



## **City of Commerce**

P.O. Box 348  
27 Sycamore Street  
Commerce, GA 30529  
Phone: (706) 336-3297  
Fax: (706) 336-3297  
Email: [tommyh@commercega.org](mailto:tommyh@commercega.org)

You are invited to submit a bid to the City of Commerce, Commerce Georgia for a multi-conductor type color sewer TV inspection system. Attached hereto are the general conditions, technical specifications, and submittal format.

The written requirements contained in this Invitation to Bid (RFB) shall not be changed or superseded except by written addendum from The City of Commerce Purchasing Department. Failure to comply with the written requirements for this (RFB) may result in disqualification of the submittal by The City of Commerce.

The City of Commerce reserves the right to reject any and all submittals, to waive any technicalities or irregularities and to award contracts based on the best interest of the city.

**THE RESPONSIBILITY FOR SUBMITTING A RESPONSE TO THIS RFB ON OR BEFORE THE STATED DATE AND TIME WILL BE SOLELY AND STRICTLY THE RESPONSIBILITY OF THE OFFEROR.**

**RFB 16-009**

**CITY OF COMMERCE, GEORGIA  
REQUEST FOR PROPOSAL  
FOR  
Sewer Inspection System**

**BID OVERVIEW**

**1 PURPOSE**

The City of Commerce is to purchase a multi-conductor type color sewer TV inspection system.

**1.1 INFORMATION TO VENDORS**

**RFB TIMETABLE**

The anticipated schedule for the RFB is as follows:

RFB Available	June 7, 2016
Deadline for questions	June 30, 2016 @ 12pm (1 WEEK BEFORE DUE)
Submittal deadline	<b>July 8, 2016 12:00pm, local time prevailing</b>

**1.2 RFB SUBMISSION OPTIONS**

**1.2.1 Electronic Submittals**

**1.2.1.1** One (1) fully executable electronic copy (PDF) of the complete submittal must be received by submittal deadline (see 1.1) and sent to [tommyh@commercega.org](mailto:tommyh@commercega.org). Information is to be sent as an attachment in PDF format. Additional information may also be attached (demo links, pictures of products, etc.) and initial information, contact data, and website links may be placed inside the body of the email. The RFB number must be in the “Subject” line. Vendors are encouraged to use “read receipts” to ensure delivery confirmation. The City of Commerce is not responsible for emails that are not delivered or received; vendors can confirm electronic delivery via phone if desired. Or simply Submit via Paper/Standard Submittal.

**1.2.2 Paper/Standard Submittals**

**1.2.2.1** One (1) original, two (2) copies of the complete submittal must be received by submittal deadline (see 1.1). Proposals must be submitted in a sealed envelope stating on the outside, the vendor's name, address, the RFB Number and title to:

**City of Commerce**  
P.O. Box 348  
27 Sycamore Street  
Commerce, GA 30529  
Attn: Purchasing Agent

Hand delivered copies may be delivered to the above address ONLY between the hours of 8:30 a.m. and 4:30 p.m. ET, Monday through Friday, excluding holidays observed by the City of Commerce.

Vendors are responsible for informing any commercial delivery service, if used, of all delivery requirements and for ensuring that the required address information appears on the outer wrapper or envelope used by such service.

### 1.3 ADDITIONAL INFORMATION/ADDENDA

The City of Commerce will issue responses to inquiries and any other corrections or amendments it deems necessary in written addenda issued prior to the due date. Vendors should not rely on any representations, statements or explanations other than those made in this RFB or in any addendum to this RFB. Where there appears to be a conflict between the RFB and any addenda issued, the last addendum issued will prevail.

Addenda will be published at [www.commercega.org](http://www.commercega.org) under the “Doing Business Here” tab. Vendors are encouraged to check this site regularly for immediate access to issued addenda. RFP & Bid Communications can also be requested as stated above (1.3).

***Vendors must acknowledge any issued addenda by including the Addenda Acknowledgement Form with the submittal. Proposals which fail to acknowledge the vendor’s receipt of any addendum will result in the rejection of the offer if the addendum contains information which substantively changes the owner’s requirements***

### 1.4 LATE SUBMITTAL, LATE MODIFICATIONS AND LATE WITHDRAWALS

Submittals received after the due date and time will not be considered. Modifications received after the due date will not be considered. The City of Commerce assumes no responsibility for the premature opening of a proposal not properly addressed and identified, and/or delivered to the proper designation.

### 1.5 REJECTION OF BID

The City of Commerce may reject any and all submittals and reserves the right to waive any irregularities or informalities in any submittal or in the submittal procedure. ***Submittals received after said time or at any place other than as stated in the notice will not be considered.***

### 1.6 MINIMUM RFB ACCEPTANCE PERIOD

Valid submittals shall not be withdrawn for a period of 30 days from the date specified for receipt of submittals.

