, personnel, experience and understanding of the specifications to be performed under the contract.

No contract will be awarded to any bidder who, in the opinion of RWRA, is not qualified to perform satisfactorily due to a previously unfavorable performance, reputation or lack of experience, capital, organization, equipment, and/or personnel to conduct and complete the services in accordance with the terms and conditions of the contract.

New Goods, Fresh Stock

Unless otherwise specifically stated, all Contractors shall provide new commodities, fresh stock, latest model, design or package.

Method of Procurement

Competitive Sealed Bidding (KRS 45A.365) will be the method of procurement for the purchase of the item(s) listed herein.

Bid Award

This bid will be evaluated based on the evaluation criteria established in the bid specifications.

The RWRA reserves the right to reject any and all bids and to waive any irregularities in said bids, and the RWRA also reserves the right to award bids based on the best interest and/or most advantageous to RWRA. Award will be made to the lowest responsive and responsible bidder meeting specifications.

Shipping Charges

All items quoted shall be 'F.O.B. Destination'. No additional freight charges will be allowed.

Delivery Schedule

Delivery date shall be specified on each item quoted. The vendor will be expected to fulfill the delivery as specified. The completed unit shall be delivered to RWRA at 2101 Grimes Avenue, Owensboro, KY 42303. Certificate of Origin, Warranty certificates, and one (1) copy each of Operator's, Parts and Maintenance manuals shall be provided to RWRA at the time of delivery. Digital media is acceptable in lieu of books.

***Certificates of Origin to be delivered with unit. Certificate/Title to be assigned to Regional Water Resource Agency, 1722 Pleasant Valley Road, Owensboro, KY 42303.***

Insurance Requirements

The Contractor shall furnish the Owner with the certificates evidencing insurance coverage, from an "A" or better rated Insurance Company (by AM Best Rating System), prior to commencing work. Contractor shall procure and maintain for the duration of this bid insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the work hereunder by Contractor, its agents, representatives, employees or subcontractors.

Release and Indemnity

All contractors shall be required to sign a release and indemnity agreement included in the bid package to be considered for this project.

Compliance with KRS 45A.343 and KRS 45A.395

Attached are statements which must be completed by bidders. These statements are required under the listed statutes and must be completed and submitted with the bid.

Compliance with Applicable Laws/Regulations

Successful bidder must comply with the City of Owensboro/Daviess County ordinances relating to Occupational License Fees, business Licenses, payroll and net profits taxes and any other ordinances which may apply to any particular bid package.

Compliance with Equal Opportunity Statutes

The Regional Water Resource Agency is an equal opportunity employer and does not discriminate on the basis of race, color, religion, sex, national origin, age, marital status, physical or mental disability, or any other characteristic protected by law. RWRA is also committed to employing only United States citizens and aliens who are authorized to work in the United States and complies with the Immigration Reform and Control Act of 1986. Therefore, the successful bidder must demonstrate to the satisfaction of RWRA that he also conforms to all Federal, State and Local equal opportunity statutes. Further, the contractor will reimburse RWRA for any damages incurred due to any violation of the above mentioned statutes by the contractor while under contract.

Safety Regulations

Unit shall meet any state or federal OSHA or DOT regulations as applicable.

Manuals

This vehicle shall be provided with an Owner's manual and a CD consisting of Service and Parts. These manuals shall be current with yea model of the equipment delivered and shall accompany the delivery of the truck.

Pre-Service

All new equipment must be pre-serviced to the manufacturer's recommendations and in first class operating condition when delivered. All service work shall be done in the vendor's place of business or in another location provided by the vendor. No major assembly or servicing of equipment will be allowed on RWRA property. Only minor modifications to equipment necessary to bring the item into compliance with specifications will be permitted.

Standard Equipment

Unit shall contain all standard equipment listed as such in the manufacturers' latest literature unless otherwise stated within these specifications

Advertising

Unit shall be entirely free from any and all advertising attachments of dealer, such as clips, license brackets, mud flaps or other devices bearing vendor's name.

SPECIFICATIONS

Detailed specifications are listed below. All bidders are expected to meet or exceed all specifications. Any bidder submitting a bid, which does not meet or exceed the stated specification is required to identify the specification which is not met, with an explanation for the exception on the "Bidders Exceptions, Conflicts and Clarifications". RWRA reserves the right to consider any listed exception to determine if the exception is of a minor nature, and may be accepted, or if the exception is of such a serious nature that the bid will not be accepted.

