

June 20, 2011

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

**BID NO. ITB-4173
DUE: July 6, 2011**

Sealed bids will be received (**Original Plus Two (2) Copies**) by the Purchasing Division, 5th Floor, City Hall on or before 10:00 a.m., Wednesday July 6, 2011, at which time they will be opened and publicly read aloud. All bids become the property of the City of Ann Arbor.

Specifications are attached.

We have enclosed our Human Rights Work Utilization Forms to be filled out and returned with your bid or you may submit an updated EEO-1 with your bid. Submittal of these forms with your bid is not a requirement of this bid; however, the first and second low bidders are required to complete a contract compliance form or an acceptable equivalent by no later than 5:00 p.m. of the work day following the opening.

No bidder may withdraw his bid within 60 days after the date set for the opening thereof.

The City of Ann Arbor reserves the right to accept any bid, to reject any bid or all bids, to waive irregularities and/or informalities in any bid, and to make the award in any manner deemed in the best interest of the City.

Specifications referred to herein are used to indicate the desired type, and/or construction, and/or operation. An alternate may be offered if deviations from specifications are minor and if all deviations are properly outlined on a separate sheet. Failure to outline all deviations may be grounds for rejection of your bid (see attached specifications).

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

The decision of the City of Ann Arbor, acting through the Administrative Services Director, or his authorized representative, shall be final as to what constitutes acceptable deviations from specifications.

All envelopes must be marked, " **TELEVISION PIPE INSPECTION SYSTEM**". We cannot be responsible for any bid not marked as stated above.

Authorized

GENERAL: The City of Ann Arbor's Purchasing Division is soliciting quotations for the purchase of a television pipe inspection system with lateral evaluation television system. To be installed in the city of Ann Arbor's 2004 Ford box truck.

CONTACT PERSON: If there any questions concerning this bid, please contact Dan Wooden Field Operations Supervisor (734) 794 6350 ext 43324, between the hours of 6:30 a.m. and 2:30 p.m., Monday through Friday.

COPIES OF BID: All venders will be required to return the complete original bid plus two copies.

DEVIATIONS FROM SPECIFICATIONS: Each sub-section of each Item must be marked clearly as to it meeting the City=s specifications completely or not. Any deviation from the specification must be fully described in detail on the last page of this bid document

**ALL UNITS MUST MEET ALL OSHA OR MIOSHA REGULATIONS AT TIME OF
MANUFACTURE**

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

**BID NO. ITB-4173
 DUE: July 6, 2011**

**CITY OF ANN ARBOR
 TECHNICAL SPECIFICATIONS
 FOR
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

		COMPLY	
		YES	NO
1.0	INTENT:		
1.01	It is the intent of the City of Ann Arbor to be capable of upgrading the camera system in the future using compatible equipment from the same manufacturer. Therefore only modular systems that can be readily upgraded will be accepted. Only system that currently have available an integrated multi-camera lateral inspection system with launcher will be considered.		
1.02	Furthermore, it is the intent of the City of Ann Arbor to be capable of upgrading the camera system, now or in the future, for use with a manhole inspection. All camera used in the main system shall be readily used with and interchangeable with the cameras used for manhole inspection system. This manhole inspection system shall attach to a fiberglass pole, winch, or rope system for lowering into the manhole. The manhole adapter system shall be capable of utilizing the monitor system of the main camera system for observation and recording. Therefore only modular camera head systems that are interchangeable with the manhole inspection system will be accepted.		
1.03	The City of Ann Arbor has evaluated different types of equipment and has determined that this product is best suited for its needs in safety, quality, performance, and standardization. This specification is not to be interpreted as restrictive, but rather as a measure of the safety, quality and performance against which all equipment bid will be compared. In comparing proposals, consideration will not be confined to price only.		
1.04	Contract will be awarded for the product which best serves the interests of City of Ann Arbor when cost, product, safety, quality and delivery are considered. The City of Ann Arbor reserves the right to reject any or all bids or any part thereof, and to waive any minor technicalities. A contract will be awarded to the bidder submitting the lowest responsible bid meeting the exact requirements of this specification.		
2.0	EQUIVALENT PRODUCT		

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

2.01	Bids will be accepted for consideration on any make or model that is equal or superior to the equipment specified. Decisions of equivalency will be at the sole interpretation of the City of Ann Arbor.		
2.02	Bidder shall demonstrate the exact equipment being offered within 5 business days of the bid opening date. Equipment demonstrated shall be fully equipped with all accessories and components required in this specification. Bidders who have previously demonstrated to the City of Ann Arbor may request a waiver of this requirement.		
2.03	Failure to comply with this demonstration requirement will result in rejection of bid without further review.		
2.04	A blanket statement that equipment proposed will meet all requirements will not be sufficient to establish equivalence. Original manufacturer's brochures of the proposed unit are to be submitted with the proposal. All modifications made to the standard production unit described in the manufacturer's brochures shall be certified by the manufacturer and submitted with the bid, or the bid will be deemed "non-responsive" and rejected without further review.		
3.0	INTERPRETATIONS		
3.01	In order to be fair to all bidders, no oral interpretations will be given to any bidder as to the meaning of the specification documents or any part thereof. Every request for such a consideration shall be made in writing to the municipal clerk of City of Ann Arbor. Based upon such inquiry, the City of Ann Arbor may choose to issue an Addendum in accordance with public contracts law.		
4.0	GENERAL		
4.01	The specification herein states the minimum requirements of the City of Ann Arbor. All bids shall be regular in every respect. Unauthorized conditions, limitations, or provisions shall be cause for rejection. Any bid not prepared and submitted in accordance with the bid document and specification, or any bid lacking sufficient technical literature to enable the City of Ann Arbor to make a reasonable determination of compliance to the specification will be consider as "non-responsive" and rejected without further review.		
4.02	It shall be the bidder's responsibility to carefully examine each item of the specification. Failure to offer a completed bid or failure to respond accurately to each individual item of the technical specification will cause the proposal to be rejected without further review. All variances, exceptions and/or deviations shall be fully described in the appropriate section. Deceit in responding to the specification will be cause for rejection.		