### 1.7 NON-COLLUSION AFFIDAVIT

By submitting a response to this RFB, the vendor represents and warrants that such proposal is genuine and not a sham or collusive or made in the interest or in behalf of any person not therein named and that the vendor has not directly or indirectly induced or solicited any other vendor to put in a sham proposal, or any other person, firm or corporation to refrain from submitting and that the vendor has not in any manner sought by collusion to secure to that vendor any advantage over any other vendor. By submitting a proposal, the vendor represents and warrants that no official or employee of the City of Commerce has, in any manner, an interest, directly or indirectly in the proposal or in the contract which may be made under it, or in any expected profits to arise there from.

### 1.8 COST INCURRED BY VENDORS

All expenses involved with the preparation and submission of the RFB to the City of Commerce, or any work performed in connection therewith is the responsibility of the vendor(s).

### 1.9 RFB OPENING

RFB submittal prices will be opened publicly at Commerce City Hall, 27 Sycamore St. Commerce GA, 20529. Bids will then be reviewed by a selected committee. A list of companies responding to the RFB may be obtained from the Purchasing Agent, after the RFB due date and time stated herein.

1.10 TAXES. The selected vendor will be provided with the City of Commerce Sales and Use Tax Certificate of Exemption number upon request.

### 1.11 VENDOR INFORMATION

All submissions shall include a current W-9. Vendors whose place of business is other than the State of Georgia may be required to provide the Purchasing Agent with copies of that state's regulations and/or laws concerning the application of certain vendor preference requirements to vendors whose place of business is in the applicable state. Failure to provide this information will result in the disqualification of the vendor from submitting a proposal.

### 1.12 DELIVERY

1.12.1 Delivery of all materials must be FOB destination to the City of Commerce. Delivery shall be made within the vendor's quoted days after receipt of order. Any item(s) not delivered within the time limit may be cancelled by City at no expense to the same. No deliveries are accepted on Saturdays, Sundays or holidays. DELIVERY SHALL BE ACCOMPLISHED ON WEEKDAYS BETWEEN 8:30AM AND 3:30PM EASTERN TIME.

1.12.2 The bidder shall be responsible for the protection of the City of Commerce premises and property, and will be held liable for any damages caused by the bidder, bidder's employee(s) or bidder's agent(s) during the execution of this bid, resultant purchase orders or contracts.

### 1.13 TERMINATION

Federal, State, and other Local government agencies may terminate this Agreement in the event funds are not appropriated for it in future periods; provided, however, that funds are also not appropriated for equipment or services that replace those contracted for under this Agreement. Customer shall be obligated for any future annual period if Company is not notified in writing at least thirty (30) days prior to the beginning for the annual period for which non-appropriation is being claimed.

### 1.14 ANTI-DISCRIMINATION

By submitting a response to this RFP, all perspective contractors certify to The City of Commerce they will conform to the provisions of the Federal Civil Rights Act of 1964, as amended. In every contract of over \$10,000 the provisions in 1.15.1 and 1.15.2. apply:

1.15.1 During the performance of this contract, the contractor agrees as follows:

1.15.1.1 The contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex or national origin, except where religion, sex or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the contractor. The contractor agrees to post in conspicuous places, available to employees and applicants for

employment, notices setting forth the provisions of this nondiscrimination clause.

1.15.1.2 The contractor, in all solicitations or advertisements for employees placed by or on behalf of the contractor, will state that such contractor is an equal opportunity employer.

1.15.1.3 Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

1.15.2 The contractor will include the provisions of 1. above in every subcontract or purchase order of over \$10,000 so that the provisions will be binding upon each subcontractor or vendor.

### 1.15 INSPECTION

All merchandise and services shall be subject to inspection after arrival at destination or completion of work. In case any items are found to be defective or otherwise not in conformity with specifications or statement of work, the City has the right to reject such items and/or services and return them at bidder's expense.

### 1.16 ACCEPTANCE

Submission of any proposal indicates acceptance of the conditions contained in the RFB unless clearly and specifically noted otherwise in the BID

### 1.18 PRICE

Prices quoted shall include all costs and charges to include, but not limited to purchasing, packing, transporting the equipment and/or services described herein. The City of Commerce is exempt from state sales tax. All fees shall be included in the bid price. Bidders must quote based on the bid unit listed.

### 1.19 SAMPLES

If samples are requested by the City of Commerce, they shall be at no charge to the City and will become property of the City, unless return is requested by the bidder in writing in their bid. Return of samples will be at bidder's expense.

### 1.20 TRADE NAME

Bidders are required to indicate the brands and models of merchandise and/or services quoted. Unless listed as "brand/model only", brand names and models listed in specifications are used as a standard of quality and/or clarification of desired product.

### 1.21 MARKING

Merchandise in full cases shall have an identification marking on the outside of the case. Each case, shipping container, etc. shall be marked with the Purchase Order Number supplied by the City.

## 1.22 SAFETY

Material Safety Data Sheets shall be provided for all applicable items.

