

**IT IS THE VENDOR'S RESPONSIBILITY TO CHECK
FOR ADDENDUMS PRIOR TO SUBMITTING PROPOSALS**

**NOTICE TO BIDDERS
SPECIFICATION NO. 07-209**

The City of Lincoln, Nebraska intends to purchase and invites you to submit a sealed bid for:

**PIPELINE TELEVISION INSPECTION EQUIPMENT and RIGGING
AND
TRADE-IN/SALE OF CURRENT INSPECTION VEHICLE AND
EQUIPMENT**

Sealed bids will be received by the City of Lincoln, Nebraska on or before **12:00 noon Friday, July 6, 2007** in the office of the Purchasing Agent, Suite 200, K Street Complex, Southwest Wing, 440 South 8th Street, Lincoln, Nebraska 68508. Bids will be publicly opened and read at the K Street Complex.

Bids may be downloaded from the City's website at www.lincoln.ne.gov Keyword: Bid. Prospective submitters must monitor the bid listing for any addendums.

Bidders should take caution if U.S. mail or mail delivery services are used for the submission of bids. Mailing should be made in sufficient time for bids to arrive in the Purchasing Division, prior to the time and date specified above. Late bids will not be considered. **Fax or e-mail bids are not acceptable. Bid response must be in a sealed envelope.**

PROPOSAL FORM SPECIFICATION NO. 07-209

BID OPENING TIME: 12:00 NOON
DATE: Friday, July 6, 2007

The undersigned bidder, having full knowledge of the requirements of the City of Lincoln for the below listed items and the contract documents (which include Notice to Bidders, Instructions to Bidders, this Proposal, Specifications, Contract, and any and all addenda) and all other conditions of the Proposal, agrees to sell to the City the below listed items for the performance of this Specification, complete in every respect, in strict accordance with the contract documents at and for unit prices listed below.

THE REQUIREMENTS FOR PIPELINE TELEVISION INSPECTION SYSTEM

BIDDING SCHEDULE

<u>ITEM</u>	<u>ITEM DESCRIPTION</u>	<u>QTY</u>	<u>EACH</u>	<u>TOTAL</u>
1.	Pipeline Television Inspection Equipment All equipment, rigging, labor, delivery as per specifications	1	\$ _____	\$ _____
2.	Trade-In Allowance OR <u>Offer To Purchase</u> 1996 Chevy Van and all accessories	1	\$ _____	\$ _____
3.	OPTIONAL EQUIPMENT Reel Payout Assistance	1	\$ _____	\$ _____
4.	OPTIONAL EQUIPMENT Pan and Tilt Mini Camera	1	\$ _____	\$ _____
5.	OPTIONAL EQUIPMENT Wheel Drive Mini Transporter	1	\$ _____	\$ _____
6.	OPTIONAL EQUIPMENT Transmission Cable and Reel System	1	\$ _____	\$ _____
7.	OPTIONAL EQUIPMENT On-Board AC Power System 6kw	1	\$ _____	\$ _____
8.	OPTIONAL EQUIPMENT Control Room Substitute Layout	1	\$ _____	\$ _____
9.	OPTIONAL EQUIPMENT Equipment Room Substitute Layout	1	\$ _____	\$ _____
TOTAL				\$ _____

Company Name _____

BID SECURITY REQUIRED: Yes X No _____
Amount: 5% Bid Bond

Performance Bond - 100% Yes X Will be requested upon award of contract

AFFIRMATIVE ACTION PROGRAM: Successful bidder will be required to comply with the provisions of the City's Affirmative Action Policy (Contract Compliance, Sec. 1.16). The Equal Opportunity Officer will determine compliance or non-compliance with the City's policy upon a complete and substantial review of successful bidder's equal opportunity policies, procedures and practices.

The undersigned signatory for the bidder represents and warrants that he has full and complete authority to submit this proposal to the City, and to enter into a contract if this proposal is accepted.

**RETURN 2 COMPLETE COPIES OF BID AND SUPPORTING MATERIAL.
MARK OUTSIDE OF BID ENVELOPE:
SEALED BID FOR SPEC. 07-209**

COMPANY NAME

BY (Signature)

STREET ADDRESS or P.O. BOX

(Print Name)

CITY, STATE ZIP CODE

(Title)

TELEPHONE No. FAX No.

(Date)

E-MAIL ADDRESS

**ESTIMATED DELIVERY DAYS FROM TIME
VEHICLE IS DROP SHIPPED**

Bids may be inspected in the Purchasing Division during normal business hours after tabulation and review by a Purchasing Agent. Bid tabulations can be viewed on our website at: lincoln.ne.gov Keyword: **Bid** The Intent to Award will be listed on the website when a recommendation is received from the Department.

Technical Specifications for Pipeline Television Inspection System

1. **INTENT**

- 1.1 It is the intent of this specification to provide for the purchase of one (1) complete color television vehicle inspection system.
 - 1.1.1 The system shall be capable of inspecting 8" to 30" pipes and sewer lines.
 - 1.1.2 The system will be used for the inspection of underground infrastructure assets from a single access point.
- 1.2 Equipment must be able to operate the City's existing Aries equipment.
 - 1.2.1 This includes model EE1200 straight view cameras, PE1111 bulb pan and tilt cameras, PE2000 LED pan and tilt zoom cameras, and TR1000 and TR2000 tread drive tractors.
- 1.3 **This bid provides the specifications for all equipment except the vehicle itself.**
 - 1.3.1 **The chassis and box, Ford E-450 16' maximum hi-cube van will be purchased from a Nebraska dealer on a separate bid (07-208) and then drop shipped to the rigging companies facilities.**
- 1.4 **Bidder shall be responsible for all alterations to the vehicle being drop shipped by the Nebraska dealer.**
 - 1.4.1 The vendor will not alter the vehicle in any way as to compromise the original warranty of the vehicle from the manufacturer or the safety of the vehicle.
 - 1.4.2 Vendor will inspect vehicle at time of delivery and note any and all scratches, dents, nicks or other damage to vehicle.
 - 1.4.2.1 In cases where damage is noted by vendor, vendor shall contact Bob Walla at (402) 441-8309 prior to performing any alterations to vehicle.

2. **EQUIVALENT PRODUCT**

- 2.1 The following specification is based upon a television inspection system as manufactured by ARIES Industries, Inc.
- 2.2 Bids will be accepted for consideration on any make or model that is equal or superior to the television inspection system specified.
 - 2.2.1 Decisions of equivalency will be at the sole interpretation of the City of Lincoln.
 - 2.2.2 A blanket statement that equipment proposed will meet all requirements will not be sufficient to establish equivalence.
 - 2.2.3 Original manufacturer's brochures of the proposed unit are to be submitted with the proposal.
- 2.3 It shall be the bidder's responsibility to carefully examine each item of the specification.
 - 2.3.1 Failure to offer a completed bid or failure to respond to each section of the technical specification (YES / NO) may cause the proposal to be rejected without further review as "non-responsive."
 - 2.3.2 All exceptions and/or deviations shall be fully described in the appropriate section.
 - 2.3.3 Deceit in responding to the specification will be cause for automatic rejection.
- 2.4 The bidder must include a separate sheet where any and all deviations to the specifications are listed.
 - 2.4.1 Each deviation must reference the listed specification, by number if necessary, and explain in full detail how the proposed system is different.

3. **SUPPLEMENTAL INSTRUCTIONS TO BIDDERS**

- 3.1 Bid prices shall include entire cost of the labor, equipment and delivery to the Lincoln Wastewater Plant.
- 3.2 Bidder shall submit two (2) complete sets of bid documents and all supporting material, unless otherwise stipulated.

- 3.3 All inquiries regarding these specifications shall be directed via e-mail or faxed written request to Bob Walla, Assistant Purchasing Agent (rwalla@lincoln.ne.gov) Or Fax: (402)441-6513.
 - 3.3.1 These inquiries and/or responses shall be distributed to prospective bidders as an addenda.
 - 3.3.2 The City of Lincoln shall only reply to written inquiries received within five (5) calendar days of bid opening.
- 3.4 Bid and prices must be valid for a minimum of 120 days after the bid submission date.
- 3.5 A vehicle layout plan is attached to this bid for vendor reference. (Attachment A)

4. EXPERIENCE AND LONGEVITY

- 4.1 All modifications made to the standard production unit described in the manufacturer’s brochures must be certified to have been in prior successful use through the submission of a minimum of three references to be included in the proposal.
 - 4.1.1 Failure to submit references for non-standard units will deem the proposal “non-responsive” and be rejected without further review.
- 4.2 The equipment to be furnished shall be the product of a qualified firm or sub-contracted firm that is regularly engaged in the manufacture and supply of this equipment.
 - 4.2.1 The successful bidder must supply a list of (6) users of the equipment specified.
 - 4.2.2 Of these references, 50% shall be private contractors and 50% shall be municipal customers.