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

5.0	SERVICE QUALIFICATIONS		
5.01	The availability of quality local service and parts support is of paramount importance to the City of Ann Arbor . Bidder shall have Class "A" service and parts facility capable of performing all diagnostic requirements and repairs on site at that facility. The City of Ann Arbor reserves the right to inspect this facility to determine compliance with this essential performance requirement. Bids failing to have a satisfactory local service and parts facility will be rejected without further review.		
5.02	The City of Ann Arbor will not accept the use of substitute, contractor, sub-contractor or other indirect service without the prior evaluation of such indirect service provider by the City of Ann Arbor . Failure to provide acceptable service providers will result in rejection of bid without further review.		
5.03	If the Bidder intends to use substitute, contractor, or sub-contractor service providers, Bidder shall submit as part of the bid package submitted, a letter from such service provider(s) bearing an original signature and addressed directly to the City of Ann Arbor acknowledging they have read and understand the service provisions of this specification and certifying they will fully comply with all the provisions contained herein. Letter shall also certify acknowledgement that they assume full and equal liability for all work performed. Failure to submit such letter with the bid shall result in rejection of the bid without further review.		
5.04	If the Bidder intends to use substitute, contractor, or sub-contractor service providers, each indirect service provider shall submit a separate Guaranty of Surety Bond service the full amount of the bid to guarantee full service for the duration of the warranty period. Bond shall name the City of Ann Arbor . Failure to submit Guaranty of Surety with the bid shall result in rejection of the bid without further review.		
5.05	Bidder shall state the location of manufacturer's factory service facility nearest to the City of Ann Arbor . State Location: _____		
5.06	Bidder shall state the location of Bidder's service facility nearest to the City of Ann Arbor . State Location: _____		
	Exceptions:		
6.0	ELECTRONIC EQUIPMENT LOANER POLICY		
6.01	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 City of Ann Arbor. The service center will have available a rental or loaner component for immediate shipment.		

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

**BID NO. ITB-4173
 DUE: July 6, 2011**

	Exceptions:		
8.0	CAMERA		
8.01	Orion-L Lateral Navigating Camera shall be provided.		
8.02	Camera shall have pan & tilt function with motorized controls to allow the operator to change the viewing angle from the camera controller.		
8.03	Camera shall be able to be attached to a push rod for lateral inspection operation as well as onto a wheeled robotic tractor for mainline operation.		
8.04	Camera shall have remote focus controls that can be changed from the camera controller.		
8.05	Camera shall have automatic iris that adjust light sensitivity based on pipeline conditions.		
8.06	The camera housing shall be pressurized to a maximum of 1 bar to avoid water egress from damage. A low-pressure situation will alert the operator with an audible tone and text message on the camera controller's diagnostic display.		
8.07	Camera shall have built-in a minimum of 4 groups of 10 white LED lights to illuminate the interior of the pipeline.		
8.08	Camera shall have auto upright picture control to insure video image is correctly displayed on the monitor with the top of the pipe always at the top of the video monitor screen.		
8.09	Camera shall 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 interruption to the camera operation.		
8.10	Camera shall be able to operate in a minimum 2.75" diameter pipeline.		
8.11	Camera housing shall be cylindrical in design with long radius edges and no protruding surfaces to catch on during operations.		
8.12	A tool and spares kit, and storage transport case shall be provided.		
8.13	Guided satellite camera for pushrod operation for 100 mm pipes upwards shall be provided.		
8.14	Positionable in laterals with guide rod (panning function) shall be provided.		
8.15	LED lighting shall be provided.		
8.16	Picture right side up in pushrod operation, auto home, continuous rotation shall be provided.		
8.17	Integrated detector transmitter, pipe guide and transport box shall be provided.		
8.18	ORPHEUS Pan and Tilt Camera With Zoom With Case shall be provided.		
8.19	Camera shall have pan & tilt function with motorized controls to allow the operator to change the viewing angle from the camera controller.		
8.20	Camera shall have a 40x zoom comprised of a 10x optical and 4x digital zoom.		
8.21	Camera shall have automatic focus that will focus to the pipe will without user intervention. The focus shall also have remote focus controls that can be changed from the camera controller.		
8.22	Camera shall have automatic iris and manual iris that adjust light sensitivity based on pipeline conditions.		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

8.23	Camera shall internally contain two projected laser diodes spaced no less than 1.35" apart, which can be used for reference measurement using visible light laser with optional software program.		
8.24	Graphical warning labels shall be affixed to warn of laser light and identify the laser classification.		
8.25	The camera housing shall be pressurized to a minimum of 1 bar to avoid water egress from damage. A low-pressure situation will alert the operator with an audible tone and text message on the camera controller's diagnostic display.		
8.26	The pressurization valve shall be located on the rear of the camera housing with a protective plastic cap.		
8.27	Camera shall have built-in a minimum of 4 groups of 20 white LED lights to illuminate the interior of the pipeline. Light groups shall be connected in parallel so that the failure of 1 LED does not affect other LEDs		
8.28	Camera shall have auto upright picture control to insure video image is correctly displayed on the monitor with the top of the pipe always at the top of the video monitor screen		
8.29	Camera CCD imaging chip shall have a minimum of 380,000 pixels		
8.30	Camera aperture angle / FOV shall be no more than 58 degrees diagonal on the wide view and no more than 6.5 degrees diagonal on the telephoto view.		
8.31	Camera photosensitivity shall be no more than 1.5 lux		
8.32	Camera resolution shall be no less than 470 TVL of horizontal resolution		
8.33	Camera shall have 360 degrees of continuous rotation.		
8.34	Camera rotation shall 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.		
8.35	Camera shall have 240 degrees of total pan		
8.36	Camera rotation shall be controllable between 2 speeds of rotation		
8.37	Camera shall have automatic joint panning operated from a single button press		
8.38	Camera shall have pre-programmed panning positions at 45 degrees and 90 degrees		
8.39	Camera lens window shall be a minimum of 1.25" in diameter to allow maximum lighting through the lens to the imaging chip.		
8.40	Camera shall 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 interruption to the camera operation.		
8.41	Camera shall have removable side covers to allow ease of maintenance and repairs. The side covers shall have o-ring sealing and be fixed with a minimum of 8 fasteners per side.		
8.42	A minimum of one side cover shall be translucent or clear polycarbonate to allow visual inspection of tilt drive system and allow maximum performance of radio sonde transmitter.		
8.43	Camera shall be able to operate in a minimum 4" diameter pipeline and be no longer than 6.5" in overall length		
8.44	Camera shall have a zero (home) position where the camera views straight ahead and the upright picture control automatically enables		