### **ITEM SPECIFICATIONS**

- 2.1 **Intent of Specifications** -It is the intent and purpose of these specifications to secure for the City of Commerce the necessary equipment and accessories, which will comprise a multi-conductor type color sewer TV inspection system. A detailed list of components required is included and is the basis on which the Contractors proposal is made. The following specification is based the Modular 1 Pipeline Inspection System as manufactured by IBAK. The **City of Commerce** has evaluated different types of inspection systems and has determined that this product is best suited for the **Commerce's** needs in safety, quality and performance. This specification is not to be interpreted as restrictive, but rather as a measure of the safety, quality and performance against which all inspection systems bid will be compared. Please review and complete the attached check list and detail deviations and exceptions accordingly.
- 2.2 **Materials and Workmanship** - All equipment, materials, parts, and workmanship are required to be furnished, will be of the highest grade in accordance with modern practice. The equipment supplied will be new and unused, except for necessary testing, calibration, and transportation.
- 2.3 **Warranty** - The manufacturers and or contractor's standard warranty or guarantee on new equipment will cover all items furnished in accordance with these specifications. The minimum warranty period on new equipment will be one (1) year from the date of delivery.
- 2.4 **Parts and Service.** - To best serve the requirements of the Owner, it is the intent of these specifications to secure equipment, which can be properly maintained and serviced without the necessity of stocking an expensive parts inventory or being subjected to long periods of interrupted service due to lack of spare parts. All Bidders submitting proposals must have available at least one (1)-factory parts and service center within the United States. These centers will be staffed with full-time technical, as well as order and shipping personnel, during regular business hours and days. These factory centers must have toll-free telephone service and be convenient to airfreight, bus, or overnight parcel service. The Bidder will list the nearest factory part and service location, plus any other pertinent information requested.
- 2.5 **Electronic Equipment Loaner Policy** - The Bidder will maintain rental and/or loaner electronic equipment at service center if unable to repair and have ready to return any component of the system within one (1) week of receipt from the purchaser. The service center will have available a rental or loaner component for immediate shipment. The Bidder will indicate whether a rental charge is made for this equipment and service both during and after warranty.
- 2.6 **Exceptions and Alternate Bids** - Major exceptions to the component list and specification requirements, or failure to submit requested information will be considered sufficient cause

for rejection of a proposal. The specifications describe the components and/or system that are necessary to meet the performance requirements of the City. Alternate Bids must meet the intent of the specifications, and any deviations to the specifications will be clearly delineated on the Contractor Information Sheet.

- 2.7 Pre-Contract Demonstration of the Equipment** - The Owner will have the right to have each Bidder (Contractor), demonstrate the exact equipment that will be supplied within two (2) weeks after notification following the opening of Bids. Failure to demonstrate the exact equipment will be just cause for disqualification of the proposal.
- 2.8 Training** - The Contractor will fully instruct the Owners personnel in the operation of the equipment furnished, after delivery, at no additional cost to the Owner. The instruction period will be of sufficient duration (minimum one day) to fully familiarize the Owners operating personnel with all elements of the equipment, and the appropriate maintenance of the equipment and related parts. This instruction and testing will be conducted by trained personnel of the Contractor and will include full instruction in equipment operation, field procedures, techniques of use, maintenance, troubleshooting, and recording and logging of field information.
- 2.9 Service Manuals** - The Contractor will furnish at least two (2) copies of suitable service manuals that describe in detail the proper operation and maintenance of the equipment furnished under the contract. The manuals will contain a current and complete parts for re-ordering, and the equipment actually furnished under this contract will be highlighted to identify exact part and model numbers for each component.
- 2.10 Payment to the Contractor** - Full payment under this contract will be made by the Owner in a single, lump sum payment within thirty (30) calendar days after the successful completion of all contract requirements by the Contractor. The contract requirements will include the required furnishing, installation, and demonstration of equipment and accessories as specified herein, including the furnishing of the required training and service manuals, including vehicle title.
- 2.11 Time of Contract Completion** - The Contractor will furnish, install, deliver, and successfully demonstrate all equipment as specified herein; provide the required training; and provide the required service manuals within one hundred and twenty (120) calendar days after issuance of a Purchase Order.

### 3.0 PROCEDURES & MISC. ITEMS

The project will be administered by the City of Commerce through the Purchasing Agent being the main point of contact for all questions during the preliminary procedures. After a contract or bid is awarded a project manager will be designated.