Meets Specs.
YES NO

5. ON-BOARD AC POWER SYSTEM, 7KW

- | | | | |
|-----|-----|-------|---|
| ___ | ___ | 5.1 | The system shall include an on-board electrical power source rated for 7kW of alternating current output. |
| ___ | ___ | 5.1.1 | The system shall be a commercial mobile generator set, duty-rated for operating at a full 8-hour day minimum. |
| ___ | ___ | 5.1.2 | Systems that include an “RV” style power source at a lighter duty-rating, shall be deemed unacceptable due to the higher life-cycle cost. |
| ___ | ___ | 5.2 | All electrical fixtures shall be appropriate for the complete electrical requirements of the system and are installed to NEC codes and local requirements. |
| ___ | ___ | 5.3 | All wiring shall be run in protective conduits. |
| ___ | ___ | 5.4 | The electrical system shall include an AC power distribution panel, with a minimum of (6) circuit breakers of appropriate size. |
| ___ | ___ | 5.5 | A disconnection feature shall be provided for the on-board power supply. |
| ___ | ___ | 5.5.1 | This will allow for the system to be connected to a commercial 120V AC house power supply through an exterior connection in the vehicle. |
| ___ | ___ | 5.5.2 | The unit shall be an automatic switchover box with time-delay protection. |
| ___ | ___ | 5.5.3 | There shall be a weatherproof housing in the driver’s side of the vehicle body at an appropriate power rating for the system. |
| ___ | ___ | 5.5.4 | There shall be a house power cord with weatherproof plug and socket for attaching to house power. |
| ___ | ___ | 5.6 | The electrical system shall include a 12V system. |
| ___ | ___ | 5.6.1 | This shall include a 600CCA 12V automotive battery in a protective case as well as a minimum 5A battery-charging unit. |
| ___ | ___ | 5.6.2 | The 12V system shall be for starting the generator as well as powering all 12V aftermarket equipment including emergency lighting and pumps to prevent any additional load on the vehicle’s 12V system. |
| ___ | ___ | 5.6.3 | Any 12V installed equipment that ties into the vehicle’s 12V system shall be deemed unacceptable. |
| ___ | ___ | 5.7 | The overall generator set shall include the following features: |
| ___ | ___ | 5.7.1 | Commercial mobile duty cycle |
| ___ | ___ | 5.7.2 | Remote start and stop capability |
| ___ | ___ | 5.7.3 | Sound attenuated housing with a rating of 69dB at 10’ under full load |
| ___ | ___ | 5.7.4 | Local and remote control panels |
| ___ | ___ | 5.7.5 | Fueled from vehicle’s fuel tank, with safety preventing tank running empty |

Meets Specs.
YES NO

- 5.8 The engine powering the system shall have the following features:
 - 5.8.1 Gas powered commercial generator
 - 5.8.2 Centrifugal blower, 500cfm, for alternator and engine
 - 5.8.3 Replaceable air cleaner
 - 5.8.4 Electric fuel pump
 - 5.8.5 Replaceable oil filter and fuel filters
 - 5.8.6 USDA-approved spark arrest muffler
 - 5.8.7 Automatic shutdown for low oil pressure and high temperature

- 5.9 The alternator producing the electrical power shall have the following features:
 - 5.9.1 Rated AC output of 120V ± 2.0%, 60Hz ± 1.7%
 - 5.9.2 Double-sealed long-life ball bearings
 - 5.9.3 Electrographic long-life brushes
 - 5.9.4 High quality pure sine wave output

- 5.10 The generator mounting system shall include the following:
 - 5.10.1 Base pan for drip control
 - 5.10.2 Generator enclosure including the following:
 - 5.10.2.1 Located within or under the vehicle body
 - 5.10.2.2 Lined with fire retardant noise reduction material
 - 5.10.2.3 Minimum of 1/2" Luan plywood or comparable wood product with glued and screwed construction
 - 5.10.2.4 Lockable outside access door with ventilation grating and gas-assist cylinders
 - 5.10.3 Mounting bridge with welded steel framing
 - 5.10.4 Electrical, fuel, and exhaust connections
 - 5.10.5 The generator unit specified includes all maintenance points accessible from the outside of the vehicle.
 - 5.10.5.1 Slide out mountings are deemed unacceptable.

- 5.11 The system shall also include a remote control panel including voltmeter, frequency meter, hour meter, and start/stop switch.
 - 5.11.1 The panel shall be mounted in the control room within clear view of the operator.

6. CONTROL ROOM

- 6.1 The control room shall be located in the forward section of the hi-cube body.
 - 6.1.1 It shall be accessible through a sliding door from the driver's compartment and a swing door from the equipment room.
- 6.2 The walls shall be insulated with 1/2" foam and finished with gray non-porous laminate over Luan plywood or comparable wood product.
- 6.3 The ceiling shall be insulated with 1/2" foam and finished with composite board including a non-porous embossed structoglass surface or comparable surface.
- 6.4 The room shall include a roof-mounted air conditioning unit with a minimum rating of 13000btu of cooling, combined with a 5600btu rated heat strip.
- 6.5 The room shall include a 1500W heater with protective metal guard, mounted on a wall under the desktop.
- 6.6 The floor shall be constructed of 1/2" minimum AC-rated plywood with water relief channels.
 - 6.6.1 The plywood shall then be covered with seamless industrial grade non-skid flooring.

Meets Specs.
YES NO

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|--------------------------|--------------------------|--|--------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.7 | A bulkhead wall shall separate the control room from the equipment room and include the following: |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.7.1 | Minimum 2x4 framing with 1/2" 7-ply Luan plywood, or comparable wood product, laminated with non-porous laminate matching corresponding room wall surfaces. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.7.2 | Swinging door of hollow core construction with minimum 10"x23" tinted window and locking handle. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.7.3 | Bulkhead wall is to placed so as to not interfere with roll up door operation. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.8 | The room shall be lit by cold weather fluorescent lighting, with switch next to the bulkhead door. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.9 | The room shall include a padded bench seat including: |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.9.1 | Seating capacity for (2) people. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.9.2 | Construction of 3/4" 7-ply Luan plywood or comparable wood product finished with oak trim. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.9.3 | Removable padded cushion constructed of foam and black vinyl, allowing storage within the seat. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.9.4 | An overhead shelf constructed of 3/4" 7-ply Luan plywood or comparable wood product with adequate, finished in matching wall laminate. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.10 | The room shall include a floor-to-ceiling closet including: |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.10.1 | Minimum 3/4" 7-ply Luan plywood or comparable wood product with exterior finish matching wall laminate |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.10.2 | Minimum of (5) removable or adjustable height shelves, constructed from 3/4" 7-ply Luan plywood, including 1/2"x2" oak trim at the front of each shelf. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.10.3 | Swing-opening doors with hollow core construction, full-length stainless steel hinge, and latching hasps to prevent opening in transit. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.11 | The room shall include a standard 19" EIA electronics rack for the secure mounting of the system's electronic components. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.11.1 | The rack shall be mounted above the desktop, and include sufficient free space for future electronic upgrades to the system. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.11.2 | The rack shall include a slide-out tray for mounting a laptop computer. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.12 | A countertop shall be included with the following features: |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.12.1 | Minimum 3/4" 7-ply Luan plywood construction with non-porous durable laminated finish |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.12.2 | Adequate space for specified system controls, possibly including: camera controller, transporter controller, reel controller, lateral inspection controller, cutter controller, steerable transporter controller, keyboard, and mouse. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.13 | There shall be a minimum of (2) quad outlet boxes supplied in the room. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 6.14 | A securing cord shall be supplied for in-transit storage of 2 adjustable height chairs w/casters. |

7. EQUIPMENT ROOM

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|--------------------------|--------------------------|--|-------|---|
| <input type="checkbox"/> | <input type="checkbox"/> | | 7.1 | The equipment room shall be located in the rearward section of the hi-cube body accessible through the rear body door and a swing door from the control room. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 7.2 | The walls shall be insulated with 1/2" foam and finished with aluminum non-porous laminate over Luan plywood or other suitable smooth covering. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 7.3 | The ceiling shall be insulated with 1/2" foam and finished with composite board including a non-porous embossed structoglass surface or equivalent covering. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 7.4 | The floor shall be covered with aluminum tread plate flooring, with caulked protection at wall joints. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 7.5 | The room shall be lit by a minimum of (2) cold weather fluorescent light fixtures, with switches placed near entry points. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 7.6 | The back of the electronics rack equipment shall be accessible from the equipment room through a hinged door. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 7.7 | There shall be a fire extinguisher securely mounted to a wall of the room in clear view of the operator. |
| <input type="checkbox"/> | <input type="checkbox"/> | | 7.7.1 | The fire extinguisher shall be a dry chemical type, NFPA-Classified 3A-40BC. |

Meets Specs.
YES NO

- ___ ___ 7.8 A workbench area shall be included with the following features:
 - ___ ___ 7.8.1 ABS worktop with vise.
 - ___ ___ 7.8.2 Vise with 5" jaws.
 - ___ ___ 7.8.3 Aluminum trim protection at all corners.
 - ___ ___ 7.8.4 Overhead storage cabinet with sliding doors.
- ___ ___ 7.9 A lockable tool chest shall be included, Craftsman 65529-6 (no exceptions). A shelf shall be installed above the toolbox, wall mounted, as large as reasonably possible.
- ___ ___ 7.10 There shall be a minimum of (2) quad outlet boxes supplied in the room.
- ___ ___ 7.11 The TV cable reel system shall be mounted at the rear of the room on the driver's side.
- ___ ___ 7.12 A set of vertical storage brackets and hooks shall be included on the passenger side of the vehicle at the rear of the room.
- ___ ___ 7.13 Down hole pole storage shall be included in an underbody box accessible through the rear bumper.
- ___ ___ 7.14 The room shall include a 3-speed reversible roof vent, Fan-Tastic model 4000R or equal.