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

8.45	Camera housing shall be cylindrical in design with long radius edges and no protruding surfaces to catch on during operations.		
8.46	All fasteners used on the camera shall be recessed so that there is no protruding fasteners to catch during operations		
8.47	Camera shall provide a clock position graphical overlay on screen to provide information on viewing angle.		
8.48	Camera shall have a pipe size overlay to measure pipe diameter sizes.		
8.49	Camera connection shall be no greater than .650 inches in diameter.		
8.50	Camera housing shall be constructed of hard-anodized high strength aluminum with a documented testing of shock resistance of 1 kg / height of fall 27.5”.		
8.51	Camera light housing shall be constructed of high strength polycarbonate with a documented testing of shock resistance of 1 kg / height of fall 15.75”		
8.52	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”		
8.53	Camera protection class shall meet a minimum of an IP68 to IEC 529 rating		
8.54	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.		
8.55	A tool and spares kit, protective connector cap, and watertight plastic storage transport case shall be provided.		
8.56	RETRUS Back-Eye Camera shall be provided.		
8.57	Shall plug in between cable and tractor		
8.58	May require software update on older systems		
8.59	Pressure Test Set for JUNO / ORION / ORPHEUS, Hand pump, air dehumidifier and pressure gauge shall be provided.		
8.60	A pressure test kit shall be supplied to pressurize the camera and tractor components.		
8.61	The pressure test set shall provide clean dehumidified air to the components.		
8.62	The pressure test set shall have quick connect adapters to accommodate each component.		
8.63	The pressure test kit shall have an air gauge and air relief valve set to 1 bar to prevent over pressurization.		
	Exceptions:		
8.01	T76 Steerable Large Camera Tractor shall be provided.		
8.02	Tractor shall be able to operate in a minimum 6” diameter pipeline with enough clearance to negotiate offsets and debris.		
8.03	Tractor shall be designed utilizing wheels / tires as it mode of propulsion. Tracked crawlers or other modes of propulsion shall be deemed unacceptable.		
8.01	Tractor shall be steerable with each side able to be independently operated to provide skid-steer style of turning. Tractor shall have two internal motors for this operation.		

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

8.02	Tractor shall be no longer than 22 inches in length. Any tractors longer than 22 inches shall be deemed unacceptable.		
8.03	Tractor shall weigh a minimum of 50 pounds without any wheels attached.		
8.04	Tractor shall have a dual swivel cable connector, allowing both X & Y axis to pivot.		
8.05	Tractor shall have continuously adjustable speed with speed set.		
8.06	Tractor shall have a front moveable camera connector, referred to as a base module, that will fold upwards to assist during insertion in confined areas.		
8.07	The base module shall be removable through utilization of a recessed connector.		
8.08	Tractor shall have the ability to remove the base module and have the ability to add a lateral launching module to convert the tractor to a fully operational lateral launch robot.		
8.09	Tractor shall have anti tilt compensation that will automatically steer the tractor so that it does not ride up on the pipe wall and capsize. The anti tilt compensation shall maintain the tractor in a level plane within the pipeline during operation. Any tractors without anti tilt compensation shall be deemed unacceptable.		
8.10	The tractor housing shall be pressurized to a minimum of 1 bar to avoid water egress from damage. A low-pressure situation will alert the operator with an audible tone and text message on the camera controller's diagnostic display.		
8.11	Tractor body shall be manufactured from solid brass for weight and coated with a chrome finish to resist tarnishing and facilitate cleaning.		
8.12	All fasteners shall be manufactured from a non-corrosive material such as stainless steel or aluminum.		
8.04	Tractor shall have a remotely operated motorized camera-elevating device that allows the camera to be raised and lowered inside of pipeline during operation. Manual elevating of camera will be deemed unacceptable.		
8.05	Motorized camera elevator shall be able to raise the camera vertically a minimum of 8.25"		
8.06	Motorized camera elevator shall have the ability to display the height of operation in percentage on the main control panel.		
8.07	Motorized camera elevator shall be pressurized to a minimum of 1 bar to avoid water egress from damage. A low-pressure situation will alert the operator with an audible tone and text message on the camera controller's diagnostic display.		
8.08	Tractor shall have the ability to be operated without the use of a motorized camera-elevating device for smaller diameter pipelines. Protective caps and all hardware shall be supplied for this mode of operation.		
8.09	Appropriate graphical warning stickers shall be affixed to warn of any potential pinch points on elevating device.		
8.10	Tractor shall have a milled sloped hook system with a lowering claw to quickly and efficiently insert and extract the tractor from manholes.		
8.11	The tractor may be supplemented with various wheel sets, additional weights, and auxiliary LED lighting to inspect pipeline up to 72" in diameter.		

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

8.12	Tractor shall have connection ports for two unique sizes of auxiliary light rings and have protective covers secured with a minimum of two fasteners.		
8.13	All fasteners used on the tractor shall be recessed so that no protruding fasteners catch during operations		
8.14	All electronic PCBs shall be connected to one another without the need of soldering for ease of service and repair. Any tractor with PCB's that require soldering will be deemed unacceptable.		
8.15	All electronic PCBs shall be located in a single location on the tractor with a single access cover, o-ring sealed, and secured with a minimum of 6 fasteners for protection and ease of service and repair.		
8.16	All gearing and motors shall be accessible from a single location on the tractor with a single access cover, o-ring sealed, and secured with a minimum of 8 fasteners for protection and ease of service and repair.		
8.17	The tractor may be outfitted with an inclinometer module to monitor and log the pitch and roll of the tractor in the pipeline.		
8.18	The tractor shall include wheel sets for 6", 8", and 10" diameter pipe.		
8.19	Tractor protection class shall meet a minimum of an IP68 to IEC 529 rating		
8.20	A tool and spares kit shall be provided for maintenance of the tractor.		
8.21	Camera Base Module for T76 Tractor (Required for operation of T76 as mainline tractor) Includes integrated transmitter for location shall be provided.		
8.22	Remote Elevator for T76 (Raises the camera to allow centering in pipeline) - lifts camera above water line in pipes with flow shall be provided.		
8.23	For operations of small tractor in pipeline 12" and upwards		
8.24	Height extension shall have gear reduction to slow the tractor when used with larger wheel sets.		
8.25	Set of Granulated Wheels (Tractor Wheels) RAD 120 For operation with KRA 6 in pipes of 8" and upwards shall be provided.		
8.26	Set of Granulated Wheels (Tractor Wheels) RAD 150 For operation with KRA in pipes of 8" and upwards shall be provided.		
8.27	Granulated Wheel set RAD 100-4 for PVC shall be provided.		
8.28	Granulated Wheel set RAD120 for PVC shall be provided.		
8.29	Granulated Wheel set RAD150 for PVC shall be provided.		
8.30	Temperature Sensor for T66/76/86/PANORAMO/LISY shall be provided.		
8.31	Tractor Lowering Hook With Quick Disconnect shall be provided.		
9.0	LATERAL INSPECTION CAMERA SYSTEM		
9.01	Lateral Inspection Camera System Type LISY 150 M - SYNCHRON Package shall be provided.		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