- 3.1 Please include pictures and specifications for each vehicle in the submitted bid.
- 3.2 Vendors are not required to submit a bid on each vehicle listed and are free to bid one or more vehicle options per vehicle requested.
- 3.3 All questions shall be submitted in writing (e-mail is preferred) and relevant questions shall be posted on our website (see 1.4)
- 3.4 All materials submitted in connection with this RFB will be public documents and subject to the Open Records Act and all other laws of the State of Georgia, the United States of America and the open records policies of the City of Commerce. All such materials shall remain the property of the City of Commerce and will not be returned to the respondent.
- 3.5 All respondents to this RFB shall hold harmless the City of Commerce, and any of their officers and employees from all suits and claims alleged to be a result of this RFB. The issuance of this RFB constitutes only an invitation to present a bid. The City of Commerce reserves the right to determine, at its sole discretion, whether any aspect of a respondent's submittal meets the criteria in this RFB. The City of Commerce also reserves the right to seek clarifications, to negotiate with any vendor submitting a response, to reject any or all responses with or without cause, and to modify the procurement process and schedule. In the event that this RFB is withdrawn or the project canceled for any reason, the City of Commerce shall have no liability to any respondent for any costs or expenses incurred in connection with this RFB or otherwise.
- 3.6 Failure to submit all the mandatory forms from this RFB package shall be just cause for the rejection of the qualification package. However, the City of Commerce reserves the right to decide, on a case by case basis, in its sole discretion, whether or not to reject such a bid as non-responsive.
- 3.7 Any payment terms requiring payment in less than 30 days will be regarded as requiring payment 30 days after invoice or delivery, whichever occurs last. This shall not affect offers of discounts for payment less than 30 days, however. The City of Commerce reserves the right to withhold fifteen percent (15%) of the total cost until the City's Project Manager certifies the project as satisfactory and complete.
- 3.8 In case of failure to deliver goods in accordance with the contract terms and conditions, The City of Commerce, after due oral or written notice, may procure substitute goods or services from other sources and hold the contractor responsible for any resulting additional purchasing and administrative costs. This remedy shall be in addition to any other remedies which the City of Commerce may have.
- 3.9 By submitting a qualification package, the vendor is certifying that they are not currently debarred from bidding on contracts by any agency of the State of Georgia, nor are they an agent of any person or entity that is currently debarred from submitting bids on contracts by any agency of the State of Georgia.
- 3.10 Any contract resulting from this RFB shall be governed in all respects by the laws of the State of Georgia and any litigation with respect thereto shall be brought in the courts of the State of Georgia. Then contractor shall comply with applicable federal, state, and local laws and regulations.
- 3.11 It is understood and agreed between the parties herein that the City of Commerce shall be bound hereunder only to the extent of the funds available or which may hereafter become available for the purpose of this agreement.

#### 4.0 FINAL SELECTION

Following review of all qualified proposals, selection of a suitable vendor, and preliminary contract negotiations, a recommendation will be made to the City of Commerce by the project representative. Following approval, the City will complete contract negotiations.

The City of Commerce reserves the right to accept the response that is determined to be in the best interest of the City. The City reserves the right to reject any and or all proposals.

Every vendor submitting a proposal must complete the form showing compliance with the **Illegal Immigration Reform and Enforcement Act of 2011, OCGA §13-10-90(b)(1)**. The form is provided with this RFB package.

#### 4.1 Evaluation Method

The City will evaluate all bids deemed responsive to this invitation by a committee selected by the City of Commerce. Discussions may take place with the short-list vendors to ensure clarification. The award will be based upon the proposal that is determined to be the most advantageous to the City.

## Attachments

Please Complete & Return with Submittal

## Specification Checklist

These specifications are to serve as a guideline of preferred requirements. While reviewing the specification it is imperative that you carefully and clearly indicate a yes or no response to each line.

A “No” response is “NOT” an automatic negative or may not lead to the bidder being disqualified; we would encourage each bidder to add comparative information or justifications for each “No” on a separate sheet. We realize different manufactures utilize different technologies. We will do our best to determine if the features align and give the same desired benefit.

### Cameras

#### Zoom

	Pan, Tilt and Zoom Camera (Color) (Orion Zoom)	Yes	No
	Camera must have pan, tilt and zoom function with motorized controls to allow the operator to change the viewing angle and camera zoom from the camera controller.		
	Camera total diameter not to exceed 2.5 inches		
	Camera total length is not to exceed 4 inches		
	Camera must be able to operate in a minimum 4” diameter pipeline.		
	Camera must weigh less than 1.25 lbs		
	Camera housing must be cylindrical in design with long radius edges and no protruding surfaces to catch on during operations.		
	<p>Camera must be able to be attached to multiple tractor and push applications without the need for adaptors or additional components to facilitate fitment:</p> <ul style="list-style-type: none"> <li>✓ Push rod for lateral inspection operation <u>including both lateral launch and hand push reel</u></li> <li>✓ Wheeled robotic tractor(s) (minimum of 3) for mainline operation without the need for ancillary adaptors or additions.</li> </ul> <p>Systems that require adaptors or additional components to move the camera from the tractor to the push rod or from the push rod to the tractor will not be accepted.</p>		
	Camera shall have remote focus controls that can be changed from the camera controller.		
	Camera aperture angle / FOV shall be no less than 150 degrees diagonal		
	<p>Camera resolution shall be no less than 570 TVL of horizontal resolution.</p> <p>Systems that have resolution lower than 570 horizontal lines of resolution may be deemed</p>		

