



300 S. Dayton Street • Davison, MI 48423

P: (810) 412-4740 F: (810) 412-4743

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## **SPECIFICATIONS FOR:** **A PORTABLE MAINLINE VIDEO INSPECTION SYSTEM**

### **GENERAL**

The purchaser is requesting sealed bids for 1 (one) self-contained and fully integrated portable crawler system for pipe inspection in 6" to 12" main lines, and up to 18" with an additional wheel set. It is the intention of these specifications to describe the minimum acceptable requirements for this system.

The system and equipment proposed shall be new and unused except for the necessary testing and calibration.

Responses to each specification item contained herein must be indicated by marking either YES or NO in the blank. Items left blank shall be regarded as a NO response. All specifications will be scored and the final selection will be partially based upon the supplier's ability to meet the specific equipment requirements.

All sections and requirements of this bid proposal must be completed and all information provided must be accurate and truthful. Failure to meet this requirement will result in rejection of the bid proposal.

Determination of the successful bidder will be made based on the following criteria.

1. Bid price
2. Performance Evaluation of the system proposed.
3. Specification compliance.
4. Length of delivery time.
5. Service center availability.
6. Warranty.
7. Reference list.

The City Purchasing Officer reserves the right to rule upon each of the criteria set forth above in a manner that best meets the needs of The City \_\_\_\_\_.



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## CHECK LIST OF SPECIFICATIONS:

To be returned with Bid or Proposal. Please include the manufactures spec sheet also.

Please provide a check for each item that the proposed equipment meets. If blank please provide an explanation in the additional information section. If any options are not specified, please list these additional options in the same space for review and consideration.

### GENERAL OVERVIEW:

### COMPLY:

The mainline system shall be compact and portable integrated with the following features.

- Self-propelled robotic transporter
- Includes 10 inch touchscreen
- Motorized cable reel drum of TV transmission power cable
- Color video inspection system capable of inspecting 6" to 12" main lines
- Additional wheel sets for 18" pipes size

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

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

- Ability for transporter to be free wheel so the cable can be rewound at the same speed to avoid running over the cable
- Cable reel drum must have variable speed, power cable and level rewind
- Cable reel drum must have a telescopic handle and wheels for easy portability
- Cable reel drum must be able to hold a minimum of 600' feet of multi-conductor flexible video cable

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

The motorized reel cable drum shall incorporate the latest digital technology in programmable microprocessor.

- Windows apps controls for video functionalities
- Able to connect to an external monitor
- Additional source of AC power outlet
- Ability to pan & rotate the camera on the transporter
- Allow brightness control for lighting in pipes
- Integrated transporter controls for direction and speed

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

### OPERATING PLATFORM:

(Shall Incorporate At Minimum)

### COMPLY:

- Windows 7 x64 Professional operating system for ease-of-use
- Intel i5 processor to allow seamless multi-tasking
- Windows Apps to control for video playback, record and store(save)

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_



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- Gigabit Ethernet port for various network connection Yes\_\_\_\_\_ No\_\_\_\_\_
- Wireless "N" network enabled for wireless internet connections Yes\_\_\_\_\_ No\_\_\_\_\_

Yes\_\_\_\_\_ No\_\_\_\_\_

- Minimum 500 GB solid state drive for rapid boot-up and file storage
- Minimum 8 GB 240-Pin DDR3 SDRAM to increase computer speed and usability Yes\_\_\_\_\_ No\_\_\_\_\_

**CONTROL PANEL DISPLAY:** (Shall Incorporate At Minimum)

**COMPLY:**

- 10" LED Touchscreen for quick navigation and user access Yes\_\_\_\_\_ No\_\_\_\_\_
- 1024 x 768 high (native) resolution for better brightness and contrast Yes\_\_\_\_\_ No\_\_\_\_\_
- Ability to display digital text editor and touch keyboard interface Yes\_\_\_\_\_ No\_\_\_\_\_
- Supported external USB port for wireless keyboard Yes\_\_\_\_\_ No\_\_\_\_\_
- Read to external USB and flash drive port for data storage Yes\_\_\_\_\_ No\_\_\_\_\_
- Interface must include wireless "N" remote access Wi-Fi to other computer Yes\_\_\_\_\_ No\_\_\_\_\_
- Built with external recordings to USB, SD or SSD for data storage Yes\_\_\_\_\_ No\_\_\_\_\_

**PAN & ROTATE CAMERA:** (Shall Incorporate At Minimum)

**COMPLY:**

- Camera can rotate 360 degrees and pan 180 degrees for full view of laterals and joints Yes\_\_\_\_\_ No\_\_\_\_\_
- Have a fixed focus at 6 through 24 inch pipe size Yes\_\_\_\_\_ No\_\_\_\_\_
- Adjustable camera lift height for various size pipes Yes\_\_\_\_\_ No\_\_\_\_\_
- Built with impact resistant and replaceable polycarbonate camera dome Yes\_\_\_\_\_ No\_\_\_\_\_
- System available in NTSC or PAL format Yes\_\_\_\_\_ No\_\_\_\_\_
- Ability to produce high resolution camera picture pixel of 640 x 480 Yes\_\_\_\_\_ No\_\_\_\_\_
- Must have variable hi-intensity LED's lights to provide pipe illumination Yes\_\_\_\_\_ No\_\_\_\_\_
- Built with imager sensitivity at 1 Lux Yes\_\_\_\_\_ No\_\_\_\_\_
- Pan & Rotate camera head must be submersible Yes\_\_\_\_\_ No\_\_\_\_\_