9.02	Lateral launch tractor shall be able to operate in a minimum 6" diameter pipeline with enough clearance to negotiate offsets and debris.		
9.03	Lateral launch tractor shall be designed utilizing wheels / tires as it's mode of propulsion. Tracked crawlers or other modes of propulsion shall be deemed unacceptable.		
9.04	Lateral launch system shall be able to accept auto-uprighting straight view, pan & tilt, or steerable pan & tilt camera for launching into laterals.		
9.05	Lateral launch tractor shall be no longer than 39 inches in length with a folding joint for ease of insertion. Any tractors longer than 39 inches or without a folding joint shall be deemed unacceptable.		
9.06	The lateral launch system shall have an integrated monochrome axial camera to monitor lateral launch propulsion system.		
9.07	Lateral launch tractor shall have a dual swivel cable connector allowing for both X & Y axis to pivot.		
9.08	The launching positioner shall have rotation and tilt controlled via a joystick on the power supply controller.		
9.09	The lateral launch tractor and positioner housing shall be pressurized to a minimum of 1 bar to avoid water egress from damage. A low-pressure situation will alert the operator with an audible tone and text message on the camera controller's diagnostic display.		
9.10	The launching drive mechanism shall have an integrated distance measuring device to measure the paid out push rod into each lateral. The distance shall be able to be displayed on screen and through the serial port for software integration.		
9.11	The launching push rod drive wheels shall be diamond tipped		
9.12	Tractor body shall be manufactured from solid brass for weight and coated with a chrome finish to resist tarnishing and facilitate cleaning.		
9.13	All fasteners shall be manufactured from a non-corrosive material such as stainless steel or aluminum.		
9.14	The tractor may be supplemented with various wheel sets, a positioner height extension, auxiliary camera, and auxiliary LED lighting.		
9.15	Lateral launch system shall be able to accept a flusher kit to position water jet hose and clean lateral pipelines.		
9.16	Tractor protection class shall meet a minimum of an IP68 to IEC 529 rating		
9.17	The lateral drive unit shall be constructed of hard-anodized high strength aluminum		
9.18	A tool and spares kit shall be provided for maintenance of the tractor.		
9.19	The auto lateral reel shall be able to electronically retrieve lateral push rod and camera without moving the tractor backwards.		
9.20	The lateral launch push rod shall have a protective nylon tube liner with a continuous length fiberglass rod internally placed for rigidity and a soft video / electronics cable.		
9.21	The lateral launch push rod's nylon tube liner shall be field replaceable.		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

9.22	The cable winch shall be stationary mounted and shall have the ability to hold a minimum of 600 linear feet of camera cable comprised of 500 feet of Kevlar reinforced soft cable and 100 feet of insertion rod.		
9.23	Pushrod diameter shall be no less than 0.600" in diameter soft cable shall be no larger than 0.375" in diameter with 2000 lb. rating and Kevlar fiber armored.		
9.24	The cable winch shall have an automatic level wind guide.		
9.25	Cable winch shall have a removable boom for directing cable into the manhole.		
9.26	Cable winch shall have an emergency stop button to remove all power to the downhole equipment.		
9.27	Propulsion tube for Orion operation shall be provided.		
9.28	Height adapting device LISY 150 shall be provided.		
9.29	Adapter cable (KT-BE) shall be provided.		
9.30	Claw LISY150; 1000N, cable deflection pulley unit KUV 2.3 shall be provided.		
9.31	Documentation shall be provided.		
9.32	Modification of LISY 150 for operation with BK3 shall be provided.		
9.33	Modification of control box, screen writer with length measurement read-out for the mainline sewer and laterals shall be provided.		
9.34	Adapter box LISY150/BK3 and adapter cable BK3/box shall be provided.		
9.35	600' Cable shall be provided consisting of 500' cable capacity and 100' of Lateral shall be provided.		
9.36	Lateral Inspection Camera System Type LISY 150 M - SYNCHRON Package shall be provided.		
	Exceptions:		
10.0	SYSTEM CONTROL UNIT		
10.01	Control Unit Type BE3.5, Vehicle Mounted Control Panel (includes extension cable to the drum) shall be provided.		
10.02	Power supply controller shall be 19" rack mount, single component design handling camera power and controls, tractor power and controls, text generation, diagnostics, and cable winch controls. Camera systems that require more than one component will be deemed unacceptable.		
10.03	Remote Command And Control Center shall have Touch Screen Color LCD Panel.		
10.04	Power supply controller shall have a minimum 4 line LCD display with 40 characters per line with a minimum of 5 buttons for system configuration, operating status, and error messages / diagnostics.		
10.05	The power supply controller's LCD display shall allow for contrast adjustment for viewing in various lighting conditions.		

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

10.06	Power supply controller shall give a diagnostic readout of component pressure and issue an audible warning when pressure is low.		
10.07	Power supply controller shall display the current draw of both the lighthead and each motor in the tractor by view of a bar graph representing percentage.		
10.08	Power supply controller 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 lighthead.		
10.09	Power supply controller shall 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.		
10.10	On-screen text shall have a minimum of 16 lines of text with a minimum of 53 characters per line.		
10.11	The controller shall be capable accepting inputs for a minimum of 2 distance counters and switchable between meters and feet.		
10.12	The controller shall be able to delete all text from the screen with the press of a single key.		
10.13	The power supply controller shall allow for a minimum of 10 color variations of overlay text to contrast on different backgrounds.		
10.14	The on-screen text generator shall have a header field that will continuously display text at the desired location.		
10.15	The power supply controller shall allow the user to position each system field anywhere on the visible screen to prevent obstruction of view.		
10.16	The power supply controller shall automatically identify which camera, tractor, and cable winch is connected to the system.		
10.17	The power supply controller shall have a minimum of 1 composite video output, 1 S-Video output, and 1 composite video input.		
10.18	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.		
10.19	Tractor speed, speed set, direction, and steering shall be operated from a multi-axis, multi-function joystick to be mounted in the desktop area. Forward and reverse shall 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 shall be supplied on the top of the joystick, one to set the speed and stop the tractor, the other to switch between cameras.		
10.20	Camera pan & tilt operations, auto-home, iris, and focus shall be operated from a multi-axis, multi-function joystick to be mounted in the desktop area. Camera rotation shall 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. In addition, two function buttons shall be supplied on the top of the joystick, one to return the camera to the home position, the other to switch between iris controls.		
10.21	Joystick functions should automatically change based on power supply controller's recognition of the attached tractor or camera.		
10.22	Joystick shall have proportionate directional controls so that the speed of the tractor varies by the percentage from home to max.		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