	unacceptable due to low resolution video.		
	Camera shall have a digital 3x zoom for looking up into laterals and focusing on more distant objects within the pipeline.		
	Camera shall have automatic iris that adjusts light sensitivity based on pipeline conditions and has the ability to manually set the iris level.		
	The camera housing must be pressurized to a minimum of 1 bar to avoid water ingress that could cause damage.  A low-pressure situation will alert the operator with an <u>audible tone</u> and <u>text message</u> on the camera controller's diagnostic display. Systems that do not have both on screen pressure display and audible alarm <u>may</u> be deemed unacceptable.		
	Camera must be pressurized with dry air. Systems that utilize gasses that require additional purchase MAY be deemed unacceptable.		
	Camera shall have built-in a minimum of 4 groups of 10 white LED lights to illuminate the interior of the pipeline. Light groups must be connected in parallel so that the failure of 1 LED does not affect other LEDs		
	Camera must have an ability to measure pipes.		
	All fasteners used on the camera must be recessed so that no protruding fasteners to catch during operations.		
	Camera must have a built-in radio sonde transmitter operating at 32.8 kHz. The transmitter shall be able to be powered off or on remotely without interrupting the camera operation.		
	Camera must have 360 degrees of continuous rotation.		
	Camera rotation must be on the horizontal axis of the main connector with a slipping through the geometric center of the camera to reduce unnecessary strain on moving parts and connectors during operation.		
	Camera rotation must be controllable must be variable based on operator input.		
	Camera must have 240 degrees of total pan with no less than 300 degrees angle of view		
	Camera shall have a zero (home) position where the camera views straight ahead and the upright picture control automatically enables		
	Camera must display viewing direction on screen while operating. The display shall appear as a clock allowing the operator to clearly and quickly indicate viewing direction.		
	Camera must have auto upright picture control to insure video image is automatically and correctly displayed on the monitor with the top of the pipe always at the top of the video monitor screen		
	Camera housing must be constructed of hard-anodized high strength aluminum with a		

	documented testing of shock resistance of 1 kg / height of fall 27.5".		
	Camera light housing must be constructed of high strength polycarbonate with a documented testing of shock resistance of 1 kg / height of fall 15.75"		
	Camera lens protective front window shall be constructed of a special glass with a documented testing of shock resistance of 1 kg / height of fall 15.75"		
	Camera protection class shall meet a minimum of an IP68 to IEC 529 rating		
	All electronic PCBs shall be connected to one another without the need of soldering for ease of service and repair. Any camera with PCB's that require soldering will be deemed unacceptable.		
	A tool and spares kit, and storage transport case must be provided.		

## Tractors

	<b>Robotic Tractor</b>		
	Tractor must be able to operate in a minimum 4" diameter pipeline with enough clearance to negotiate offsets and debris.		
	Tractors shall be four wheel drive.		
	Tractor must be steerable with each side able to be independently operated to provide skid-steer style of turning. Tractor must have two internal motors for this operation.		
	Tractor must be no longer than 14 inches in length. Any tractors longer than 14 inches shall be deemed unacceptable.		
	<p>Must be able to be fitted with multiple camera connection configurations.</p> <p>Configuration shall include:</p> <ul style="list-style-type: none"> <li>✓ Fixed position connection</li> <li>✓ Movable connection to assist in positioning in confined areas and providing camera protection during impact with objects</li> <li>✓ Connection that allows the addition of an auxiliary light ring</li> <li>✓ Adjustable lift for large diameter pipelines</li> </ul> <p>Each optional connector must accept a minimum of five (5) camera options without the need for additional, ancillary or auxiliary adaptors.</p>		
	<p>Tractor must have ATC (anti tilt compensation) that will automatically steer the tractor so that it does not ride up on the pipe wall and capsize.</p> <ul style="list-style-type: none"> <li>✓ The anti-tilt compensation shall maintain the tractor on a level plane within the pipeline during operation without operator input.</li> <li>✓ The anti-tilt compensation shall operate in both forwards and reverse.</li> </ul> <p>Any tractors without ATC (anti tilt compensation) or require operator input to maintain a level plane shall be deemed unacceptable.</p>		
	<p>The tractor housing must be pressurized to a minimum of 1 bar to avoid water egress from damage.</p> <ul style="list-style-type: none"> <li>✓ A low-pressure situation will alert the operator with an <u>audible tone</u> and <u>text message</u> on the controller's diagnostic display.</li> </ul> <p>Systems that do not have both on screen pressure display and audible alarm may be deemed unacceptable.</p>		
	The tractor may be supplemented with various wheel sets, a tractor height extension, additional weights, and auxiliary LED lighting.		