8. EQUIPMENT HOIST

- ___ ___ 8.1 An equipment hoist shall be included to aid in down hole equipment launching and retrieval.
- ___ ___ 8.2 The hoist shall conform to the following specifications:
 - ___ ___ 8.2.1 Lifting capacity of 500 pounds minimum.
 - ___ ___ 8.2.2 The system must be designed and manufactured using all applicable ANSI standards for mobile cranes.
 - ___ ___ 8.2.3 Overall mast height shall not exceed 71.5".
 - ___ ___ 8.2.4 The boom shall have adjustable lengths of 52", 62", and 72".
 - ___ ___ 8.2.5 The boom shall use environmentally sealed needle bearings and thrust bearings.
 - ___ ___ 8.2.6 The boom shall be formed from 3/16" ASTM A572 Grade50 high tensile steel.
 - ___ ___ 8.2.7 The mounting location shall allow for equipment to be placed inside the vehicle at the appropriate storage location.
 - ___ ___ 8.2.8 Boom rotation must be 180° minimum.
 - ___ ___ 8.2.9 The system shall include a 10' control pendant.
 - ___ ___ 8.2.10 The winch shall be powered by the vehicle's 12VDC system, with circuit breaker protection.
 - ___ ___ 8.2.11 The hoist shall include a 60' length of 3/16" diameter galvanized aircraft quality steel cable, with a standard lifting hook.

9. WASH DOWN SYSTEM

- ___ ___ 9.1 A pressurized water system shall be supplied in order to rinse down hole equipment after an inspection.
- ___ ___ 9.2 The wash down system shall conform to the following specifications:
 - ___ ___ 9.2.1 The pump shall operate from 12VDC with circuit breaker protection.
 - ___ ___ 9.2.2 The pump shall supply a minimum of 3.3gpm at 45psi.
 - ___ ___ 9.2.3 The system shall include a reservoir with the following features:
 - ___ ___ 9.2.3.1 30 gallon capacity
 - ___ ___ 9.2.3.2 Fill port
 - ___ ___ 9.2.3.3 Drain port
 - ___ ___ 9.2.3.4 Mounted in equipment room, City reserves the option to request underbody location
 - ___ ___ 9.2.4 The system shall include a spray nozzle.
 - ___ ___ 9.2.5 The system shall include a 25' length of 90psi-rated hose on a retractable reel.
- ___ ___ 9.3 The system shall also include a wash basin.
 - ___ ___ 9.3.1 The wash basin shall be located near the workbench and include a drain system.
 - ___ ___ 9.3.2 The drain system shall include an 8 gallon gray water tank mounted under the vehicle with an RV-style hookup.

Meets Specs.
YES NO

10. POWER CONTROL UNIT (PCU)

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|-----|-----|-----------|--|
| ___ | ___ | 10.1 | A power control unit (PCU) shall be provided to control and distribute power to the TV system equipment specified. |
| ___ | ___ | 10.2 | The PCU shall include the following features at a minimum: |
| ___ | ___ | 10.2.1 | Housing for mounting in a standard 19" EIA electronics rack. |
| ___ | ___ | 10.2.2 | Approval through test spec UL1012 for power units. |
| ___ | ___ | 10.2.3 | All electrical connections to be plug-type, no "terminal block" wiring is allowed. |
| ___ | ___ | 10.2.4 | All electrical connection plugs to be keyed and vibration proof |
| ___ | ___ | 10.2.5 | Isolation transformer for clean downhole power signal source |
| ___ | ___ | 10.2.6 | Front face of unit shall include the following controls: |
| ___ | ___ | 10.2.6.1 | Camera power switch |
| ___ | ___ | 10.2.6.2 | Camera power breaker reset button |
| ___ | ___ | 10.2.6.3 | Camera voltage adjustment dial, 0 to 150V DC |
| ___ | ___ | 10.2.6.4 | Camera current adjustment dial |
| ___ | ___ | 10.2.6.5 | Camera remote focus and iris controls |
| ___ | ___ | 10.2.6.6 | Pan and tilt controller connection |
| ___ | ___ | 10.2.6.7 | Auxiliary lighthead switch |
| ___ | ___ | 10.2.6.8 | Lighthead power switch |
| ___ | ___ | 10.2.6.9 | Lighthead power breaker reset button |
| ___ | ___ | 10.2.6.10 | Lighthead lamp power selector |
| ___ | ___ | 10.2.6.11 | Lighthead intensity dial |
| ___ | ___ | 10.2.6.12 | Lighthead overcurrent warning light |
| ___ | ___ | 10.2.6.13 | Auxiliary lighthead controller connector |
| ___ | ___ | 10.2.6.14 | Auxiliary tractor controller connector |
| ___ | ___ | 10.2.7 | Diagnostic meters on front face of unit shall include: |
| ___ | ___ | 10.2.7.1 | Camera module voltage |
| ___ | ___ | 10.2.7.2 | Camera module current draw |
| ___ | ___ | 10.2.7.3 | Lighthead voltage |
| ___ | ___ | 10.2.7.4 | Lighthead current draw |

11. 15" LCD MONITOR(S)

- | | | | |
|-----|-----|---------|--|
| ___ | ___ | 11.1 | A 15" LCD monitor shall be supplied in the control room for viewing the inspection. |
| ___ | ___ | 11.2 | A 15" LCD monitor shall be supplied in the equipment room, facing rearward, for viewing the inspection at the rear of the vehicle. |
| ___ | ___ | 11.3 | The monitor(s) shall meet these minimum specifications: |
| ___ | ___ | 11.3.1 | Size = 15" diagonal |
| ___ | ___ | 11.3.2 | Dimensions = 15.0"h x 18.4"w x 7.5"d, weight = 11.7lbs. |
| ___ | ___ | 11.3.3 | Resolution = 1024x768 |
| ___ | ___ | 11.3.4 | Brightness = 450 cd/m ² |
| ___ | ___ | 11.3.5 | Viewing angle = 160° horizontal, 130° vertical |
| ___ | ___ | 11.3.6 | Contrast ratio = 400:1 |
| ___ | ___ | 11.3.7 | Power signal = 100 to 240V AC at 50 to 60Hz |
| ___ | ___ | 11.3.8 | Video input from PC or component sources |
| ___ | ___ | 11.3.9 | 6W total audio stereo output from internal speakers |
| ___ | ___ | 11.3.10 | Adjustments for H-position, V-position, contrast, tint, brightness, and color |

12. DVD RECORDER

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|-----|-----|--------|---|
| ___ | ___ | 12.1 | A DVD recorder system shall be included for recording of inspection video. |
| ___ | ___ | 12.2 | The video recorder shall include the following features at a minimum: |
| ___ | ___ | 12.2.1 | AC power input of 120V. |
| ___ | ___ | 12.2.2 | Mounted in standard 19" EIA electronics rack, DVD must be removable without removing recorder from panel. |
| ___ | ___ | 12.2.3 | Recorder bypass switch. |

Meets Specs.
YES NO

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|-----|-----|--------|--|
| ___ | ___ | 12.2.4 | Commercial or professional grade. |
| ___ | ___ | 12.2.5 | Remote control with record, fast forward, pause, slow, stop, and rewind functions. |
| ___ | ___ | 12.2.6 | Minimum of (4) recording modes, for up to 10 hours of video inspection storage. |
| ___ | ___ | 12.3 | A microphone with flexible neck and remote on/off switch shall be included and mounted near the operator. |
| ___ | ___ | 12.3.1 | This shall allow audio to be recorded with the inspection. |
| ___ | ___ | 12.4. | DVD devices that are consumer grade will be deemed unacceptable due to their limited duty cycle and lower overall picture quality. |