A. GENERAL

- 1) **Positive displacement (PD) units will not be accepted.**
- 2) **The length of the entire unit will not exceed thirty two (32) feet.**
- 3) The unit shall be equipped with a safety device to ensure that the transmission cannot be engaged with the debris body in the upright/dump position. **Units without this safety device will not be considered.**

B. SUBFRAME:

- 1) The equipment shall be of modular design consisting of vacuum system, water tanks system, debris body and drive system.
- 2) A sub-frame shall be fabricated to the exact dimensions of the truck chassis for mounting of modular components.
- 3) All components of the module shall attach to the sub frame and not directly to the chassis.
- 4) Sub frame shall be designed to ASME standards for maximum applied loads, chassis frame movement and even distribution of weight to the chassis and suspension.
- 5) Sub frame shall be continuous and uninterrupted from back of cab to end of frame.

C. DEBRIS BODY:

- 1) The body shall be cylindrical having a minimum usable capacity of 10 cubic yards.
- 2) The body shall be capable of a 48" dump height.
- 3) The debris storage body shall be constructed with a minimum 3/16" corrosion and abrasion resistant Ex-Ten steel.
- 4) The debris storage body shall have a minimum yield point of 50,000 PSI and a minimum tensile strength of 70,000PSI.
- 5) Body shall have a rear door that is hinged at the top and is equipped with a replaceable neoprene type seal. Adjustable for periodic compensation of door seal wear.
- 6) Dual outward mounted rear door props shall be included as standard to prevent operator from entering door swing path when engaging rear door prop.

- 7) For optimal particulate separation, vacuum shall be drawn from separate ports in the top of the debris body.
- 8) Body shall be dumped by raising the body to a 50 degree angle utilizing a forward mounted, double acting hydraulic dump cylinder.
- 9) Dump controls, accessory controls, e-stop control shall be provided at a central curb side location directly behind the cab of the truck.
- 10) For stability and safety, dumping must be accomplished while the pivot point of the body remains fixed to the sub frame.
- 11) Industrial style rear debris body door shall be flat, and shall open and close hydraulically by cylinders mounted at the top of the body. Door shall open 50 degrees from the fully closed position. Door shall be unlocked, opened, closed and locked by a failsafe hydraulically activated sequential positive locking system, cam operated by a single hydraulic cylinder, with all controls located behind truck cab, forward of the debris body, so operator is not subject to sewage when dumping.
- 12) Debris body shall have a body flush out system with a fan-type spray nozzle located in the front wall of the debris body to aid in the flushing of heavy debris. The nozzle shall also utilize (2) spray nozzles to flush the front most area of the debris body. System must produce a flow of 80GPM. Control valve shall be on the curb side of the unit.
- 13) Debris body load limit alarm coupled to float indicator arm automatically activating vacuum relief to be provided.
- 14) Body shall have a float type automatic shut-off system protecting the Fan System with (2) 10" stainless steel shut-off balls located in the debris body. Each float ball housing shall be within a non-corrosive slide-out screen assembly and be accessed without the use of tools.
- 15) The debris body shall be equipped with a rear door drain to drain off excess liquids while retaining solids and shall include a manually operated 6" butterfly valve with 10' of lay flat hose.
- 16) The debris body shall be equipped with a curb side forward mounted body drain to drain off excess liquids while retaining solids and shall include an air-activated 6" knife valve and screen with cam-lock coupler and 10' of lay flat hose.
- 17) (4) Dual vertical (cyclone) centrifugal separators shall be installed in-line between the debris body and the air mover, (2) per side for each debris body discharge port. Each dual separator shall include large fallout chamber cleanout door.
- 18) For safety, a minimum of (5) vacuum tubes shall be stored on curbside storage racks to minimize operator exposure to traffic side of unit. Shall include quick release retainer handles (no bungees or clamps)
- 19) A curb-side, folding 3-pipe rack shall be provided, constructed of steel tubing, spring assisted. Shall include quick release retainer handles (no bungees or clamps)
- 20) A street-sided, folding 3-pipe rack shall be provided, constructed of steel tubing, spring assisted. Shall include quick release retainer handles (no bungees or clamps)

- 21) A splash shield shall be mounted around the lower 60% of door opening to direct liquid and debris away from the chassis. Shield shall be minimum 10" deep bolted assembly with no opening.
- 22) A 10" valve with 3" vent to atmosphere, electrically activated, air operated valve debris body vacuum relief system shall be located in the inlet of the vacuum system to allow the venting of the tank and relieve vacuum at the debris intake hose.
- 23) A debris inlet deflector distributing load evenly in debris body shall be included.