10.23	Power supply controller shall have the capability to switch between right hand and left hand joystick configurations.		
10.24	Power supply controller shall have a 360 degree joint inspection function that will automatically turn the camera to an upright position and then slowly scan 360 degrees.		
10.25	The power supply controller shall allow the operator the ability to electronically and remotely switch off and on the radio sonde transmitter in the camera head.		
10.26	The power supply controller shall allow the operator the ability to electronically and remotely switch off and on the upright picture control of the camera head.		
10.27	When used with corresponding equipment, the power supply controller shall 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.		
10.28	The power supply controller shall allow the operator the ability to electronically and remotely switch off and on the automatic tilt compensation of the tractor.		
10.29	Power supply controller shall have an emergency stop button to remove all power to the downhole equipment.		
10.30	Power supply controller shall weigh no more than 25 lbs. for ease of installation and shipping.		
10.31	On-screen text entry and menu navigation shall be done on a standard QWERTY PS2/AT keyboard.		
10.32	Controller shall have a serial communications port using a DB9 connection for interface with various computer softwares.		
10.33	The power supply controller shall be able to be restarted without removing power to other components and via menu selection.		
10.34	The power supply controller shall have a master power switch on the front of the unit.		
10.35	Power supply controller shall have on-board help menus to aid in new user operation.		
10.36	Power supply controller menu system shall come standard with a minimum of 12 unique language settings.		
10.37	Power supply controller shall be able to be reset to factory defaults by a maximum of 3 key presses.		
10.38	The power supply controller shall have a function to calibrate the tractor mounted inclination meter and have the ability to calibrate within a minimum of +/- 5%.		
10.39	The power supply controller shall be constructed from lightweight, extruded aluminum with a minimum of 4 sides with over 80% of the surface area ventilated.		
10.40	Connection Cable KT180/KW180 to BK3/BE3 For permanent installation, length 16 feet shall be provided.		
	Exceptions:		
11.0	CABLE AND REEL		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

11.01	KW305 Cable Reel with Boom Work Light shall be provided.		
11.02	The cable winch shall be stationary mounted and hold 1000 linear feet of camera cable.		
11.03	Cable winch shall operate with a 48 volt DC power source.		
11.04	The cable winch shall have an automatic level wind guide.		
11.05	Cable winch shall 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		
11.06	The cable winch shall have a cable equalization amplifier for video picture processing.		
11.07	The cable winch shall have an electromagnetic clutch to engage and disengage the cable winch.		
11.08	The cable winch's clutch shall be electronically switchable on and off using a push button switch with a LED status indicator light.		
11.09	There shall be a cable distance-measuring device built into the boom and integrated pulley.		
11.10	Cable winch shall have an integrated traction-regulating device that ensures optimum performance of the tractor in all operating conditions. This system assists in paying out cable dependant on tractor speed.		
11.11	Cable winch shall have an integrated lowering winch to lift, lower, and position the tractor from the truck into the manholes.		
11.12	The cable winch's integrated lowering winch shall be capable of lifting a minimum of 175 lbs.		
11.13	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 shall be equipped with a manual override and hand crank.		
11.14	Cable winch shall 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.		
11.15	Cable winch shall have an emergency stop button on both the drum and the pendant controller to remove all power to the downhole equipment.		
11.16	Cable winch shall have a minimum of 3 status indicators, power and circuit breaker states.		
11.17	Cable winch shall have a button used to reset the distance counter to zero position.		
11.18	Cable winch shall have a foldable boom that will lock into position at various angles.		
11.19	The cable winch's foldable boom shall be able to support a minimum of 175 lbs.		
11.20	Cable winch shall have a 12 VDC work light mounted on the boom to illuminate in a downward angle		
11.21	Cable winch shall have a removable drip tray that will catch and retain water and debris from main cable drum.		
11.22	Camera cable shall be a maximum of 0.375" diameter with 2000 lb. rating and Kevlar fiber armored.		

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

11.23	Camera cable shall have an industrial connector on the reel end to aid in quick exchange of cable.		
11.24	Cable winch shall be able to operate with an optional foot-controlled switch for hands-free raising and lowering of the camera / tractor with the lowering winch.		
11.25	Cable winch shall be constructed of light, high-strength powder coated aluminum		
11.26	Camera Cable - 1000 feet, Type 524/11 Terminated with connectors, High strength, 2000lb. pull, Kevlar reinforced shall be provided.		
11.27	KUV 5.1 Down Hole Rollers - Cable Deflection Pulley Type KUV 5.1 for 316/11 and 524/11 Cable shall be provided.		
11.28	KUV 5.1 Upper Deflection Guide Pulley attaches to Type KW305 / KW505 Reel (to keep cable tension for off-site use) shall be provided.		
	Exceptions:		
11.01	Rycom-8874PLSD Sonde Locator and Carrying Case shall be provided.		
12.0	COMPUTER HARDWARE		
12.01	Standard 19" Rack Mount Computer with Dual 19" LCD Flat Panel Monitors shall be provided.		
12.02	Wireless Keyboard and mouse		
12.03	320GB Internal Disk Drive for Operating System and Software		
12.04	1.5tB internal Hard Disk Drive		
12.05	Multi Re-Write DVD Burner		
12.06	4gB RAM		
12.07	PCI Express Slot Video Card w/ Dual Display support		
12.08	Windows Operating System (minimum of XP Pro 32bit but as required by software in section 13 Data management Systems)		
12.09	UPS to provide power conditioning and on battery runtime of >5 min		
12.10	Color Printer capable of printing on 8.5" x 11" and connectivity to the computer		
12.11	Wall mounts and associated cables to connect all devices (i.e. Displays, printer, etc.)		
12.12	Video encoder card as required by software specified in section 13 Data Management System		
	Exceptions:		
13.0	DATA MANAGEMENT SYSTEMS		
13.001	Pipelogix (Flexidata) SOFTWARE SYSTEMS shall be provided.		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

13.002	Pipelogix (Flexidata) Full Reporting Module (With Analysis At Inspection Site) shall be provided.		
13.003	BASIC SOFTWARE FUNCTIONS		
13.004	The inspection software shall be NASSCO PACP 4.4 certified and conform to its pipeline assessment procedures.		
13.005	The software shall offer all coding compliant with PACP standards and validate each entry before it can be saved. The PACP mode is included at no additional cost.		
13.006	The software will be able to import and export to a variety of industry standards including PACP version 4.4 and Hansen/Cityworks at no additional cost.		
13.007	The software's data entry interface shall be intuitive, easy to use, and able to provide on-line help files within the software to assist remote users with questions they may have.		
13.008	It shall offer tool bars, drop-down menus, function keys and shortcut keys for easy navigation from keyboard or mouse.		
13.008A	Software shall be capable of operating in a standalone environment without connectivity to a central server.		
13.009	The software shall support simultaneously the following code systems: WRc, PACP, LACP, MACP, Pipelogix (Flexidata) standard. Defect coding in all standards can be grouped for ease of use and to allow exclusion of codes not needed for different types of inspections.		
13.010	The footage reading from the camera equipment shall be automatically entered into the Survey Log and shall directly correspond to the noted defect location throughout the pipe graphic and tabular reports generated.		
13.011	The footage preset can be stored for easy entry into survey form without retyping.		
13.012	The software shall be able to receive multiple, simultaneous inputs from connected devices i.e. inclinometers, footage counters, sonar devices.		
13.013	The inspection database shall include an asset-based architecture which allows multiple inspections to be performed and retained as a historical record for the same physical location (asset).		
13.014	All inspections can be viewed on a structure even if gathered in different projects.		
13.015	DETAILED SOFTWARE/HARDWARE SPECIFICATION		
13.016	The software shall be able to import an entire asset database.		
13.017	The software shall be able to import and retain the entire list of assets despite not ever having generated an inspection.		
13.018	New segments can be entered into the survey form and will be simultaneously stored as a survey and asset in separate tables.		
13.019	Multiple projects can reside within a single database. Information gathered in projects shall be available to view by project or by database.		
13.020	Cityworks CCTV workorders can be imported into the software as a survey that can be completed by the inspector.		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

