

## **Advertisement for Bids**

### **S1E Crawler Mainline System Camera (or Equal)**

The City of Ironwood is soliciting bids for a S1E Crawler Mainline System Camera or equivalent, that can be used to televise underground infrastructure. A list with technical specifications along with a bid sheet can be picked up in the Clerk's Office, 213 South Marquette Street, Ironwood, MI 49938. Office hours are 7:30 to 4:00 pm Monday through Friday.

Sealed bids will be received in the Clerk's Office until 2:10 pm CST, Thursday, January 30, 2020.

The City of Ironwood reserves the right to accept or reject any and all bids. For more information contact Bob Tervonen, Utilities Manager at (906)932-5050.

Legal Ad:

Please run Thursday, January 9 and Saturday, January 11, 2020

**S1E CRAWLER MAINLINE SYSTEM CAMERA Bids**

The City of Ironwood is soliciting bids for a S1E Crawler Mainline System Camera (or equivalent) for large diameter underground infrastructure such as sewer lines. Technical specifications for the system can be obtained from the City of Ironwood at 213 South Marquette Street, Ironwood, MI 49938.

Opening of the sealed bids will be Thursday, January 30, 2020 at 2:10 pm CST. You may contact Bob Tervonen at the City of Ironwood at (906)932-5050 if you have any questions. Bids may be submitted to the following:

Crawler Mainline System Camera  
Attn: Bob Tervonen  
City of Ironwood  
213 South Marquette Street  
Ironwood, MI 49938

**CITY OF IRONWOOD  
TECHNICAL SPECIFICATIONS  
FOR  
S1E CRAWLER MAINLINE SYSTEM CAMERA (OR EQUAL)**

**1.0 INTENT**

**1.01** It is the intent of this specification for the purchase of one (1) new and unused complete portable color television inspection system, ready for operation. The system shall include self-leveling color television camera, power unit, color monitor, and video recording unit. The following specification is based upon a S1E Crawler Mainline System Camera model television pipe inspection system as manufactured by Source One Environment (or Equal).

**1.02** The City of Ironwood has evaluated different types of equipment and has determined that this type of unit 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.

**1.03** A contract may be awarded for the product, which best serves the interest of the City of Ironwood when cost, produce, safety, quality and delivery are considered. The City of Ironwood reserves the right to reject any or all bids or any part thereof, and to waive any minor technicalities. A contract may be awarded to the bidder submitting the lowest responsible bid meeting or exceeding the requirements of this specification.

**2.0 EQUIVALENT PRODUCT**

**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 Ironwood.

**2.02** The low bidder shall be prepared to demonstrate the exact equipment being proposed prior to the City awarding bids. Equipment demonstrated shall be fully equipped with all accessories and components required in this specification. Bidders who have previously demonstrated to the City of Ironwood may request a waiver of this requirement.

**2.03** Failure to comply with this demonstration requirement will result in rejection of bid.

**2.04** A blanket statement that equipment proposed will meet or exceed 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 must be certified by the manufacturer and submitted with the bid, or the bid will be deemed "non-responsive" and may be 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 utilities' manager of the City of Ironwood. Based upon such inquiry, the City of Ironwood 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 Ironwood. All bids must 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 Ironwood to make a reasonable determination of compliance to the specification will be considered 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 may 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.

### **5.0 SERVICE QUALIFICATIONS**

**5.01** The availability of quality local service and parts support is of impertinence to the City of Ironwood. Indicate who would be performing any future maintenance and/or repairs to the proposed equipment. Bids failing to identify a satisfactory service and parts facility may be rejected without further review.

**5.02** The City of Ironwood will not accept the use of substitute, contractor, subcontractor or other indirect service without the evaluation of such indirect service provider by the City of Ironwood. Clearly indicate the facility that would be providing service to the proposed equipment.

**5.03** If the bidder intends to use substitute, contractor, sub-contractor service providers, bidder shall submit as part of the bid package submitter, a letter from such service provider(s) bearing an original signature and addressed directly to the City of Ironwood 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 may result in rejection of the bid without further review.