D. WATER TANKS:

- 1) The water tanks shall be manufactured from a non-corrosive material to prevent rust yet still provide for maximum strength.
- 2) The water tank material shall require no internal coating and shall be repairable if patching is required.
- 3) The water tanks shall be easily removed from the sub-frame to provide complete access to the truck chassis for maintenance purposes.
- 4) The water tanks shall be totally separate from the debris tanks to prevent corrosion.
- 5) The water tanks shall come equipped with an anti-siphon device and 25' of hydrant fill hose and fittings.
- 6) The water tanks shall carry a 10 year warranty against corrosion or cracking.
- 7) All water tanks shall be fully baffled to form a maximum compartment storage of 150 gallons for each compartment. RWRA has determined that for the stability of the vehicle when turning and stopping and for safety of personnel that systems baffled at 150 maximum gallon compartments are preferred. Exceptions of requirement shall be explained in detail accompanied with detailed engineered drawings.
- 8) The water tank shall be located for the lowest possible center of gravity while providing 100% gravity flooded intakes to water pumps.
- 9) Fresh water shall enter the tanks through an in line 6" air gap, all aluminum covered anti-siphon device.
- 10) Water level sight tubes of non-yellowing plastic shall be installed on both tanks.
- 11) The sides of these water tanks shall not extend more than 48" out from the centerline of the truck chassis.
- 12) A fresh water drain system shall be provided to completely drain the fresh water system from one location utilizing a 3 drain port and plug.
- 13) A minimum 6" connection between tanks shall be provided.
- 14) For stability safety, the water tanks shall not elevate with debris body during dump cycle.
- 15) A hydraulic oil high temperature digital gauge and alarm shall be provided.

- 16) A 3 in-line "Y" trap strainer shall be located at inlet of water tank fill air-gap.
- 17) A 3 in-line "Y" trap Monel stainless steel strainer shall be located between the water cells and water pump.
- 18) A 3" Gate Valve shall be provided at water pump.
- 19) Water tank must be a certified metered capacity of 1000 gallons. Certification shall be necessary upon delivery.
- 20) Water tanks shall be constructed of 1/8" aluminum with baffled compartments maximum 150 gallons each,
- 21) An additional water tank sight gauge shall be provided.
- 22) Liquid Float Level indicator shall be provided.

E. VACUUM/ VACUUM DRIVE SYSTEM

- 1) Vacuum shall be provided by compressing air within a two-stage 38" diameter centrifugal compressor.
- 2) Compressor fans are to be constructed of non-corrosive material.
- 3) Each centrifugal compressor fan shall be constructed of non-corrosive, hardened ¼" chrome blades.
- 4) Centrifugal compressor shall be warranted against corrosion for five years.
- 5) The outer hosing shall be constructed of ¼" spun steel.
- 6) Compressor housing shall be equipped with a drain not exceeding 2" diameter.
- 7) Complete compressor and housing assembly shall be warranted against materials and workmanship for five years.
- 8) Hydrostatic drive system that shall include an electronic controlled variable displacement hydrostatic pump producing up to 300 Bar.
- 9) The compressor Hydrostatic Drive system shall utilize electronic controls located at the front operator station. The system shall be controlled on/off with a switch that may be engaged or disengaged at any operating speed.
- 10) The compressor controls will have a speed selection switch at the operator station to control compressor speed; manual levers on the hydrostatic pump to control compressor speed will not be accepted.
- 11) The centrifugal compressor should be driven direct through a helical gear type step-up transmission drive with a step-up ratio 2 to 1.