**SYSTEM RECORDER:** (Shall Incorporate At Minimum)

**COMPLY:**

- Must have an easy 'One-Touch' recording option from the touchscreen Yes\_\_\_\_\_ No\_\_\_\_\_
- Built with user accessible USB 2.0 and 3.0 ports to transfer all files from pc Yes\_\_\_\_\_ No\_\_\_\_\_
- Take snapshots in JPEG/ PNG (image formats) during inspections Yes\_\_\_\_\_ No\_\_\_\_\_
- Record in MPEG 4 compressed video for ideal data sharing Yes\_\_\_\_\_ No\_\_\_\_\_



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- |  |          |         |
|--|----------|---------|
| • Compatible with other multi-format data collection programs            | Yes_____ | No_____ |
| • Built with auxiliary video output ports for external screen monitor    | Yes_____ | No_____ |
| • Ability to display multi-monitor Windows operations                    | Yes_____ | No_____ |
| • Must have automatic file storage to user directories and storage media | Yes_____ | No_____ |

**ON-SCREEN TEXT DISPLAY:**                      (Shall Incorporate At Minimum)

**COMPLY:**

- |   |          |         |
|---|----------|---------|
| • Must have multi-tab or page text entry screen for data collection             | Yes_____ | No_____ |
| • Must have digital on-screen distance counter in meters or feet                | Yes_____ | No_____ |
| • Ability to enter user job and multi-run tabs to allows documenting inspection | Yes_____ | No_____ |
| • Ability to export footage counter reading to third-party software             | Yes_____ | No_____ |
| • System must be compatible with Third-Party PACP software integration          | Yes_____ | No_____ |

**TRANSPORTER:**                                      (Shall Incorporate At Minimum)

**COMPLY:**

- |  |          |         |
|--|----------|---------|
| • Built with six wheels and be all-wheel drive(AWD) for better control                       | Yes_____ | No_____ |
| • Must have no less than three (3 ) available wheel sets for various pipe size ranges        | Yes_____ | No_____ |
| • Must be able to inspect 6'' to 12'' pipe diameters (Up to 18'' with additional wheel sets) | Yes_____ | No_____ |
| • Tractor speed and camera can be controlled by tether pendant on the reel                   | Yes_____ | No_____ |
| • Wheels must be high-grip polymer rubber tires for demanding conditions                     | Yes_____ | No_____ |
| • Built with heavy-duty planetary gear transmission for longer runs                          | Yes_____ | No_____ |
| • Tractor motor must be built with 159:1 reduction ratio for better controls                 | Yes_____ | No_____ |
| • Must incorporate leak/ pressure test valve/ port test for water intensive pipes            | Yes_____ | No_____ |
| • Must have hardened helical final drive gears for increased durability                      | Yes_____ | No_____ |
| • Ability to easily/ rapidly change wheel set with single retaining nut                      | Yes_____ | No_____ |
| • Weight of transporter must be no less than 35 lbs.   | Yes_____ | No_____ |
| • Transporter Dimension must be no shorter than 19'' L x 3.5'' H x 5'' W                     | Yes_____ | No_____ |
| • Transporter body must be submersible for various pipe conditions                           | Yes_____ | No_____ |
| • 9 high intensity LED lateral lights  | Yes_____ | No_____ |



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**MOTORIZED REEL CABLE DRUM:** (Shall Incorporate At Minimum)

**COMPLY:**

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

**SERVICE:**

**COMPLY:**

Provides up to eight (8) hours or one (1) day of operator training performed on-site or webinar by a factory trained specialist. Training such as operator use of all equipment, preventive maintenance, diagnostic trouble-shooting, and equipment repair will be provided.

Yes\_\_\_\_\_ No\_\_\_\_\_

Remotely accessible interface for software upgrades and trouble-shooting support including diagnostic services.

Yes\_\_\_\_\_ No\_\_\_\_\_

Supply one(1) complete manufactures user's manual.

Yes\_\_\_\_\_ No\_\_\_\_\_

**INSURANCE:**

Not Applicable

**WARRANTY:**

All items furnished in accordance with these specifications shall be covered by the manufacturers and/or suppliers standard warranty or guarantee on new equipment. The minimum warranty period of the new video inspection equipment will be one (1) year for all parts and labor on manufacturers' defects. **The warranty statement must be included with the bid response to be considered a valid bid.**

This image shows a full page of blank white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page, providing a template for writing or drawing. There are no margins, text, or other markings present.



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**BIDDER'S PROPOSAL**  
**A PORTABLE MAINLINE VIDEO INSPECTION SYSTEM**  
*(This portion of the form can be customized for additional requirements)*

DATE: \_\_\_\_\_

CITY: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

We, the undersigned, agree to furnish ALL MATERIALS AND LABOR TO PROVIDE A PORTABLE CCTV MAINLINE VIDEO INSPECTION SYSTEM for \_\_\_\_\_, in accordance with the attached minimum specifications, which are part of this proposal, at the following price:

BID: Bid amount for Portable CCTV Mainline Video Inspection System \$ \_\_\_\_\_

**SUBMITTED BY:**

FIRM: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
BY: \_\_\_\_\_  
PRINTED: \_\_\_\_\_  
TITLE: \_\_\_\_\_  
PHONE: \_\_\_\_\_  
FAX: \_\_\_\_\_