13.021	Completed inspections can be exported back into the Cityworks database including any pictures and movies.		
13.022	A Mainline and a Lateral Survey Form will be available to create surveys within a project.		
13.023	All relevant mainline segment or lateral segment information can be selected for entry into the survey form if it is stored in the database.		
13.024	The lateral inspection can be done from a mainline survey form and will be linked to the mainline for reporting and review.		
13.025	Mandatory entry fields for project information, pipe information and defect entry fields can be created by a logged in supervisor and imported from the Full Reporting License for use with any Pipelogix (Flexidata) license; Lite or Full Reporting.		
13.026	The below listed minimum pipe detail shall be supplied in the software for proper system management. The graphic and tabular survey reports generated shall include the below listed information as well as footage, defect, pipe location reference, severity and special remarks.		
13.027	Pipe Diameter		
13.028	Starting Manhole #		
13.029	Ending Manhole #		
13.030	Starting Manhole Depth		
13.031	Ending Manhole Depth		
13.032	Direction of Survey		
13.033	Pre-clean (y/n)		
13.034	Total Surveyed Length		
13.035	Pipe Material		
13.036	Pipe section length		
13.037	Pipe shape		
13.038	Road Name		
13.039	Address or Place Name		
13.040	Work Order #		
13.041	Video Cassette #		
13.042	Engineering Drawing #		
13.043	Purpose of Survey		
13.044	Pipe Age (year of construction)		
13.045	Multiple windows shall be able to display on screen for viewing live video compared to recorded video compared to recorded snaps.		
13.046	Each database shall be able to use a different code system or standard. All projects within a database will conform to the same operating mode and code standard.		
13.047	The database can be created in the default directory or other network or writable drive available.		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

13.048	The software will use an open architecture and store the data in a Microsoft Access or SQL Server Express database.		
13.049	The software will be compatible with Microsoft Windows XP and Windows 7.		
13.050	Familiar Microsoft layouts or forms will be used with standard Microsoft tools to minimize, enlarge, or exit. Forms can be resized to personal preference and settings stored under the user window login.		
13.051	Forms shall be synchronized so that changes made to an observation, inspection, asset, project, or resulting from a specific filtering criteria shall display the newly selected properties in all corresponding forms whether open or closed.		
13.052	Users shall be able to “single click” to burn CD/DVD’s or generate reports.		
13.053	The software shall be able to interface with multiple data sources. All or part of the data shall be capable of being duplicated (video, pictures and inspection) and exported into multiple formats such as Azteca Cityworks, Hansen NDEU, GBA Masterseries, RJN, shape files, and ESRI geodatabases,		
13.054	The software’s Lite module shall have the means to sort in ascending and descending order according to date, pipe segment reference number, road name, manhole number(s), observed footage, pipe materials, pipe diameters, work order numbers, etc.		
13.055	A site sketch feature shall also be supplied so that a drawing or sketch will indicate special details or locations about a particular set-up site.		
13.056	A summary paragraph shall be made available for the note form to add a conclusive pipe segment assessment. A minimum of 15 summary statements shall be quickly accessible stating the overall condition of the pipe(s).		
13.057	The software shall provide for grouting survey forms for mainlines at no additional cost. The form will monitor the test pressure and passed or failed joints.		
13.058	The software shall provide a GPS module to enable real-time collection of GPS coordinates at no additional cost.		
13.059	The software shall offer an optional GIS interface to enable bi-directional integration with geodatabases or shape files.		
13.060	The software shall offer an optional Manhole Inspection Mode.		
13.061	The software shall offer an optional Inclinator Inspection Mode		
13.062	The software shall offer an optional mode for use with camera systems able to scan the pipe and create a “virtual pipe”.		
13.063	SUMMARY REPORTING		
13.064	Summary reports compiling data from multiple inspections shall be available. Such reports shall indicate individual survey results in tabular form and list (sort) surveys based on a user defined description field. Individual summary reports shall tabulate pipe survey results observed.		
13.065	Section summary reports are to be made available so that all surveys within a section are listed showing purpose of inspection, dates, work order numbers, manholes, road names and total lengths.		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

13.066	A Defect by Inspection report shall be programmable to list specific defects observed, starting and ending manhole numbers, structural pipe defects, (i.e. cracks, offsets, defective laterals, collapsed pipe, etc.) and service oriented defects (i.e. roots, grease, obstructions, infiltration, etc.).		
13.067	A drainage schedule report including starting and ending manhole numbers and depths, pipe material, total survey length and pipe diameter.		
13.068	The grading scores report shall summarize the manhole numbers, pipe material and diameter and the grade scores for each survey with totals.		
13.069	Service and structural aspect scoring reports are to list the pipe segment reference number, total observed length, number of defects and total score with reference to the condition of the total pipe, average of the pipe, total defects and average of defects.		
13.070	The video image capture module shall have the capability to send output to the color printer for printing up to 16 multiple images on a single 8.5" x 11" sheet of plain paper.		
13.071	A summary report for images captured shall be made available. This will include a thumbnail photo, the relative footage count, the defect code and the actual picture name (i.e. XXX.jpg).		
13.072	READER SITE LICENSE		
13.073	A Reader Module will be available for viewing all collected data.		
13.074	A Site License allowing free distribution of the Reader will be granted.		
13.075	All pictures will be available to review or print.		
13.076	All reports will be available to review or print individually.		
13.077	All data will be viewed in the same format as the Pipelogix (Flexidata) Reporting License		
13.078	FULL REPORTING MODULE—Required		
13.079	The Full Reporting Module shall have all of the functions and features of the Lite (basic) module.		
13.080	The software shall offer the ability to quickly click on an asset and see all of the history performed against that asset.		
13.081	The software shall offer the ability to quickly view project detail or asset detail from the survey form.		
13.082	The module shall also have search (filter) capabilities in order to find information about past surveys located in the database(s).		
13.083	The (filter) will remain to view any project or database until removed.		
13.084	The (filter) shall be maintained when viewing the surveys in edit mode.		
13.085	A summary paragraph editing function shall be made available for creating a conclusive pipe segment assessment statement for use in the note field. An unlimited number of statements can be created. The Paragraph List can be easily transferred to other computers for use in Pipelogix (Flexidata).		
13.086	A caption editor shall be made available to program text writing schemes to send detail from the survey to the video signal for display. The caption schemes can be easily transferred to other computers for use in Pipelogix (Flexidata).		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