13. PAN AND TILT CAMERA WITH ZOOM AND LED LIGHTING

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|-----|-----|---------|---|
| ___ | ___ | 13.1 | A color pan and tilt view camera shall be supplied. |
| ___ | ___ | 13.1.1 | The camera shall include a zoom function and use directional long-life-rated LED light sources to provide adequate pipe wall illumination in sizes up to 72". |
| ___ | ___ | 13.2 | The camera shall have the following operational features: |
| ___ | ___ | 13.2.1 | Usable in 6" relined pipes and larger |
| ___ | ___ | 13.2.2 | Transmits a color video signal through at least 2000' of multi-conductor cable |
| ___ | ___ | 13.2.3 | Designed with solid-state circuitry to withstand shock and vibration |
| ___ | ___ | 13.2.4 | Operates in climatic conditions from at least 0°C to 50°C with 100% RH |
| ___ | ___ | 13.3 | The camera module shall have the following electronic features: |
| ___ | ___ | 13.3.1 | Color Super HAD CCD, ¼" |
| ___ | ___ | 13.3.2 | Collection matrix of 768h x 494v pixels, total of 379,392 |
| ___ | ___ | 13.3.3 | 470h x 400v TV lines of resolution |
| ___ | ___ | 13.3.4 | NTSC color image scanning - 525 lines a 60Hz, 2:1 interlaced |
| ___ | ___ | 13.3.5 | Minimum illumination sensitivity of 0.1lux |
| ___ | ___ | 13.3.6 | Signal-to-noise ratio of at least 46dB |
| ___ | ___ | 13.3.7 | Precise image geometry with no image burn-in |
| ___ | ___ | 13.3.8 | Automatic light-compensating iris, with manual override |
| ___ | ___ | 13.3.9 | Regulated DC power input range of 18-60V |
| ___ | ___ | 13.3.10 | No visible streaking when viewing a standard EIA test chart |
| ___ | ___ | 13.3.11 | Software resident on upgradeable EEPROM |
| ___ | ___ | 13.3.12 | 4.2 ~ 42mm, f1.8 zoom lens, 10x optical, 4x digital, 40:1 total zoom |
| ___ | ___ | 13.3.13 | Proportionally slowed camera movements when zooming |
| ___ | ___ | 13.3.14 | ½" to ∞ automatic focus, with manual override |
| ___ | ___ | 13.4 | The camera chassis shall have the following electromechanical features: |
| ___ | ___ | 13.4.1 | Overall length of 13.75" |
| ___ | ___ | 13.4.2 | Body diameter of 2.375", fitting a standard 3" camera yoke |
| ___ | ___ | 13.4.3 | Head diameter of 3.75" |
| ___ | ___ | 13.4.4 | Stainless steel and anodized aluminum construction |
| ___ | ___ | 13.4.5 | 360° continuous camera head axial rotation |
| ___ | ___ | 13.4.6 | Pan and tilt angle to view backward a minimum of 45° |
| ___ | ___ | 13.4.7 | Military-rated gold slip ring contacts |
| ___ | ___ | 13.4.8 | Scratchproof sapphire camera window |
| ___ | ___ | 13.4.9 | Sealed keyed military connector for cable hook up |
| ___ | ___ | 13.4.10 | DC motors with planetary gears, ball bearings, power all camera motions, with clutches to protect from overloads and impacts |
| ___ | ___ | 13.4.11 | Forks extending beyond the camera head to protect from frontal impacts |
| ___ | ___ | 13.4.12 | Forks inset into body pockets to withstand severe shocks |
| ___ | ___ | 13.4.13 | Dirt and pressure seals at all moving joints |
| ___ | ___ | 13.4.14 | Automatic home feature to upright forward viewing, with forks at side of camera head |

Meets Specs.
YES NO

- 13.5 The camera lighting system shall have the following features:
 - 13.5.1 A light ring internal to the directional camera head
 - 13.5.2 LED light sources, rated for 10,000 hours of operation
 - 13.5.3 Minimum luminance of 500cd
 - 13.5.4 Light ring cavity separated from camera module housing using leak-proof military-rated glass hermetic seal
 - 13.5.5 Field-replaceable polycarbonate LED window
- 13.6 The camera shall be equipped with the following diagnostic and safety features:
 - 13.6.1 Internally pressurized with dry nitrogen to a minimum of 15psi
 - 13.6.2 An EIA color bar test chart display
 - 13.6.3 A set of diagnostic telemetry, including:
 - 13.6.3.1 Camera module current draw
 - 13.6.3.2 Lighthouse voltage
 - 13.6.3.3 Internal camera head humidity
 - 13.6.3.4 Internal camera head pressure
 - 13.6.3.5 Operating hours
 - 13.6.3.6 Electronic serialization record
- 13.7 The camera controller shall have the following features:
 - 13.7.1 Joystick controller for camera head pan/tilt and rotational movements
 - 13.7.2 Switch for manual focus override (in/out)
 - 13.7.3 Switch for manual iris override (open/close)
 - 13.7.4 Switch for diagnostic telemetry display (on/off)
 - 13.7.5 Switch for camera home position
 - 13.7.6 Desktop model, with cable connection to rear of PCU
 - 13.7.7 The camera shall be shipped with a damage-resistant case.
 - 13.7.7.1 The case shall have foam lining and metal closing latches, allowing shipping on commercial carriers.

14. WHEEL DRIVE TRANSPORTER

- 14.1 A remotely controlled wheeled transporter shall be supplied.
 - 14.1.1 The transporter system shall be able to propel an inspection camera through 6" to 30" pipes to a distance of up to 1000' from point of entry.
- 14.2 The transporter shall have the following operational features:
 - 14.2.1 Usable in 8" relined pipes and larger
 - 14.2.2 Capable of speeds of up to 65 feet per minute
 - 14.2.3 Capable of free-wheeling, allowing retrieval by cable and reel combination
 - 14.2.4 Capable of transporting a standard pan and tilt or mini-mainline camera
- 14.3 The transporter shall have the following electronic features:
 - 14.3.1 Continuous duty rated 12VDC drive motor
 - 14.3.2 Transporter shall accept controls from system power control unit transmitted through a maximum of 1000' of cable
 - 14.3.3 Complete solid-state design
 - 14.3.4 Field-replaceable mil-spec electrical connector for cable
- 14.4 The transporter shall have the following mechanical features:
 - 14.4.1 Maximum overall length of 23"
 - 14.4.2 Standard 3" camera yoke for mounting pan and tilt cameras
 - 14.4.3 Replaceable O-ring seals at all field-serviceable joint locations
 - 14.4.4 A transmission that includes:
 - 14.4.4.1 Gears in oil bath for maximum cooling and lubrication
 - 14.4.4.2 Neutral position to freewheel during retrieval
 - 14.4.4.3 Heavy duty worm drive gear to absorb drive line shock
 - 14.4.5 A drive train that includes:
 - 14.4.5.1 (Qty.6) 4" wheels for use in 8" to 18" un-relined lines
 - 14.4.5.2 (Qty.6) 3" wheels for use in 8" relined pipe
 - 14.4.5.3 (Qty.6) 5" wheels for use in 12" pipes and larger
 - 14.4.6 A tow cable assembly that relieves strain at the cable connection

Meets Specs.
YES NO

- | | | | |
|-----|-----|---------|---|
| ___ | ___ | 14.4.7 | A loop cable that can be used for lifting the tractor without straining any drive components |
| ___ | ___ | 14.5 | A set of weighted riser blocks shall be included that automatically raise the camera to the center of a corresponding pipe size as well as add tractive effort to the transporter unit. |
| ___ | ___ | 14.6 | The transporter controller shall have the following features: |
| ___ | ___ | 14.6.1 | Power switch with lamp |
| ___ | ___ | 14.6.2 | Directional switch, 3-position toggle (F/N/R) |
| ___ | ___ | 14.6.3 | Speed control dial |
| ___ | ___ | 14.6.4 | Ammeter display for power draw to transporter |
| ___ | ___ | 14.6.5 | Overload breaker protection |
| ___ | ___ | 14.7 | A foot pedal style controller shall be supplied in the control room under the desktop. |
| ___ | ___ | 14.7.1 | This pedal shall only activate the transporter, with speed control remaining at the desktop controller. |
| ___ | ___ | 14.8 | A foot pedal style controller shall be supplied in the equipment room, stored next to the cable reel. |
| ___ | ___ | 14.8.1 | This pedal shall activate the transporter motor, to aid in spotting the transporter for pickup following an inspection. |
| ___ | ___ | 14.9 | A spare parts kit shall be included with the unit that includes all parts that are expected to be replaced in the field. |
| ___ | ___ | 14.9.1 | The kit shall also include any specialized tools that are regularly needed in the servicing of the transporter. |
| ___ | ___ | 14.10 | The transporter shall be shipped with a damage-resistant case. |
| ___ | ___ | 14.10.1 | The case shall include a foam cradle, with solid exterior construction. |