	<p>The tractor may be outfitted with an optional inclinometer module to monitor and log the pitch and roll of the tractor in the pipeline.</p> <ul style="list-style-type: none"> <li>✓ Grade must be displayed on screen during operation</li> <li>✓ Must be able to work with approved software's to produce usable reports and graphical view of the pitch or grade of the pipeline.</li> </ul>		
	All fasteners must be manufactured from a non-corrosive material such as stainless steel or aluminum.		
	Tractor must have lowering hooks mounted to work in connection with a claw to enable insertion and extraction out of manholes with minimal risk to equipment		
	The tractor shall include wheel sets for 4", 6", 8" and 10+ diameter pipe.		
	Tractor protection class shall meet a minimum of an IP68 to IEC 529 rating		
	A tool and spares kit must be provided for maintenance of the tractor.		

	<b>Wheel Set 140-6 for inspections of 10-12 and larger pipe</b>		
	Must be a separate wheel & tire		
	<p>Must include 2 full sets of tires</p> <ul style="list-style-type: none"> <li>• One set installed and a complete second set</li> </ul>		
	Must use 2 fasteners to attach to hub		
	<p>Must have ability to select 2 different style stainless steel fastener</p> <ul style="list-style-type: none"> <li>• Cheese head / allen socket</li> <li>• Torx's taper head</li> </ul>		
	Must have an integrated spacer adding to the overall width of the inspection unit		
	Must include additional spacer to allow for use in larger diameter pipe		
	Must be able to be used with tractor accessories such as tractor carriage or similar		

	<b>Camera Connector Small</b>		
	When attached to tractor it must be able to operate in a minimum 4" diameter pipeline with enough clearance to negotiate offsets and debris.		

	Must center the camera on the tractor body		
	Must be removable and utilize recessed stainless fasteners		

<b>Camera Connector Lift</b>			
	When attached to tractor it must be able to operate in a minimum 6" diameter pipeline with enough clearance to negotiate offsets and debris.		
	Lift must attach to tractor body with no more than 4 stainless steel recessed fasteners		
	Must be able to adjust height with use of only a single set screw.		
	Connector must have an integrated port to allow for the addition of ancillary/auxiliary lighting.		

<b>Tractor Weight Kit</b>			
	Weight kit shall come with two (2) weight options – Light and Heavy		
	Weight kit must be able to be used while navigating six (6) inch pipelines and have enough clearance to navigate debris and offsets		

<b>Inclinometer</b>			
	Inclinometer must be installed in the tractor to allow the sensor to be as close to center as possible to yield the most accurate results.		
	Inclinometer data shall displays grade/fall of the pipe in percentage on screen		
	Inclinometer must be able to be calibrated with controller and/or VIA softwares ✓ Inclinometers that do not have or utilize a calibration or verification process shall not be deemed acceptable		

<b>Granulated wheels for eight (8) inch</b>			
	Granulated traction wheels must be constructed of a non-sparking rubberized granulated material. <ul style="list-style-type: none"> <li>✓ Granulated wheels made of stone or hard material will not be accepted.</li> </ul>		

<b>Pneumatic wheelset</b>			
	<ul style="list-style-type: none"> <li>✓ Wheelset shall be an inner tube style tire</li> <li>✓ Wheelset shall come with axle extenders to widen the configuration for inspection of larger diameter pipelines</li> </ul>		

### Controllers

<b>Power Supply/Controller</b>			
	Power supply controller shall be rack mount design with remote control station and keyboard handling camera power and controls, tractor power and controls, text generation, diagnostics, and cable winch controls. Camera systems that require more than one mounted component will be deemed unacceptable.		
	Remote Control Station must have a minimum 6" diagonal, full-color adaptive touch screen for selecting options and controlling system functions.		
	Remote Control Station shall give a diagnostic readout of component pressure and issue an audible warning when pressure is low.		
	Remote Control Station shall allow for adjustment of brightness / intensity of both auxiliary light rings and camera lights, as well as be able to switch off individual light banks on the auxiliary light head.		
	Power supply controller must have a graphic-oriented display generator to allow the operator to type on-screen text, display distance counter, camera inclination, and display date and time.		
	On-screen text must have a minimum of 16 lines of text with a minimum of 53 characters per line.		
	The on-screen text generator must have a header field that will continuously display text at the desired location.		
	The power supply controller shall allow the user to position each system field anywhere on the visible screen to prevent obstruction of view.		