13.087	A scoring system incorporated in the software will assist the user/management personnel in making proper assessment of pipe conditions. Scoring is to be based upon defect severity entered by the operator. Only Administrators can make changes to the Score value.		
13.088	Copy and Paste will be available to move surveys or projects between databases. This function will allow databases stored on truck systems to be incorporated into one master database on the network or supervisor computer. Software Programs not able to combine databases from multiple sources into one master database will be unacceptable.		
13.089	The basic module software shall maintain a database of underground pipe and manhole assets. The entry form will allow additional detail about the pipe to be added including map coordinates.		
13.090	An administration Program will be available to allow the supervisor to modify access for users to Pipelogix (Flexidata) and provide a password for entry.		
13.091	Pipelogix (Flexidata) DVS (Digital Video Survey) Module License shall be provided.		
13.092	A module will be available that will allow surveys to be recorded as a digital MPEG file or a Windows Media Format WMV file.		
13.093	The user will be able to select MPEG 1, MPEG 2, or WMV as a recording standard		
13.094	The MPEG or WMV file will have indexes to the observations saved in Pipelogix (Flexidata) as a time reference allowing the user to immediately select a defect in the video.		
13.095	The MPEG or WMV files can be created from the live video or from recorded video files.		
13.096	The recording will be able to be paused for brief periods.		
13.097	The recording will be able to be stopped and be able to be continued via the APPEND feature. This allows the user to create one mainline survey video and create multiple lateral survey videos during the same inspection and setup.		
13.098	The recording can be stopped and restarted without losing any continuity when replayed.		
13.099	The Live Video window can be displayed in full screen mode my clicking on the video. It will return to original size by clicking on the screen.		
13.100	A Playback Window can be open on screen to display the recorded video while the Live Window is open.		
13.101	As each observation is saved, the time link into the MPEG or WMV file will be automatically recorded.		
13.102	When the video is played back in the Playback Window, selecting an observation within the survey form will instantly display that section of the video.		
13.103	Archiving capabilities will be available to move the video file from the hard drive		
13.104	A report will be included to provide the path to the video files and a new name if File Naming is used.		
13.105	When archiving or exporting the video file, a file naming scheme can be used to rename the file to the users standard.		
13.106	A player will be provided to view the video files with the Pipelogix (Flexidata) database and have instant access to the indexed observation.		
13.107	The player will show a list of the observations along with details about the pipe.		

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

13.108	Pictures can be taken during recording of the survey or from playback of the movie.		
13.109	Images shall be easily launched for viewing during inspection review. Multiple images can be viewed from the same form.		
13.110	The video and image capture is available during recording of the survey or from videotape.		
13.111	Footage count is attached to the corresponding video image and shall appear on the reports indicating the correct footage when the image was captured during the pipeline inspection.		
13.112	Multiple images may be taken at any recorded condition.		
13.113	Pipelogix (Flexidata) 12 month support program shall be provided.		
13.114	SOFTWARE OPERATION TRAINING AND SUPPORT		
13.115	The camera system manufacturer, in addition to any other camera system field training, shall furnish training for a total of sixteen (16) hours of on-site software and computer specific operation.		
13.116	Software and computer training shall cover the full operational capabilities of the camera inspection system reporting software.		
13.117	The software training shall include an appropriate amount of field training under live field pipeline inspection conditions including training in the generation of field reports covering all possible reporting functions of the software.		
13.118	The training shall be delivered by factory authorized representatives of the software manufacturer.		
13.119	Support will be provided for a six month period that includes phone support and upgrades as they become available.		
13.120	Internet conference site will be available during the Support period to provide additional training or Support.		
13.121	Training and Delivery		
13.122	(1) Days of JDS personnel training (Truck and Equipment) shall be provided.		
13.123	(1) Days of JDS personnel training (Software and Computer) shall be provided.		
	Exceptions:		
13.01	Installation in Customer's Van (Includes removal of existing equipment) shall be provided.		
14.0	MANUALS		
14.01	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.		
	Exceptions:		

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

15.0	WARRANTY		
15.01	Vendors shall have a full parts and service facility within a reasonable distance from the City of Ann Arbor's garage. State location and distance.		
15.02	A qualified technician shall provide complete training to City of Ann Arbor's personnel at its garage. Training shall include safety, operation, maintenance and service.		
15.03	The manufacturer's standard warranty or guarantee on new equipment shall cover all items furnished in accordance with these specifications.		
15.04	The minimum warranty period on new equipment will be one (1) year from the date of delivery.		
15.05	The warranty period for the computer system will be four (4) years from date of delivery.		
	Exceptions:		
16.0	SERVICE AND TRAINING		
16.01	Vendors shall have a full parts and service facility within a reasonable distance from the City of Ann Arbor's garage. State location and distance.		
16.02	A qualified technician shall provide complete training to City of Ann Arbor's personnel at its garage. Training shall include safety, operation, maintenance and service.		
16.02	Trainer shall be a New Jersey or Federal Certified Safety Trainer or Certified Incident Safety Officer. Certification shall be submitted with bid. Failure to include certification will be grounds for rejection without further review. No exception will be allowed to this critical safety requirement.		
16.03	Trainer shall be certified in OSHA 29 CFR 1926 30-hour work site safety program. Certification shall be submitted with bid. Failure to include certification will be grounds for rejection without further review. No exception will be allowed to this critical safety requirement.		
	Exceptions:		
17.0	DELIVERY		
17.01	Vehicle shall be delivered F.O.B. the City of Ann Arbor in first class operating condition.		
17.02	Acceptance shall be subject to the inspection and approval of the City of Ann Arbor.		
17.03	Delivery shall be by "drive-away" service from the point of manufacturer of the body and camera system, and included within the base price. As an alternative, bidder shall state the cost (if any) of trailered delivery. Additional Cost: \$ _____		
17.04	Bidder shall state delivery time after receipt of order:		
	Exceptions:		

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

**BID NO. ITB-4173
 DUE: July 6, 2011**

18.00	INSTALATION		
	All equipment shall be installed in the City of Ann Arbor's TV truck in an arrangement agreeable to the city's field operations staff.		

PROPOSAL FORM

CITY OF ANN ARBOR:

The undersigned hereby declares that they have carefully examined the requirements of the specifications contained herein, and propose to furnish and deliver to the City of Ann Arbor the modular apparatus listed below.