15. TRANSMISSION CABLE AND REEL SYSTEM

- | | | | |
|-----|-----|-----------|---|
| ___ | ___ | 15.1 | A reel with multi-conductor cable shall be supplied. |
| ___ | ___ | 15.1.1 | The cable shall be used for closed circuit video transmission as well as retrieval of the downhole equipment. |
| ___ | ___ | 15.1.2 | The reel shall be capable of providing adequate force to the cable for equipment retrieval. |
| ___ | ___ | 15.2 | The reel shall have the following features: |
| ___ | ___ | 15.2.1 | Stainless steel construction with powder coated finish |
| ___ | ___ | 15.2.2 | Minimum ½hp AC motor |
| ___ | ___ | 15.2.3 | Transmission with minimum of three gear ratios plus neutral |
| ___ | ___ | 15.2.4 | Linkage control on both reel and control room desktop |
| ___ | ___ | 15.2.5 | Mechanical drive linkage between motor and drum |
| ___ | ___ | 15.2.6 | All chains and linkages enclosed and safety labeled |
| ___ | ___ | 15.2.7 | Low friction greased bearings to minimize drag |
| ___ | ___ | 15.2.8 | Cable level wind that automatically lays cable evenly across drum |
| ___ | ___ | 15.2.9 | Drop down cable guide with directional roller and locking positions |
| ___ | ___ | 15.2.10 | Mechanical footage meter mounted on level wind |
| ___ | ___ | 15.2.11 | Footage encoder to send electronic footage data to display system, ±2% accuracy minimum |
| ___ | ___ | 15.2.12 | Sealed continuous gold contact slip ring assembly with the following features: |
| ___ | ___ | 15.2.12.1 | Voltage range from 1µV to 460V |
| ___ | ___ | 15.2.12.2 | Current range from 1nA to 25A |
| ___ | ___ | 15.2.12.3 | Pulse DC frequencies to 100MHz |
| ___ | ___ | 15.2.12.4 | Corrosion proof and maintenance free |
| ___ | ___ | 15.2.12.5 | 12 circuits minimum |
| ___ | ___ | 15.2.13 | Local control box, with direction, power, and speed controls |
| ___ | ___ | 15.2.14 | Safety switch, front control lockout |
| ___ | ___ | 15.2.15 | Remote desktop mounted controller, with direction, power, and speed controls |
| ___ | ___ | 15.2.16 | Switchover plug, 24-pin minimum, to bypass reel for diagnostic purposes |
| ___ | ___ | 15.2.17 | Drip pan mounted under reel assembly, draining through floor of vehicle |

Meets Specs.
YES NO

19. WARRANTY

- ___ ___ 19.1 The TV inspection system shall be warranted against manufacturing defects for a period of (12) months from the date of delivery at a minimum.
 ___ ___ 19.1.1 Any installed equipment warranties that extend beyond this period shall be passed on to the City of Lincoln by the TV system manufacturer.

20. DELIVERY

- ___ ___ 20.1 The system shall be delivered to the City of Lincoln in first-class operating condition. Acceptance of the system shall be subject to inspection and approval by City personnel.

21. LOAN EQUIPMENT PROGRAM

- 21.1 If the manufacturer's service center is unable to repair and have ready to return any component of the system within 48 hours of receipt from the purchaser, the service center shall have available loaner equipment for immediate shipment.

22. TRADE-IN/ FOR SALE

- 22.1 The City of Lincoln offers the City's 1996 Chevy gas chassis with 18' step van body.
 22.1.1 The vehicle has approximately 60,273 miles.
 22.1.2 The components included for trade value are:
 22.1.2.1 the outfitted vehicle,
 22.1.2.2 generator with remote control panel,
 22.1.2.3 (2) TV cable reels with Cues gold cable (1000' AVG.),
 22.1.2.4 tool chest,
 22.1.2.5 small air compressor,
 22.1.2.6 workbench with maple top,
 22.1.2.7 washdown system with retractable reel,
 22.1.2.8 Aries rack power supply,
 22.1.2.9 14" monitor, and
 22.1.2.10 VHS video recorder.
 22.1.2.11 Aries Pan and Tilt Color Camera
 22.1.2.12 Mainline eagle eye color cameras (2 each)
 22.1.2.13 Aries Track Transporters TR 2000 and miscellaneous parts
 22.1.2.14 Sets of skids 8", 10", 12", 15", 21", 24".
 22.1.2.15 Sets of skids 6"
 22.1.2.16 Sets of Top Runners (2 each)
 22.1.2.17 Transmissions for the 1200 reel. (3 each)
 22.1.2.18 Hi-performance light heads (5 each)
 22.1.2.19 6" light heads (2 each)
 22.1.2.20 1200 Reel Levelwinds with 3/4" pitch (2 each)
 22.1.2.21 1200 Reel Footage Head Assembly (3 each)
 22.1.2.22 Motors for the 1200 Reel Assembly (2 each)
 22.1.2.23 Transmission for the 1200 Reel Assembly
 22.1.2.24 Miscellaneous parts, handles, and sprockets for the 1200 Reel.
 22.2 The trade-in vehicle and equipment may be viewed in person by appointment only.
 22.2.1 Contact Jerry Morris at 402-441-7839.
 22.3 Please see attached photos 1 - 8 on the web page for vehicle and accessory condition.
 22.4 The City reserves the right to sell this vehicle to the highest bidder separate from the purchase of the new unit.
 22.4.1 If the winning bidder of the new unit bids the highest trade-in value on the used unit, total amount paid to vendor will be based on deduction of trade-in.
 22.5 All accessories listed in 22.1.2 are included with the truck and will not be sold separately.

OPTIONAL EQUIPMENT

Please include pricing for each option as noted on the proposal form.

Meets Specs.

YES NO

- | | | |
|-------|-------|--|
| _____ | _____ | <p>1. <u>REEL PAYOUT ASSISTANCE - Option #1, Add to Mainline Reel</u></p> |
| _____ | _____ | <p>1.1 A device shall be installed that will automatically assist the cable reel drum in paying out cable as the transporter drives through the pipeline. The device shall have sensors that automatically drive the reel when the cable reaches a designed tension limit.</p> |
| _____ | _____ | <p>2. <u>PAN AND TILT MINIATURE CAMERA - Option #2, Add vehicle-mounted miniature inspection system</u></p> |
| _____ | _____ | <p>2.1 A color pan and tilt view camera shall be supplied.</p> |
| _____ | _____ | <p>2.1.1 The camera shall use directional long-life-rated LED light sources to provide adequate pipe wall illumination in sizes up to 36".</p> |
| _____ | _____ | <p>2.2 The camera shall have the following operational features</p> |
| _____ | _____ | <p>2.2.1 Usable in 5" relined pipes and larger</p> |
| _____ | _____ | <p>2.2.2 Transmits a color video signal through at least 1000' of multi-conductor cable</p> |
| _____ | _____ | <p>2.2.3 Designed with solid-state circuitry to withstand shock and vibration</p> |
| _____ | _____ | <p>2.2.4 Operates in climatic conditions from at least 0°C to 50°C with 100% RH</p> |
| _____ | _____ | <p>2.3 The camera module shall have the following electronic features</p> |
| _____ | _____ | <p>2.3.1 Color Super HAD CCD, a"</p> |
| _____ | _____ | <p>2.3.2 Collection matrix of 768h x 494v pixels, total of 379,392</p> |
| _____ | _____ | <p>2.3.3 480h TV lines of resolution</p> |
| _____ | _____ | <p>2.3.4 NTSC color image scanning - 525 lines a 60Hz, 2:1 interlaced</p> |
| _____ | _____ | <p>2.3.5 Minimum illumination sensitivity of 0.14lux</p> |
| _____ | _____ | <p>2.3.6 Automatic light-compensating iris, with manual override</p> |
| _____ | _____ | <p>2.3.7 Regulated DC power input range of 18-36V</p> |
| _____ | _____ | <p>2.3.8 Software resident on upgradeable EEPROM</p> |
| _____ | _____ | <p>2.3.9 " to ∞ automatic focus, with manual override</p> |
| _____ | _____ | <p>2.4 The camera chassis shall have the following electromechanical features:</p> |
| _____ | _____ | <p>2.4.1 Overall length of 5.375"</p> |
| _____ | _____ | <p>2.4.2 Head diameter of 2.7"</p> |
| _____ | _____ | <p>2.4.3 Stainless steel and anodized aluminum construction</p> |
| _____ | _____ | <p>2.4.4 360° continuous camera head axial rotation</p> |
| _____ | _____ | <p>2.4.5 Pan and tilt angle to view backward a minimum of 45°</p> |
| _____ | _____ | <p>2.4.6 Military-rated gold slip ring contacts</p> |
| _____ | _____ | <p>2.4.7 Scratchproof sapphire camera window</p> |
| _____ | _____ | <p>2.4.8 Sealed keyed military connector with gold plated contacts</p> |
| _____ | _____ | <p>2.4.9 DC motors with planetary gears, ball bearings, power all camera motions, with clutches to protect from overloads and impacts</p> |
| _____ | _____ | <p>2.4.10 Dirt and pressure seals at all moving joints</p> |
| _____ | _____ | <p>2.4.11 Automatic home feature to upright forward viewing, with forks above and below camera head</p> |
| _____ | _____ | <p>2.4.12 Fast-check LED indicator for low camera head pressure</p> |
| _____ | _____ | <p>2.4.13 Forks at top and bottom of camera head at home position, allowing quicker viewing of side-entry laterals</p> |
| _____ | _____ | <p>2.5 The camera lighting system shall have the following features</p> |
| _____ | _____ | <p>2.5.1 A light ring internal to the directional camera head</p> |
| _____ | _____ | <p>2.5.2 LED light sources, rated for 10,000 hours of operation</p> |
| _____ | _____ | <p>2.5.3 Minimum luminance of 500cd</p> |
| _____ | _____ | <p>2.5.4 Light ring cavity separated from camera module housing using leak-proof military-rated glass hermetic seal</p> |
| _____ | _____ | <p>2.5.5 Field-replaceable polycarbonate LED window</p> |
| _____ | _____ | <p>2.5.6 Cameras that offer lighting through any style incandescent bulb with considerably shorter life ratings will be deemed unacceptable.</p> |
| _____ | _____ | <p>2.6 The camera shall be controlled by the same unit for the standard mainline camera. Systems that require a different controller for miniature and standard camera shall be deemed unacceptable.</p> |