**5.04** Bidder shall state the location service facility nearest to the City of Ironwood.

**5.05** Manufacturer shall provide for the cost of transportation of all equipment when service is required during the warranty period. Manufacturer shall provide a letter with **original signature** addressed directly to the City of Ironwood certifying they will fully comply with this requirement. Failure to submit such letter with the bid may result in rejection of the bid without further review. Bidder shall provide a minimum 1-year full parts and labor warranty. Identify with the bid the term of the warranty being provided.

**GENERAL OVERVIEW:**

The push camera system shall be compact and portable integrated with the following features. If submitting an “Equal” bid – clearly identify how the “Equal” meets or exceeds each of these specifications.

**6.01** Self-propelled robotic transporter

**6.02** Includes 10” touchscreen

**6.03** Motorized cable reel drum of TV transmission power cable

**6.04** Color video inspection system capable of inspecting 6” to 12” main lines

**6.05** Additional wheel sets for 18” pipe sizes

The mainline system shall be designed to support all of the following features and additions for maximum system configuration and flexibility.

**6.06** Ability for transporter to be free wheel so the cable can be rewound at the same speed to avoid running over the cable

**6.07** Cable reel drum must have variable speed, power cable and level rewind

**6.08** Cable reel drum must have a telescopic handle and wheels for easy portability

**6.09** Cable reel drum must be able to hold a minimum of 600’ of multi-conductor flexible video cable. The motorized reel cable drum shall incorporate the latest digital technology in programmable processor.

**6.10** Windows apps controls for video functionalities

**6.11** Able to connect to an external monitor

**6.12** Additional source of AC power outlet

**6.13** Allow brightness control for lighting in pipes

**6.14** Integrated transporter control for direction and speed

**OPERATING PLATFORM: (Minimum Requirements)**

**6.15** Windows 7 x 64 Profession operating system for ease-of-use

**6.16** Intel i5 processor to allow seamless multi-tasking

**6.17** Windows Apps to control for video playback, record and store (save)

**6.18** Gigabit Ethernet port for various network connection

**6.19** Wireless “N” network enabled for wireless internet connections

**6.20** Minimum 500 GB solid state drive for rapid boot-up and file storage

**6.21** Minimum 8 GB 240-Pin DDR3 SDRAM to increase computer speed and usability

**CONTROL PANEL DISPLAY: (Minimum Requirements)**

**6.22** 10” LED Touchscreen for quick navigation and user access

**6.23** 1024 x 768 high (native) resolution for better brightness and contrast

**6.24** Ability to display digital text editor and touch keyboard interface

Supported external USB port for wireless keyboard

- 6.25 Read to external USB and flash drive port for data storage
- 6.26 Interface must include wireless “N” remote access Wi-Fi to other computers
- 6.27 Built with external recordings to USB, SD or SSD for data storage

**PAN & ROTATE CAMERA: (Minimum Requirements)**

- 6.28 Camera can rotate 360 degrees and pan 180 degrees for full view of laterals and joints
- 6.29 Have a fixed focus at 6” through 24” pipe size
- 6.30 Adjustable camera lift height for various size pipes
- 6.31 Built with impact resistant and replaceable polycarbonate camera dome
- 6.32 System available in NTSC or PAL format
- 6.33 Ability to produce high resolution camera picture pixel of 640 x 480
- 6.34 Must have variable hi-intensity LED’s lights to provide pipe illumination
- 6.35 Built with imager sensitivity at 1 Lux
- 6.36 Pan & Rotate camera head must be submersible

**SYSTEM RECORDER: (Minimum Requirements)**

- 6.37 Must have an easy ‘One-Touch’ recording option from the touchscreen
- 6.38 Built with user accessible USB 2.0 and 3.0 ports to transfer all files from PC
- 6.39 Take snapshots in JPEG/PNG (image formats) during inspections
- 6.40 Record in MPEG 4 compressed video for ideal data sharing
- 6.41 Compatible with other multi-format data collection programs
- 6.42 Built with auxiliary video output ports for external screen monitor
- 6.43 Ability to display multi-monitor Windows operation
- 6.44 Must have automatic file storage to user directories and storage media