**COMPLETE NEW AND UNUSED
 TELEVISION PIPE INSPECTION SYSTEM ITEMIZED MODULAR MATERIALS**

Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____
Manufacturer: _____	Model: _____

TOTAL PURCHASE PRICE: \$ _____

(In Words) _____

**CITY OF ANN ARBOR
 INVITATION TO BID
 TELEVISION PIPE INSPECTION SYSTEM
 WITH LATERAL EVALUATION TELEVISION SYSTEM**

**BID NO. ITB-4173
 DUE: July 6, 2011**

OPTIONAL ITEMS		COST
Manufacturer: _____	Model: _____	\$ _____
Manufacturer: _____	Model: _____	\$ _____
Manufacturer: _____	Model: _____	\$ _____
Manufacturer: _____	Model: _____	\$ _____
Manufacturer: _____	Model: _____	\$ _____
Manufacturer: _____	Model: _____	\$ _____

SIGNED: _____ DATE: _____

BIDDER: _____

ADDRESS: _____

AWARD: An award will be made to the lowest responsive bidder (**warranty costs may be a factor in determining the lowest responsive bidder**) or in any manner deemed to be in the best interest of the City of Ann Arbor. The City of Ann Arbor reserves the right to reject low bids which do not meet specifications.

NOTE: Previous experience and performance will be a factor in making the award.

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

NOTE: If cost exceeds \$10,000.00 it will require Human Rights approval and if it exceeds \$25,000.00 it will require City Council approval.

PRE-BUILD MEETING: After the award is made the winning vendor and the body builder will meet with the staff members of the Field Operations Division to discuss the correct placement of accessories, and electrical connections and expectation for the finished truck.

CERTIFICATION: We hereby certify that unless otherwise stated the “**TELEVISION PIPE INSPECTION SYSTEM**” in the bid is new, in unused condition and will meet or exceed your specifications in every respect.

Authorized Representative's Signature

Printed Name

CONTRACT COMPLIANCE: The successful bidder must comply with the City of Ann Arbor's Non-Discrimination requirement (Chapter 112, Section 9:161 of the City Code) before award and at all times during the term of this proposed contract and/or agreement.

DELIVERY PROCEDURE OF COMPLETE UNIT: Unit must be delivered ready for service.

The above service will be performed by:

ADDRESS

DELIVERY: Delivery of the installed television pipe inspection system is desired as soon as possible. Delivery will be made within 120 calendar days after receipt of purchase order.

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

_____ We can meet delivery schedule.

_____ We cannot meet the above delivery schedule, but we offer the following:

NOTE: The City of Ann Arbor reserves the right to reject bids which offer an unsatisfactory delivery schedule.

DELIVERY LOCATION: All material as specified will be delivered F.O.B. Destination, freight prepaid to the following location:

City of Ann Arbor
Field Services Division
4251 Stone School Rd
Ann Arbor, MI 48108

VENDOR'S RESPONSIBILITY: The basic unit and all required components shall be compatible and are recommended for use in combination by the manufacturer. It shall be the vendor's responsibility to insure that all components operate according to manufacturer's recommendations in regard to operation speed, imposed load, etc., and to deliver a functionally complete unit, complying with good engineering and accepted commercial practice and in accordance with the intent and details of the specifications.

ERRORS, OMISSIONS, DISCREPANCIES: Any error, omissions or discrepancies in the specification discovered by a prospective contractor and/or service provider shall be brought to the attention of Dan Wooden Field Operations supervisor (734) 794-6350 ext 43324 as soon after discovery as possible. Further, the contractor and/or service provide shall not be allowed to take advantage of errors, omissions or discrepancies in the specifications.

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

**BID NO. ITB-4173
DUE: July 6, 2011**

PARTS AVAILABILITY: Parts are normally available within 24 hours after order.

___ We can meet delivery.

___ We cannot meet the 24 hour limit, but offer the following:

NOTE: The City of Ann Arbor reserves the right to reject low bids which do not offer satisfactory parts availability.

PARTS DISCOUNT: Vendor shall allow a ___% discount on minor parts which are not covered by warranty.

SERVICE AVAILABILITY: Vendor hereby certifies that service is available for the unit quoted above within 24 hours after a request is made:

_____ We can meet service schedule.

_____ We cannot meet the service schedule, but offer the following:

NOTE: The City of Ann Arbor reserves the right to reject low bids which offer unsatisfactory service availability or service location.

SERVICE LOCATION: The above services will be performed by:

Address: _____

Telephone Number: _____

Contact Person: _____

NOTE: The City of Ann Arbor reserves the right to reject low bids which offer

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

unsatisfactory service availability or service location.

NOTE: A separate service agreement will be executed between the parties if awarded to vendor in a form acceptable to the City Attorney. Attach copy of proposed agreement.

SERVICE HOURS: Service shall be provided by the successful bidder which will include parts and labor during the warranty and extended service periods.

The vendor is open for hours of business (service only) from _____ A.M. to _____ P.M., telephone number: _____ for service call.

GUARANTEE: All parts and workmanship shall be fully guaranteed against defects in performance or construction for one (1) year of actual use.

The television pipe inspection system is guaranteed for _____ months of actual use (attach copy of standard guarantee).

FAILURE TO FULFILL GUARANTEE: In the event of the failure of any equipment within the guarantee period to meet the requirements of the detailed specifications, or failure to perform satisfactorily in service, such failure shall be adequate cause and justification for rejection of any or all equipment furnished under these "detailed specifications."

INSPECTION: Any materials, workmanship, or equipment which may be discovered to be defective within the guarantee period shall be removed and made good by the contractor at thier expense regardless of any previous inspection or final acceptance.

If any campaign change made necessary by improper material, improper installation or material or faulty designs, the campaign change shall be made and the cost shall be borne by the manufacturer of the truck chassis and/or the equipment manufacturer.

PLEASE CHECK: We have read the attached specifications thoroughly?

Yes No

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

Are all exceptions to the attached specifications properly outlined?

Yes No

INVOICE TERMS: Discount of ___% or \$_____ will be allowed for payment of invoice thirty (30) days from day of delivery and acceptance.

OTHER TERMS: Less than 30 days, E.O.M., Proximo, etc., will not be considered in determining award of contract.

The City of Ann Arbor reserves the right to accept any bid, to reject any bid or all bids, to waive irregularities and/or informalities in any bid, and to make the award in any manner deemed in the best interest of the City.

The undersigned agrees that if the bid is accepted by the City of Ann Arbor a binding contract will be in effect for the delivery of the goods in accordance with the bid.

All envelopes must be marked "Television pipe inspection system". We cannot be responsible for any bid not marked as stated above.

**CITY OF ANN ARBOR
INVITATION TO BID
TELEVISION PIPE INSPECTION SYSTEM
WITH LATERAL EVALUATION TELEVISION SYSTEM**

BID NO. ITB-4173

DUE: July 6, 2011

CITY OF ANN ARBOR
FINANCIAL SERVICES AREA- PURCHASING DIVISION
301 E. HURON STREET
P.O. BOX 8647
ANN ARBOR, MI 48107-8647

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Company's Representatives Signature

Printed

Date

Title

Phone Number

Fax Number

E-Mail