Meets Specs.
YES NO

3. WHEEL DRIVE MINIATURE TRANSPORTER

- | | | | |
|-----|-----|---------|---|
| ___ | ___ | 3.1 | A remotely controlled wheeled transporter shall be supplied. |
| ___ | ___ | 3.1.1 | The transporter system shall be able to propel an inspection camera through 6" to 18" pipes to a distance of up to 1000' from point of entry. |
| ___ | ___ | 3.2 | The transporter shall have the following operational features: |
| ___ | ___ | 3.2.1 | Usable in 6" relined pipes and larger |
| ___ | ___ | 3.2.2 | Capable of lifting the camera head a minimum of 4" |
| ___ | ___ | 3.2.3 | Capable of free-wheeling, allowing retrieval by cable and reel combination |
| ___ | ___ | 3.2.4 | Capable of transporting a standard pan and tilt or mini-mainline camera |
| ___ | ___ | 3.3 | The transporter shall have the following electronic features: |
| ___ | ___ | 3.3.1 | Continuous duty rated brushless drive motors, (1) motor per side |
| ___ | ___ | 3.3.2 | Transporter shall accept controls from system power control unit transmitted through a maximum of 1000' of cable |
| ___ | ___ | 3.3.3 | Complete solid-state design |
| ___ | ___ | 3.3.4 | Articulated rear cable connector for added cable strain relief |
| ___ | ___ | 3.3.5 | Rearward viewing color camera with LED lighting, for viewing behind tractor during and inspection |
| ___ | ___ | 3.3.6 | Integral 512 Hz transmitting beacon |
| ___ | ___ | 3.4 | The transporter shall have the following mechanical features: |
| ___ | ___ | 3.4.1 | Maximum overall length of 16" including rear connector and miniature camera |
| ___ | ___ | 3.4.2 | Forward attachment for mounting miniature pan and tilt camera |
| ___ | ___ | 3.4.3 | Replaceable O-ring seals at all field-serviceable joint locations |
| ___ | ___ | 3.4.4 | Manually-operated camera lifting mechanism, 4" minimum rise |
| ___ | ___ | 3.4.5 | A transmission that includes: |
| ___ | ___ | 3.4.5.1 | Gears in oil bath for maximum cooling and lubrication |
| ___ | ___ | 3.4.5.2 | Neutral position to freewheel during retrieval |
| ___ | ___ | 3.4.5.3 | Heavy duty worm drive gear to absorb drive line shock |
| ___ | ___ | 3.4.6 | An enclosed drive train that includes: |
| ___ | ___ | 3.4.6.1 | (Qty.6) 4" wheels for use in 8" to 18" un-relined lines |
| ___ | ___ | 3.4.6.2 | (Qty.6) 3" wheels for use in 6" relined pipe |
| ___ | ___ | 3.4.6.3 | (Qty.6) 5" wheels for use in 12" pipes and larger |
| ___ | ___ | 3.4.7 | All wheels must be interchangeable with a single fastener |
| ___ | ___ | 3.5 | A spare parts kit shall be included with the unit that includes all parts that are expected to be replaced in the field. |
| ___ | ___ | 3.5.1 | The kit shall also include any specialized tools that are regularly needed in the servicing of the mini-transporter. |
| ___ | ___ | 3.6 | The camera and transporter shall be shipped with a damage-resistant case. |
| ___ | ___ | 3.6.1 | The case shall include a foam cradle, with solid exterior construction. |
| ___ | ___ | 3.7 | The transporter controller shall have the following features: |
| ___ | ___ | 3.7.1 | Power supply unit, mounted in standard 19" EIA rack, with the following features: |
| ___ | ___ | 3.7.1.1 | Power switch with lamp |
| ___ | ___ | 3.7.1.2 | Directional switch, 3-position toggle (F/N/R) |
| ___ | ___ | 3.7.1.3 | Speed control dial |
| ___ | ___ | 3.7.1.4 | Voltage and ammeter display for power draw to transporter |
| ___ | ___ | 3.7.1.5 | Overload breaker protection |
| ___ | ___ | 3.7.2 | Desktop joystick controller for directional control |

4. TRANSMISSION CABLE AND REEL SYSTEM

- | | | | |
|-----|-----|-------|---|
| ___ | ___ | 4.1 | A portable reel with multi-conductor cable shall be supplied. |
| ___ | ___ | 4.1.1 | The cable shall be used for closed circuit video transmission as well as retrieval of the downhole equipment. |
| ___ | ___ | 4.1.2 | The reel shall be capable of providing adequate force to the cable for equipment retrieval. |

Meets Specs.
YES NO

- 4.2 The reel shall have the following features:
 - 4.2.1 Aluminum construction with anodized finish
 - 4.2.2 Cable storage drum and frame handles
 - 4.2.3 Overall dimensions 15" x 22" x 15" maximum in any direction
 - 4.2.4 120V AC motor
 - 4.2.5 Clutch system with free wheeling capability and manual override
 - 4.2.6 Mechanical drive chain between clutch and drum
 - 4.2.7 All chains and linkages enclosed and safety labeled
 - 4.2.8 Low friction greased bearings to minimize drag
 - 4.2.9 Cable level wind that automatically lays cable evenly across drum with manual override
 - 4.2.10 Mechanical footage meter mounted on level wind
 - 4.2.11 Footage encoder to send electronic footage data to display system, ±2% accuracy minimum
 - 4.2.12 Sealed continuous gold contact slip ring assembly with the following features:
 - 4.2.12.1 Voltage range from 1µV to 460V
 - 4.2.12.2 Current range from 1nA to 25A
 - 4.2.12.3 Pulse DC frequencies to 100MHz
 - 4.2.12.4 Corrosion proof and maintenance free
 - 4.2.12.5 12 circuits minimum
 - 4.2.13 Control panel with speed and direction controls
 - 4.2.14 Mounting kit for securing reel in a vehicle application
 - 4.2.15 Snap-in cable guide with roller and locking positions
- 4.3 The cable shall have the following features:
 - 4.3.1 Continuous length of 1000' minimum
 - 4.3.2 Diameter of 0.28" minimum
 - 4.3.3 Rated pull strength of 500 pounds minimum
 - 4.3.4 Outer jacket of low-friction abrasion-resistant material
 - 4.3.5 Continuous length terminated at resin-free 12-pin connector
 - 4.3.6 Construction of (10) separate conductors of adequate gauge for delivering power and control signals to downhole equipment
 - 4.3.7 Termination to field-replaceable resin-free sealed tapered connector
- 4.4 The cable shall also include a repair kit for repairing the termination in the field.

5. ON-BOARD AC POWER SYSTEM, 6KW - Option #3 , Alternate Layout Configuration (Substitute for AC Power System)

- 5.1 The system shall include an on-board electrical power source rated for 6kW of alternating current output.
- 5.2 All electrical fixtures shall be appropriate for the complete electrical requirements of the system and are installed to NEC codes and local requirements.
- 5.3 All wiring shall be run in protective conduits.
- 5.4 The electrical system shall include an AC power distribution panel, with a minimum of (6) circuit breakers of appropriate size.
- 5.5 A disconnection feature shall be provided for the on-board power supply.
 - 5.5.1 This will allow for the system to be connected to a commercial 120V AC house power supply through an exterior connection in the vehicle.
 - 5.5.2 The unit shall be an automatic switchover box with time-delay protection.
 - 5.5.3 There shall be a weatherproof housing in the driver's side of the vehicle body at an appropriate power rating for the system.
 - 5.5.4 There shall also be a house power cord with weatherproof plug and socket for attaching to house power.
- 5.6 The electrical system shall include a 12V system.
 - 5.6.1 This shall include a 600CCA 12V automotive battery in a protective case as well as a minimum 10A battery-charging unit.
 - 5.6.2 The 12V system shall be for starting the generator as well as powering all 12V aftermarket equipment including emergency lighting and pumps.
 - 5.6.3 This shall prevent any additional load on the vehicle's 12V system.
 - 5.6.4 Any 12V installed equipment that ties into the vehicle's 12V system shall be deemed unacceptable.