- 12) Hydraulic shut off valves shall be provided at the suction, return and filter lines to permit servicing of the hydraulic system.
- 13) The drive shaft shall be supported via ball bearings and gears.
- 14) Compressor shall be driven from a closed loop hydrostatic drive system utilizing available chassis power via split-shaft transfer case. The transfer case shall drive a variable displacement hydrostatic pump to energize a closed loop.
- 15) The pump shall be mounted directly to the split shift transfer case. The pump will have a B10 life rating of 10,000 hours continuous duty.
- 16) The hydraulic motor powering the compressor shall be a bent axis, bi-directional motor. Motor speed shall not exceed 2,500 RPM.
- 17) The hydrostatic drive system shall utilize electronic soft start speed control to manage ramping speed.
- 18) The control system shall provide a mode selection switch to control the compression drive in low vacuum, combination mode and full vacuum settings.
- 19) The gear drive should attach directly to the rotor shaft without the use of multiple stage V-belts or jack shafts.
- 20) The gears and bearings shall be lubricated with splash lubrication system, requiring no manual greasing.
- 21) The drive system shall not utilize pillow block bearings that require excessive daily greasing.
- 22) The in-cab PTO/transfer case activation shall be single push button control.

F. VACUUM BOOM SYSTEM

- 1) Vacuum hose shall be designed for front operation with hose mounted and stored at front mounted work station. Front mounted location is required for ease of positioning vacuum hose as well as minimizing need for operator to swing hose into traffic.
- 2) All connections between debris body and vacuum system will be of the self-adjusting pressure fitting type.
- 3) Vacuum hose will remain stationary and not rise with debris body.
- 4) Upper debris tube shall consist of an anchored steel tube and elbow.
- 5) Sub-frame mounted cab guard shall be mounted behind cab with boom rest cradle.
- 6) All vacuum pipes shall be connected to vacuum pick up tube and extension pipes by adjustable over-center quick clamps to join the aluminum flanges on pipes.
- 7) One (1) quick clamp for each pipe supplied shall be provided.

- 8) Boom pedestal shall be directly mounted to module subframe.
- 9) Boom support used for travel mode shall not interfere with access or require removal to tilt hood forward.
- 10) A control station shall be equipped with one joystick control switch for all directions as well as a safety emergency shut-down button, which shall automatically eliminate power to boom.
- 11) The vacuum boom shall have a heavy-duty flexible hose assembly joining the transition pipe to the debris body, and a 70-degree elbow and 5-1/2" heavy duty hose at the suction end of the boom.
- 12) Boom shall rotate 180 degrees and shall be operated by an electric over hydraulic system. Lift and swing movements shall be actuated by hydraulic cylinders.
- 13) The horizontal inner steel vacuum tube and inner box beam boom section shall telescope (tube within tube, box beam within box beam) and retract a minimum of 8" without affecting the vertical position of the pick-up tubes, and shall be located at the front work station in its retracted position, providing 277" minimum reach off the longitudinal axis of unit.
- 14) Boom shall be fully controlled by a remote push button pendant control station with 25 foot cable. Controls to include up/down, left/right, in/out boom functions, vacuum relief, e-stop and main power switch.
- 15) A joystick for hydraulic control of the boom shall be installed on hose reel front panel.
- 16) A removable 4" diameter storage "Post" to stabilize the lower boom hose during transport. Storage device shall not interfere with raising hood.
- 17) A cordless remote boom control system equipped to activate boom functions, throttle, water pump on/off, hose reel in/out, hose reel speed, vacuum relief on/off and emergency disengagement e-stop shall be provided. It shall have two way data transmitting showing active water pressure and current footage on the display. It shall be rechargeable with 12V recharging capabilities.
- 18) A rotatable inlet hose for telescopic boom shall be provided.
- 19) A detailed engineering drawing must be supplied showing the relationship of the hose reel in relation with the vacuum boom range of motion. Drawing shall show module mounted on chassis, full arc of vacuum hose both retracted and extended, full rotation of arc for hose reel in the extended position and dimension all arc lengths of vacuum boom retracted and extended. Drawing shall highlight intersection areas whereby combination cleaning is possible (within full arc on telescoping boom system).

F. WATER PUMP AND DRIVE

- 1) For most efficient use of horsepower and reduced fuel consumption, high pressure rodder pump shall be hydraulically driven via (1) load sensing utility pump, (1) variable displacement pump and (1) fixed displacement pump.