	The power supply controller must automatically identify which camera, tractor, and cable winch is connected to the system.		
	The power supply controller must have a minimum of 1 composite video output, 1 S-Video output, and 1 composite video input.		
	The power supply controller shall be able to operate push cameras, small and large tractors, and lateral launch systems should an upgrade be desired in the future.		
	Tractor speed, speed set, direction, and steering must be operated from a multi-axis, multi-function joystick on the Remote Control Station. Forward and reverse must be controlled by an up or down motion, drift steering by side-to-side motion, and skid steering via rotation of the joystick. In addition, two function buttons must be supplied on the top of the joystick, one to set the speed and stop the tractor, the other to switch between cameras.		
	Camera pan & tilt operations, auto-home, iris, and focus must be operated from a multi-axis, multi-function joystick to be mounted in the desktop area. Camera rotation must be controlled by side-to-side movement of the joystick, tilting by up and down movement of the joystick and focus and iris controlled by rotation of the joystick.		
	Joystick functions should automatically change based on power supply controller's recognition of the attached tractor or camera.		
	Joystick must have proportionate directional controls so that the speed of the tractor varies by the percentage from home to max.		
	Power supply controller must have the capability to switch between right hand and left hand joystick configurations.		
	Power supply controller must have 360 degrees joint inspection function that will automatically turn the camera to an upright position and then slowly scan 360 degrees.		
	Remote Control Station must allow the operator the ability to electronically and remotely switch off and on the radio sonde transmitter in the camera head.		
	Remote Control Station must allow the operator the ability to electronically and remotely switch off and on the upright picture control of the camera head.		
	When used with corresponding equipment, the power Remote Control Station must allow the operator the ability to electronically and remotely switch off and on the laser diodes, auto-focus, and control the zoom of the camera head.		
	The Remote Control Station must allow the operator the ability to electronically and remotely switch off and on the automatic tilt compensation of the tractor.		
	Remote Control Station must have an emergency stop button to remove all power to the downhole equipment.		

	Power supply controller shall weigh no more than 15 lbs. for ease of installation and shipping.		
	On-screen text entry and menu navigation shall be done on a standard QWERTY PS2/AT keyboard.		
	The power supply controller must be able to be restarted without removing power to other components and via menu selection from the Remote Control Station.		
	The power supply controller shall have a master power switch on the front of the unit.		
	Power supply controller must have on-board help menus to aid in new user operation.		
	Power supply controller must be able to be reset to factory defaults		
	The power supply controller must have a function to calibrate the tractor mounted inclination meter and have the ability to calibrate within a minimum of +/- 5%.		
	The power supply controller must be constructed from lightweight, extruded aluminum with a minimum of 4 sides.		

### Reels

	<b>Powered Cable Winch (1000 ft.)</b>		
	The cable winch shall be stationary mounted and hold 1000 linear feet of camera cable.		
	Cable winch must operate with a 48 volt DC power source.		
	The cable winch must have an automatic level wind guide.		
	Cable winch must be fitted with a timing belt drive that requires no greasing of any drive component. Cable winches that require greasing of bearings or chains will be deemed unacceptable		
	The cable winch shall have a cable equalization amplifier for video picture processing.		
	The cable winch must have an electromagnetic clutch to engage and disengage the cable winch.		
	The cable winch's clutch must be electronically switchable on and off using a push button switch with a LED status indicator light.		
	There shall be a cable distance-measuring device built into the boom and integrated pulley.		

	Cable winch must have an integrated traction-regulating device that ensures optimum performance of the tractor in all operating conditions. This system assists in paying out cable dependent on tractor speed.		
	Cable winch must have an integrated lowering winch to lift, lower, and position the tractor from the truck into the manholes.		
	The cable winch's integrated lowering winch must be capable of lifting a minimum of 175 lbs.		
	The cable winch shall be equipped with an emergency brake that will lock the reel if power is lost to the system to prevent uncontrollable unreeling of camera cable. Emergency brake must be equipped with a manual override and hand crank.		
	Cable winch must have a remote control pendant with the following controls: tractor direction and speed, tractor stop, control cable winch, operate lowering winch, switch between internal and external controls, turn winch on and off, and retract lateral launch cable if attached.		
	Cable winch must have an emergency stop button on both the drum and the pendant controller to remove all power to the downhole equipment.		
	Cable winch must have a button used to reset the distance counter to zero position.		
	Cable winch must have a foldable boom that will lock into position at various angles.		
	The cable winch's foldable boom must be able to support a minimum of 175 lbs.		
	Cable winch must have a 12 VDC work light mounted on the boom to illuminate in a downward angle		
	Cable winch must have a removable drip tray that will catch and retain water and debris from main cable drum.		
	Camera cable must be a maximum of 0.375" diameter with 2000 lb. rating and Kevlar fiber armored.		

**Accessories**

**Pressures Test Set**

<b>Pressure Test Set</b>	Yes	No
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Manual pump with pressure gauge utilized with all cameras and tractors to pressurize them to the recommended safe pressure.		
<ul style="list-style-type: none"> <li>➤ The pressurization is monitored for each component by the controller.</li> <li>➤ The controller will alert the operator in event of a low pressure situation.</li> <li>➤ This feature is a major benefit to system owners aiding in protecting it from potential water ingress.</li> </ul>		
Pressure test set must have pressure relief blow off valve integrated to ensure that the system cannot be accidentally over charged.		
Air pump/Pressure test set must have an integrated and replaceable desiccant canister to remove moisture from the air.		
Pressure test set must have an analog dial type gauge that is clear and easy to read.		