Meets Specs.
YES NO

- 5.7 The overall generator set shall include the following features:
 - 5.7.1 Commercial mobile duty cycle
 - 5.7.2 Remote start and stop capability
 - 5.7.3 Local and remote control panels
 - 5.7.4 Fueled from vehicle's fuel tank, with safety preventing tank running empty
- 5.8 The engine powering the system shall have the following features:
 - 5.8.1 Gas powered commercial generator
 - 5.8.2 Radiator with enclosed cooling fan
 - 5.8.3 Replaceable air cleaner
 - 5.8.4 Electric fuel pump
 - 5.8.5 Replaceable oil filter and fuel filters
 - 5.8.6 Spark arrest muffler
 - 5.8.7 Automatic shutdown for low oil pressure and high temperature
- 5.9 The alternator producing the electrical power shall have the following features:
 - 5.9.1 Rated AC output of 120V, 60Hz
 - 5.9.2 Double-sealed long-life ball bearings
 - 5.9.3 Electrographic long-life brushes
 - 5.9.4 High quality pure sine wave output
- 5.10 The generator mounting system shall include the following:
 - 5.10.1 Generator enclosure including the following:
 - 5.10.1.1 Located underneath the vehicle body
 - 5.10.1.2 Louvered metal enclosure
 - 5.10.1.3 Lockable outside access door with ventilation grating
 - 5.10.2 Mounting bridge with the following features:
 - 5.10.2.1 Welded steel framing
 - 5.10.2.2 Sliding rails with ball bearing rollers
 - 5.10.2.3 Positive lock mounting bolts for each sliding rail
 - 5.10.3 Flexible electrical, fuel, and exhaust connections
- 5.11 The system shall also include a remote control panel including voltmeter, frequency meter, hour meter, and start/stop switch.
 - 5.11.1 The panel shall be mounted in the control room within clear view of the operator.

- 6. **CONTROL ROOM - Substitute for Control Room**
 - 6.1 All specifications listed under Section 10 will remain the same except for the following:
 - 6.1.1 Replace Section 10.7.3 with the following:
 - 6.1.1.1 A minimum 16"h x 30"w tinted Plexiglas window, allowing operator to view rear of vehicle.
 - 6.1.2 Replace Section 10.11 with the following:
 - 6.1.2.1 The room shall include a standard 19" EIA electronics rack for the secure mounting of the system's electronic components.
 - 6.1.2.1.1 The rack shall be mounted above the window of the bulkhead wall, and include sufficient free space for future electronic upgrades to the system.

- 7. **EQUIPMENT ROOM - Substitute for Equipment Rooms**
 - 7.1 All specifications listed under Section 11 will remain the same except for the following:
 - 7.1.1 Replace Section 11.8.4 with an:
 - 7.1.1.1 overhead in-closed storage with sliding doors.

INSTRUCTIONS TO BIDDERS

CITY OF LINCOLN, NEBRASKA

1. BIDDING PROCEDURE

- 1.1 Bidder shall submit one (1) complete set of the bid documents and all supporting material, unless otherwise stipulated. All appropriate blanks shall be completed. Any interlineation, alteration or erasure on the specification document shall be initialed by the signer of the bid. Bidder shall not change the proposal form nor make additional stipulations on the specification document. Any amplified or qualifying information shall be on the bidder's letterhead and firmly attached to the specification document.
- 1.2 Bid prices shall be submitted on the Proposal Form included in the bid document.
- 1.3 Bidders may submit a bid on an "all or none" or "lump sum" basis, but should also submit a quotation on an item-by-item basis. Bidding documents shall be clearly marked indicating the kind of proposal being submitted.
- 1.4 Any person signing a bid for a firm, corporation, or other organization must show evidence of his authority so to bind such firm, corporation, or organization.
- 1.5 Bids received after the time and date established for receiving bids will be rejected.
- 1.6 If bidding on a Construction Contract, the City of Lincoln's Standard Specifications for Municipal Construction 2006 shall apply.
 - 1.6.1 Bidders may obtain this document from the City's Design Engineering Division of Public Works & Utilities for a small fee.
 - 1.6.2 Said document can be reviewed at Design Engineering or the Purchasing Division.
 - 1.6.3 The Standard Conditions are available on the web site.
<http://www.lincoln.ne.gov/city/pworks/engine/dconst/standard/stndspec/index.htm>

2. BIDDER'S SECURITY

- 2.1 Bid security, as a guarantee of good faith, in the form of a certified check, cashier's check, or bidder's bond, may be required to be submitted with this bid document, as indicated on the Proposal Form.
- 2.2 If alternates are submitted, only one bid security will be required, provided the bid security is based on the amount of the highest gross bid.
- 2.3 Such bid security will be returned to the unsuccessful bidders when the award of bid is made.
- 2.4 Bid security will be returned to the successful bidder(s) as follows:
 - 2.4.1 For single order bids with specified quantities: upon the delivery of all equipment or merchandise, and upon final acceptance by the City.
 - 2.4.2 For all other contracts: upon approval by the City of the executed contract and bonds.
- 2.5 City shall have the right to retain the bid security of bidders to whom an award is being considered until either:
 - 2.5.1 A contract has been executed and bonds have been furnished.
 - 2.5.2 The specified time has elapsed so that the bids may be withdrawn.
 - 2.5.3 All bids have been rejected.
- 2.6 Bid security will be forfeited to the City as full liquidated damages, but not as a penalty, for any of the following reasons, as pertains to this specification document:
 - 2.6.1 If the bidder fails to deliver the equipment or merchandise in full compliance with the accepted proposal and specifications.
 - 2.6.2 If the bidder fails or refuses to enter into a contract on forms provided by the City, and/or if the bidder fails to provide sufficient bonds or insurance within the time period as established in this specification document.

3. BIDDER'S REPRESENTATION

- 3.1 Each bidder by signing and submitting a bid, represents that the bidder has read and understands the specification documents, and the bid has been made in accordance therewith.
- 3.2 Each bidder for services further represents that the bidder has examined and is familiar with the local conditions under which the work is to be done and has correlated the observations with the requirements of the bid documents.

4. CLARIFICATION OF SPECIFICATION DOCUMENTS

- 4.1 Bidders shall promptly notify the Purchasing Agent of any ambiguity, inconsistency or error which they may discover upon examination of the specification documents.
- 4.2 Bidders desiring clarification or interpretation of the specification documents shall make a written request which must reach the Purchasing Agent at least five (5) calendar days prior to the date and time for receipt of bids.

- 4.3 Changes made to the specification documents will be made by written addenda to all known prospective bidders and posted on the City-County website at lincoln.ne.gov Keyword - Bid.
- 4.4 Oral interpretations or changes to the Specification Documents made in any other manner, will not be binding on the City; and bidders shall not rely upon such interpretations or changes.

5. ADDENDA

- 5.1 Addenda are written instruments issued by the City prior to the date for receipt of bids which modify or interpret the specification document by addition, deletion, clarification or correction.
- 5.2 Copies of addenda will be made available for inspection at the office of the Purchasing Agent and on the City-County website.
- 5.3 No addendum will be issued later than forty-eight (48) hours prior to the date and time for receipt of bids, except an addendum withdrawing the invitation to bid, or an addendum which includes postponement of the bid.
- 5.4 Bidders shall ascertain prior to submitting their bid that they have received all addenda issued, and they shall acknowledge receipt of addenda on the proposal form.

6. INDEPENDENT PRICE DETERMINATION

- 6.1 By signing and submitting this bid, the bidder certifies that the prices in this bid have been arrived at independently, without consultation, communication or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor; unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder prior to bid opening directly or indirectly to any other bidder or to any competitor; no attempt has been made, or will be made, by the bidder to induce any person or firm to submit, or not to submit, a bid for the purpose of restricting competition.

7. ANTI-LOBBYING PROVISION

- 7.1 During the period between the bid advertisement date and the contract award, bidders, including their agents and representatives, shall not lobby or promote their bid with any member of the City Council or City Staff except in the course of City-sponsored inquiries, briefings, interviews, or presentations, unless requested by the City.