- 2) Hydraulic powered rodder pump via twin variable displacement hydraulic pumps and (1) fixed displacement utilizing (2) 10-bolt PTO's.
- 3) High pressure water pump shall be rated capable of continuous delivery of 100 GPM at 2500 PSI (submit manufacturer support documentation.)
- 4) High-pressure water (rodder) pump system shall allow front-mounted controls for operation of three modes: (1) Low flow range 0-22 GPM; (2) medium-flow range, 22-60 GPM/ 2500 psi; and (3) High-flow range: 60 up to 100 GPM/2500 psi.
- 5) This hydraulic drive system shall allow variation of water pump speed independent of required vacuum drive speed within maximum drive engine speed of 1760 RPM.
- 6) Variable flow systems routing water back-to-back are not considered equal due to additional wear, horsepower and fuel consumption. Any deviation from this drive requirement should have full explanation of horsepower consumption.
- 7) Water (rodder) pump shall include smooth and pulsation operation mode feature.
- 8) When required to assist nozzle breaking through obstructions, water pump "pulsation mode" shall provide a forward-acting nozzle surge. Pulsation surge wave shall allow nozzle to punch forward 2" to 18" depending on flow dynamics and length of hose in sewer pipe.
- 9) Explanation of forward-acting pulsation method shall be submitted with bid.
- 10) Water pump location shall provide a flooded gravity suction inlet to eliminate potential cavitation damage.
- 11) An oil to water heat exchanger will be provided in the water system to cool all hydraulic fluids on the unit. State horsepower requirement to operate hydraulics at full speed.
- 12) The water pump shall provide precise 0-80 GPM controlled flow at variable pressure up to 2500 PSI.
- 13) An extreme cold weather recirculation system- minimum 25 GPM via transmission PTO at chassis engine idle speed.
- 14) Hydro-pneumatic nitrogen charged accumulator system shall be provided with all control valves, piping and hoses for either continuous flow or jackhammer rodding. Accumulator shall be a 2.5 gallon capacity and 1400 to 2500 PSI pressure rating.
- 15) Two (2) ½" high pressure ball valves shall be provided for draining the water pump and flushing sediment from the bottom of the pump.
- 16) A nozzle rack accommodating (3) nozzles shall be provided in curbside toolbox. The nozzles shall be labeled on storage rack for pipe size/flow and application.
- 17) Hand gun water system shall be relieved to protect operator.
- 18) Handgun shall be supplied that allows for changing of flow pattern from a fine mist to a steady stream.

- 19) Handgun shall come equipped with quick connect couplers.
- 20) An additional 1" water relief valve shall be provided.
- 21) A mid-ship quick disconnect handgun couplers shall be provided.
- 22) Front and rear quick disconnect handgun couplers shall be provided.
- 23) A water pump hour meter shall be provided.

G. HOSE REEL

- 1) Hose reel assembly shall be direct frame mounted.
- 2) Hose reel assembly shall be mounted on an independent frame that can be removed from brackets attached permanently to front of main truck frame members.
- 3) Reel will be manufactured out of ¼" spun steel for added structural strength and shall require no internal or external reinforcements that could damage rodder hose.
- 4) Hose reel shall be driven by adjustable gear reduction chain and sprocket assembly.
- 5) Hose reel shall operate at full rotational speed while chassis engine is at idle.
- 6) Hydraulic Telescoping Rotating Hose Reel- 800' capacity of 1" hose shall be provided.
- 7) The front mounted hose reel shall telescope 15" forward down centerline of truck.
- 8) Entire reel assembly shall rotate 270 degrees on a large diameter ball bearing.
- 9) Hose reel shall include a dual locking device to positively lock reel in any position across operating range.
- 10) The hose reel shall rotate about the reel assembly centerline so that the reel shall never extend beyond the truck width.
- 11) 800' of 1" Piranha Sewer Hose/ 2500 PSI shall be provided.
- 12) An automatic hose level wind scroll device shall be supplied and shall have adjustable height capabilities. An air-cylinder actuated pinch-roller shall exert downward pressure across full width of reel to retain hose on reel when encountering nozzle blockages.
- 13) An air-cylinder actuated pinch-roller shall exert downward pressure across full width of reel to retain hose on reel when encountering nozzle blockages.
- 14) A hose footage counter shall be supplied to indicate the amount of hose travel within pipe.
- 15) Digital footage counter displaying absolute and relative footage values shall be provided. System must be capable of resetting relative value to ensure operator safety. Accuracy to within one percent of actual distance, large easy to read LED screen, large keypad with sealed membrane switches that are easily

activated, NEMA-4 moisture sealed enclosure, solid state circuitry. Dimensions: 5 5/8 x 3 3/8 x 3/16, LCD Display Area: 3.0 x 2.2

- 16) A lateral cleaning kit shall be provided, including reel mounted on passenger side of body, behind truck cab, equipped with ½" x 150' x 2000 psi hose and jetting nozzle.