**ON-SCREEN TEXT DISPLAY: (Minimum Requirements)**

- 6.45 Must have multi-tab or page text entry screen for data collection
- 6.46 Must have digital on-screen distance country in meters or feet
- 6.47 Ability to enter user job and multi-run tabs to allow documenting inspection
- 6.48 Ability to export footage counter reading in third-party software
- 6.49 System must be compatible with Third-Party PACP software integration

**TRANSPORTER: (Minimum Requirements)**

- 6.50 Built with six wheels and be all-wheel drive (AWD) for better control
- 6.51 Must have no less than three (3) available wheel sets for various pipe size ranges
- 6.52 Must be able to inspect 6” to 12” pipe diameters (Up to 18” with additional wheel sets)
- 6.53 Tractor speed and camera can be controlled by tether pendant on the reel
- 6.54 Wheels must be high-grip polymer rubber tires for demanding conditions
- 6.55 Built with heavy-duty planetary gear transmission for longer runs
- 6.56 Tractor motor must be built with 159:1 reduction ration for better controls
- 6.57 Must incorporate leak/pressure test valve/port text for water intensive pipes
- 6.58 Must have hardened helical final drive gears for increased durability
- 6.59 Ability to easily/rapidly change wheel set with single retaining nut
- 6.60 Weight of transporter must be no less than 35 lbs.

- 6.61 Transporter dimension must be no shorter than 19" L x 3.5" H x 5" W
- 6.62 Transporter body must be submersible for various pipe conditions
- 6.63 9 high intensity LED lateral lights

**MOTORIZED REEL CABLE DRUM: (Minimum Requirements)**

- 6.64 Reel must be motorized and have the ability to rewind and payout
- 6.65 Must have variable speed video cable retrieve and payout
- 6.66 Must have automatic free wheel drum clutch to aide and inspection
- 6.67 Must have footage count mechanism
- 6.68 Must have quadrature encoder that is 100 pulses per foot
- 6.69 Direct drive level wind system should be linked to drum movement to level
- 6.70 Reel weight must be no more than 160 lbs. with 600 feet
- 6.71 Reel dimensions must be no more than 29" H x 20" W x 21" D to fit in small areas
- 6.72 Reel must be splash resistant with rain cover for unexpected weather conditions
- 6.73 Must have an auxiliary AC input port for external power
- 6.74 Motorized reel can be powered up with 1000-watt inverter

**7.0 MANUALS**

7.01 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.

**8.0 SERVICE AND TRAINING**

8.01 Vendors shall have a full parts and service facility within a reasonable distance from the City of Ironwood.

8.02 A qualified technician shall provide complete training to the City of Ironwood's personnel at its garage. Training shall include safety, operation, maintenance and service.

**9.0 DELIVERY**

9.01 Vehicle shall be delivered F.O.B. to the City of Ironwood in first class operating condition.

9.02 Acceptance shall be subject to the inspection and approval of the City of Ironwood.

9.03 Bidder shall state delivery time after receipt of order.

**PROPOSAL FORM**

**To: The City of Ironwood**

The undersigned hereby declares that they have carefully examined the

**ONE (1) NEW AND UNUSED  
S1E CRAWLER MAINLINE SYSTEM CAMERA**

**BODY MAKE:** \_\_\_\_\_ **MODEL:** \_\_\_\_\_

**PURCHASE PRICE:**        @ \$ \_\_\_\_\_ **TOTAL:**        \$ \_\_\_\_\_

**(In Words)** \_\_\_\_\_

**SIGNED:** \_\_\_\_\_ **DATE:** \_\_\_\_\_

**BIDDER:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

\_\_\_\_\_  
**PHONE NUMBER:** \_\_\_\_\_

All bids shall be submitted in a sealed envelope and  
clearly marked as  
***'Bids for Sewer Televising Equipment – Crawler Mainline  
Camera'***