8. BRAND NAMES

- 8.1 Wherever in the specifications or proposal form brand names, manufacturer, trade name, or catalog numbers are specified, it is for the purpose of establishing a grade or quality of material only; and the term "or equal" is deemed to follow.
- 8.2 It is the bidder's responsibility to identify any alternate items offered in the bid, and prove to the satisfaction of the City that said item is equal to, or better than, the product specified.
- 8.3 Bids for alternate items shall be stated in the appropriate brand on the proposal form, or if the proposal form does not contain blanks for alternates, bidder MUST attach to the specification documents on Company letterhead a statement identifying the manufacturer and brand name of each proposed alternate, plus a complete description of the alternate items including illustrations, performance test data and any other information necessary for an evaluation. The bidder must indicate any variances by item number from the specification document no matter how slight. Bidder must fully explain the variances from the specification document, since brochure information may not be sufficient.
- 8.4 If variations are not stated in the proposal, it will be assumed that the item being bid fully complies with the City's specifications.

9. DEMONSTRATIONS/SAMPLES

- 9.1 Bidders shall demonstrate the exact item(s) proposed within seven (7) calendar days from receipt of such request from the City.
- 9.2 Such demonstration can be at the City delivery location or a surrounding community.
- 9.3 If bidder does not have an item in the area, it will be at the bidder's expense to send appropriate City personnel to the nearest location to view and inspect proposed item(s).
- 9.4 If items are small and malleable, the bidder is proposing an alternate product, the bidder MUST supply a sample of the exact item. Samples will be returned at bidder's expense after receipt by the City of acceptable goods. Bidders must indicate how samples are to be returned.

10. DELIVERY (Non-Construction)

- 10.1 Each bidder shall state on his proposal form the date upon which he can make delivery of all equipment or merchandise.
- 10.2 The City reserves the right to cancel orders, or any part thereof, without obligation, if delivery is not made within the time(s) specified on the proposal form.

- 10.3 All bids shall be based upon **inside** delivery of the equipment/ merchandise F.O.B. the City at the location specified by the City, with all transportation charges paid.
- 10.4 At the time of delivery, a designated City of Lincoln employee will sign the invoice/packing slip. The signature will only indicate that the order has been received and the items actually delivered agree with the delivery invoice. This signature does not indicate all items met specifications, were received in good condition and/or that there is not possible hidden damage or shortages.

11. WARRANTIES, GUARANTEES AND MAINTENANCE

- 11.1 Copies of the following documents must accompany the bid proposal for all items being bid:
 - 11.1.1 Manufacturer's warranties and/or guarantees.
 - 11.1.2 Bidder's maintenance policies and associated costs.
- 11.2 As a minimum requirement of the City, the bidder will guarantee in writing that any defective components discovered within a one (1) year period after the date of acceptance shall be replaced at no expense to the City. Replacement parts of defective components shall be shipped at no cost to the City. Shipping costs for defective parts required to be returned to the bidder shall be paid by the bidder.

12. ACCEPTANCE OF MATERIAL

- 12.1 All components used in the manufacture or construction of materials, supplies and equipment, and all finished materials, shall be new, the latest make/model, of the best quality, and the highest grade workmanship.
- 12.2 Material delivered under this proposal shall remain the property of the bidder until:
 - 12.2.1 A physical inspection and actual usage of this material is made and found to be acceptable to the City; and
 - 12.2.2 Material is determined to be in full compliance with the specifications and accepted proposal.
- 12.3 In the event the delivered material is found to be defective or does not conform to the specification documents and accepted proposal, then the City reserves the right to cancel the order upon written notice to the bidder and return materials to the bidder at bidder's expense.
- 12.4 Successful bidder shall be required to furnish title to the material, free and clear of all liens and encumbrances, issued in the name of the City of Lincoln, Nebraska, as required by the specification documents or purchase orders.
- 12.5 Selling dealer's advertising decals, stickers or other signs shall not be affixed to equipment. Vehicle mud flaps shall be installed blank side out with no advertisements. Manufacturer's standard production forgings, stampings, nameplates and logos are acceptable.

13. BID EVALUATION AND AWARD

- 13.1 The signed bid proposal shall be considered an offer on the part of the bidder. Such offer shall be deemed accepted upon issuance by the City of purchase orders, contract award notifications, or other contract documents appropriate to the work.
- 13.2 No bid shall be modified or withdrawn for a period of ninety (90) calendar days after the time and date established for receiving bids, and each bidder so agrees in submitting the bid.
- 13.3 In case of a discrepancy between the unit prices and their extensions, the unit prices shall govern.
- 13.4 The bid will be awarded to the lowest responsible, responsive bidder whose proposal will be most advantageous to the City, and as the City deems will best serve it's requirements.
- 13.5 The City reserves the right to accept or reject any or all bids; to request rebids; to award bids item-by-item, with or without alternates, by groups, or "lump sum"; to waive minor irregularities in bids; such as shall best serve the requirements and interests of the City.
- 13.6 In order to determine if the Bidder has the experience, qualifications, resources and necessary attributes to provide the quality workmanship, materials and management required by the plans and specifications, the Bidder may be required to complete and submit additional information as deemed necessary by the City. Failure to provide the information requested to make this determination may be grounds for a declaration of non-responsive with respect to the Bidder.
- 13.7 The City reserves the right to reject irregular bids that contain unauthorized additions, conditions, alternate bids, or irregularities that make the Bid Proposal incomplete, indefinite or ambiguous.
- 13.8 Any governmental agency may piggy back on any contract entered into from this bid.

14. INDEMNIFICATION

- 14.1 The bidder shall indemnify and save harmless the City of Lincoln, Nebraska from and against all losses, claims, damages, and expenses, including, attorney's fees arising out of or resulting from the performance of the contract that results in bodily injury, sickness, disease, death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom and is caused in whole or in part by the Bidder, any subcontractor, any directly or indirectly employed by any of them or anyone for whose acts any of them may be liable. This section will not require the Bidder to indemnify or hold harmless the City of Lincoln for any losses, claims damages, and expenses arising out of or resulting from the sole negligence of the City of Lincoln, Nebraska.
- 14.2 In any and all claims against the City or any of its members, officers or employees by an employee of the bidder, any subcontractor, anyone directly or indirectly employed by any of them or by anyone for whose acts made by any of them may be liable, the indemnification obligation under paragraph 13.1 shall not be limited in any way by any limitation of the amount or type of damages, compensation or benefits payable by or for the bidder or any subcontractor under worker's or workmen's compensation acts, disability benefit acts or other employee benefit acts.

15. TERMS OF PAYMENT

- 15.1 Unless stated otherwise, the City will begin processing payment within thirty (30) calendar days after all labor has been performed and all equipment or other merchandise has been delivered, and all such labor and equipment and other materials have met all contract specifications.

16. LAWS

- 16.1 The Laws of the State of Nebraska shall govern the rights, obligations, and remedies of the Parties under this proposal and any agreement reached as a result of this process.
- 16.2 Bidder agrees to abide by all applicable State and Federal laws and regulations concerning the handling and disclosure of private and confidential information concerning individuals and corporations as to inventions, copyrights, patents and patent rights.

17. AFFIRMATIVE ACTION

- 17.1 The City of Lincoln-Lancaster County Purchasing Division provides equal opportunity for all bidders and encourages minority businesses and women's business enterprises to participate in our bidding process.

18. LIVING WAGE

- 18.1 The bidders agree to pay all employees employed in the performance of this contract, a base wage of not less than the City Living Wage per section 2.81 of the Lincoln Municipal Code. This wage is subject to change every July.

19. EXECUTION OF AGREEMENT

- 19.1 Depending on the type of service provided, one of the following three (3) methods will be employed. The method applicable to this contract will be checked below:
 - a. This Contract shall consist of a **PURCHASE ORDER** and a copy of the suppliers signed bid (or referenced bid number) attached and that the same, in all particulars, becomes the agreement and contract between the parties hereto: that both parties thereby accept and agree to the terms and conditions of said bid documents, and that the parties are bound thereby and the compensation to be paid the Supplier is as set forth in the Supplier's Bid. Items not awarded, if any, have been deleted.
 - b. The contract shall consist of a **YEARLY AGREEMENT** and a copy of the suppliers signed bid attached and that the same, in all particulars, becomes the agreement and contract between the parties hereto. That both parties thereby accept and agree to the terms and conditions of said bid documents, and that the parties are bound thereby and the compensation to be paid the Supplier is as set forth in the Suppliers' Bid. Items not awarded, if any, have been deleted.
 - c. Three (3) copies of the **CONTRACT**, unless otherwise noted.
 - 1. City will furnish three (3) copies of the Contract to the successful Bidder who shall prepare attachments as required. Insurance as evidenced by a Certificate of Insurance, surety bonds properly executed, and Agreement signed with the date of signature shall be attached.
 - 2. The prepared documents shall be delivered to the City within 10 days (unless otherwise noted).
 - 3. The City will sign the Contract Agreement, insert the date of signature at the beginning of the Contract Agreement, prepare an Executive Order to go the Mayor for signature.
 - 4. Upon approval and signature from the Mayor, the City will return one copy to the Contractor.