#### H. WASHDOWN EQUIPMENT

- 1) A handgun with ½" x 35' hose shall be provided at mid-ship, which will allow the operator to deliver water to area served by pick up hose and to the inside of the debris body for clean out.
- 2) Hand sprayer with adjustable spray-pattern to be provided with trigger-style gun.

#### I. FRONT OPERATING STATION AND CONTROLS

- 1) Primary operator station will be located at front of truck on right curb side of hose reel.
- 2) All front operator controls shall be accessible while operating at the front reel assembly. All operations of unit shall position operator in front of vehicle affording protection from oncoming traffic.
- 3) A touchscreen operator control station shall include truck engine throttle, water pump (on/off), water pump mode, water pump flow meter, hose reel control valve (forward/reverse), adjustable hose reel speed control, oil dampened water pressure gauge, boom controls, digital water pump flow meter, and low water warning light to monitor all data of the cleaning process. It shall also be glove-touch compatible.
- 4) Tachometer and hour meter for chassis engine provided at control station shall be provided.
- 5) All Hydraulic Functions- Color Coded, Sealed Electric/Hydraulic NEMA 4 switches shall be provided.
- 6) Fan Engagement Vacuum Relief- Sealed Electric/Air NEMA 4 Switch shall be provided.
- 7) Water pump hour meter shall be provided.
- 8) PTO hour meter shall be provided.
- 9) A digital temperature gauge and alarm shall be provided. Light and audible alarm shall be activated when hydraulic temperature reaches 180 degree F.

#### J. ELECTRICAL & SAFETY LIGHTING

- 1) The entire system shall be vapor sealed to eliminate moisture damage, "NEAM-4" type or equal.
- 2) Vansco Electronic Package: Chassis Tachometer, Operating Mode, PTO Mode, Hydraulic Oil Temperature shutdown, and E-stop shall be included. E-stop activation must turn off rodder pump, shutdown PTO, set chassis throttle to idle & open vacuum relief. E-stop must be located at each operator interface; including

front hose reel controls, pendant control & dump control location. Basic machine functions and both chassis and module diagnostics shall be provided.

- 3) All electrical connections shall be void of exposed wires or terminal nor should they be painted. Paint process shall be completed prior to installation of wiring.
- 4) All wiring shall be color-coded and encased in conduit to scaled terminal boxes with circuit breakers.
- 5) All light bulbs shall be shock mounted to eliminate bulb failure.
- 6) All other lights required by State and Federal Laws.
- 7) One-piece directional 8-LED light arrow stick (Signal Master or equal) shall be mounted on rear door of debris body, with controls mounted in cab.
- 8) A wireless pistol grip hand spot light shall be provided.
- 9) FS DOT 3- 6 Light System-Federal Signal Mirror Mount Strobes, 2 Mid-Ship, 2 Rear Water Mounted Oval LED Quad Flash Strobes shall be provided.
- 10) LED Lights, Clearance, Back-Up, Stop, Tail & Turn shall be provided.
- 11) Two LED Worklights on the Boom
- 12) LED Worklight at the Operators station

#### K. SAFETY EQUIPMENT

- 1) E-stop shall be located at each operator interface location. Standard locations to include: front hose reel, mid-ship curbside dump controls & wireless controller (if equipped).
- 2) Electrical system controls shall be configured to allow for single point operation only. Upon engagement of controls at specified locations, additional controls shall be disabled.
- 3) Electrical system must enable self-check to ensure all switches are in home position prior to critical function enablement. System must “lock out” controls when switch is not in home position.
- 4) (1) Emergency Flare Kit
- 5) (1) 5# Fire Extinguisher
- 6) Debris Body up-alarm to indicate when debris body is not in the proper travel position.

#### L. SEWER TOOLS AND ACCESSORIES

- 1) A grease bank system shall be provided to allow for a centralized location to access all zerk points.