### Monitor

High intensity, backlit monitor provides daylight viewable picture		
Standard RCA connections		
Rechargeable battery		
8 hours of continuous operation		
Weatherproof construction		

### Trailer

#### 14 Foot Converted

<b>Premium Converted Inspection Trailer</b>	Yes	No
Dimensions: 14' x 6'6" inside dimensions		
Dual axle for preferred weight distribution		
Aluminum sided construction		
12" Diamond Plate stone chip protection at front of trailer.		
Low profile with wheel wells		
Side entry door with locking mechanical latch		

	Dual rear swing doors		
	Diamond plate aluminum step bumper		
	Recessed LED clearance lights		
	Aluminum Roof		
<b>Studio Office Area</b>			
	Partition wall between studio area and work area approximately 80 inches from the front of the box constructed of FRP.		
	2 12VDC LED lights in studio (1 under cabinets and 1 located on the ceiling between roof air and side entry door.		
	3 Laminated overhead cabinets in studio with sliding smoked plexi-glass or similar doors.		
	13,500 BTU roof air conditioner with heat strip installed		
	Extended heavy duty tongue		
	Onan 5500 Watt commercial gas generator Tongue mounted by ONAN factory authorized facility		
	Remote generator starter with hour meter mounted in control room.		
	Generator enclosure Enclosure to be designed & installed by generator authorized facility to ensure proper cooling and ventilation. Generators & Enclosures NOT installed by authorized ONAN factory service center will not be deemed acceptable		
	Laminate hard surface counter tops in studio Must have grommets holes to accommodate cables from monitors.		
	Sliding window with screen on partition wall above studio desk next to pass through door		
	Flooring shall be rubber Flooring must be a single piece with no visible seams		
	3/4" insulation in walls in studio area. Covered with minimum 3/8 plywood.		
<b>Work Area</b>			
	12VDC LED lights in work area. Two in in the center line of the work are and Two under each of the overhead cabinets.		
	overhead cabinets with latching doors in work area.		
	Full height cabinet with dual latching door cabinet		
	counter top sink in work area Tank and pump to be located below with latching doors.		

	Automatic shore power / generator switch		
	Exterior shore power plug / receptacle, 30 Amp with 30 foot extension cord and 15 Amp converter.		
	55 to 75 amp 12VDC battery charger / converter mounted		
	12 VDC / 100 VAC fuse / breaker box mounted and wired		
	2 Auxiliary 12 VDC battery mounted easily accessed to allow charging of any devices.		
	110VAC outlets with GFI protection on work area circuit		
	Diamond Plate aluminum floor covering in rear work area.		
	Video cable installed from work area LCD monitor to under the counter in the studio.		
	14-gallon fresh water tank with 12VDC pump with switch		
	Covered walls and ceiling in work area.		
	Minimum 22 watt strobe mounted on front roof of with switch located for driver operation		
	Directional LED arrow board on rear of vehicle with driver accessible controls		
	Commercial toolbox with locking and latching doors. <ul style="list-style-type: none"> <li>✓ Must have ball bearing slides and be removable for warranty claims.</li> <li>✓ Toolbox must carry a commercial warranty.</li> </ul>		

## Training

<b>Training</b>			
	Includes one (1) days of onsite training by a factory certified trainer with a minimum of 2 years' experience of pipeline inspection with the selected equipment. Trainer will work with purchaser's staff to ensure positive knowledge of operations General maintenance and care equipment.		



**NON-COLLUSION AFFIDAVIT**

The following affidavit is to accompany the bid:

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

\_\_\_\_\_  
Owner, Partner or Officer of Firm

\_\_\_\_\_  
Company Name, Address, City and State

being of lawful age, being first duly sworn, on oath says that he/she is the agent authorized by the bidder to submit the attached bid. Affiant further states as bidder, that they have not been a party to any collusion among bidders in restraint of competition by agreement to bid at a fixed price or to refrain from bidding. Affiant also states as bidder, that they have not been a party to any collusion with any officer of the City of Commerce or any of their employees as to quantity, quality or price in the prospective contract; and that discussions have not taken place between bidders and any office of the City of Commerce or any of their employees concerning exchange of money or other things of value for special consideration in submitting a sealed bid for:

Firm Name \_\_\_\_\_

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

Subscribed and sworn to before me this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public



ADDENDA ACKNOWLEDGEMENT

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The vendor has examined and carefully studied the Request for Proposals and the following Addenda, receipt of all of which is hereby acknowledged:

Addendum No. \_\_\_\_\_  
Addendum No \_\_\_\_\_  
Addendum No. \_\_\_\_\_  
Addendum No. \_\_\_\_\_

\_\_\_\_\_  
Authorized Representative/Title (Print or Type)      Authorized Representative (Signature)      (Date)

*Vendors must acknowledge any issued addenda. Submittals which fail to acknowledge the vendor's receipt of any addendum will result in the rejection of the offer if the addendum contained information which substantively changes the owner's requirements.*