- 2) (1) 30 degree Sand Nozzle
- 3) (1) 30 degree Sanitary Nozzle
- 4) (1) 15 degree Penetrator Nozzle
- 5) (1) 1" small finned nozzle pipe skid

M. VACUUM TOOLS AND ACCESSORIES

- 1) The basic vacuum tube package shall include the following:
- 2) (1) 8" x 3' aluminum pipe
- 3) (1) 8" x 5' aluminum pipe
- 4) (1) 8" x 6'6" catch basin tube
- 5) (1) 8" quick clamps

N. CHASSIS EQUIPMENT AND STORAGE

- 1) Two (2) front tow hooks shall be provided.
- 2) Two (2) rear tow hooks shall be provided.
- 3) (1) 48" x 20" x 12" Aluminum Toolbox Mounted street side shall be provided.
- 4) (1) Aluminum Toolbox with nozzle storage and dump controls mounted curbside shall be provided.
- 5) (2) 18" x 16" x 12" Aluminum Toolbox- Front Bumper shall be provided.

O. MODULE FINISH

- 1) Painting of the module shall be with a DuPont Imron Elite Polyurethane Enamel Top Coat. Application is to be a wet top coat applied to a wet unsanded primer base.

P. CHASSIS SPECIFICATION

- 1) The unit shall be a new model. No discontinued models will be accepted.
- 2) Freightliner 114SD Conventional Cab Chassis

- 3) The unit shall be equipped with a diesel engine, turbo charged and after cooled, with a Cummins ISL-370; 370 HP @ 1900 RPM, 1250 LB/FT @ 1400 RPM
- 4) Set Forward Axle
- 5) The unit shall be equipped with an Allison 3000 RDS Automatic Transmission with PTO Provision
- 6) The unit shall be equipped with a Meritor MFS-20-133A 20,000# Wide Track, I-Beam Type Single Front Axle
- 7) The unit shall be equipped with a 20,000# Flat Front Suspension
- 8) The unit shall be equipped with a Meritor RS-26-185 26,000# T-Series Single Rear Axle
- 9) The unit shall be equipped with a 30,000# Flat Leaf Spring Rear Suspension with Helper and Radius Rod
- 10) The unit shall be equipped with a 114 inch BBC flat room aluminum conventional cab
- 11) The unit shall have a wheelbase of 255 inches
- 12) The unit shall have a 7/16 x 3-9/16 x 11-1/8 inch steel frame with 120 KSI rating.
- 13) The unit shall have a ¼" C-Channel inner frame reinforcement.
- 14) The unit shall have a 38 inch rear frame overhang.

Q. PAINT

- 1) All metal surfaces shall be shot or sand blasted prior to painting.
- 2) All metal surfaces shall be primed with red oxide primer prior to painting.
- 3) All hoses and fittings. As well as electrical wires and connections shall not be painted.
- 4) Rodder debris body and other components paint will be painted to match the cab Ford #M7226A, Axalta Ingot Silver Metallic 809956 EB.

Q. ADDITIONAL PARTS

- 1) (4) 8" x 5' Aluminum Vacuum Tube
- 2) (4) 8" Quick Clamp Assembly
- 3) (1) 8" Adjustable Air Adapter
- 4) (1) Handgun w/ 35 foot Hose Assembly
- 5) (1) Hydrant Wrench



amendments to the specifications will be made only in writing by means of addenda. Bidders are required to acknowledge receipt of all addenda on the quotation sheet submitted with the bid. Addenda will be emailed to all prospective bidders of record and posted on [www.rwra.org](http://www.rwra.org) website.

Any bidder who receives this bid other than directly from the RWRA shall notify the RWRA that they have received the bid. This will allow the RWRA to notify all bidders of any addenda.

## 2019-16 Quotation Sheet

|  |           |
|--|-----------|
| Cost of the Truck Mounted Sewer Jet Rodder                     | \$        |
| Brand of System  |           |
| Brand of Chassis   |           |
| Option 1: Purchase of existing unit, #90-35                    | \$        |
| Option 2(a): Buyback (future trade-in value) after five years  | %         |
| Option 2(b): Buyback (future trade-in value) after six years   | %         |
| Option 2(c): Buyback (future trade-in value) after seven years | %         |
| Option 3: Unit Ordered after January 1, 2018                   | \$        |
| Delivery Schedule- number of days from receipt of order        | # of days |