

**City of Windsor Heights**  
**68<sup>th</sup> Street Between Hickman and Timmons**  
**CCTV INSPECTION OF LATERALS**

**June 28<sup>th</sup>, 2022**

The City of Windsor Heights is reconstructing 68<sup>th</sup> Street between Hickman and Timmons beginning in the spring of 2023. As part of this project, the City will replace sewer services that are at or near the point of failure or are constructed of orangeburg pipe.

The City is requesting bids to televise and inspect the services from the sewer main in the middle of 68<sup>th</sup> Street to the property line, which is approximately 25 feet. The final submittal shall include:

- A report including lateral address, pipe material, location of pipe material changes, condition of pipe for all services televised and a location map.
- Separate videos for each lateral with unique naming of each file to include the address
- 2 flash drives that include the report and all videos

The Urbandale Public Works Department is able to clean the sewer main prior to the lateral inspection project. The contractor will need to provide a minimum of 48 hours notice to Adam Pasker at [apasker@urbandale.org](mailto:apasker@urbandale.org).

Bids for this project are due back at noon on **July 11<sup>th</sup>**. The contract will go to the Windsor Heights City Council for consideration at their meeting on **July 18<sup>th</sup>**. The inspections must be completed and reports submitted no later than **October 17<sup>th</sup>**.

Bids may either be emailed to [publicworks@windsorheights.org](mailto:publicworks@windsorheights.org) or dropped off at City Hall at 1145 66<sup>th</sup> Street, Suite, 1, Windsor Heights, IA 50324.

Please contact me at [djacobus@windsorheights.org](mailto:djacobus@windsorheights.org) or 515-645-6825 if you have any questions.

Thank you,

Dalton Jacobus  
Public Works Director

City of Windsor Heights

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**CCTV INSPECTION OF LATERALS**

**PART 1 - GENERAL**

1.01 DESCRIPTION

- A. The intent of this work is to document the condition of existing sewer laterals as may be identified by the City. This work will be accomplished by utilizing closed circuit television (CCTV) equipment.

1.01 REQUIREMENTS

- A. CCTV Inspection – The individual lateral pipes shall be inspected from the mainline sewer by means of CCTV equipment with lateral launch camera capabilities.
- B. Traffic Control – The Contractor shall be solely responsible for all signage, flagging, cones, personnel and any other item or personnel required for traffic control. All costs for traffic control shall be incidental to the project, unless otherwise specified in the contract documents.

1.02 REFERENCES

- A. National Association of Sewer Service Companies (NASSCO), *Jetter Code of Practice*.
- B. National Association of Sewer Service Companies (NASSCO), *Pipe Line Assessment and Certification Program (PACP), TV inspection form and sewer condition codes*.
- C. National Association of Sewer Service Companies (NASSCO), *Lateral Assessment and Certification Program (LACP), TV inspection form and sewer lateral condition codes*.

1.03 SUBMITTALS

- A. Safety Plan –The Contractor shall provide a safety plan and identify designated safety supervisory personnel to the Engineer. The plan shall include confined space entry provisions and training, listing of personal protective equipment, and a traffic control plan (if applicable).
- B. CCTV Technician PACP Certification – The Contractor shall provide PACP certification documentation for all technicians on the project.

**PART 2 - EQUIPMENT**

2.01 LATERAL INSPECTION CCTV EQUIPMENT

- A. Type of Equipment – The CCTV cameras used for lateral inspection shall be specifically designed and constructed for sewer inspection. A Lateral Evaluation Television System (LETS) or like device(s) shall be used for inspection. This/these system(s) shall consist of two individual cameras mounted on a remote crawler. One camera shall be fixed and provide a view of the main sewer while the other shall be flexible, self-leveling and have the capability of launching up a lateral pipe from the sewer main line.
- B. Camera View - The view seen by the lateral camera shall be transmitted to a color monitor of greater than or equal to ( $\geq$ ) fifteen inches (15") diagonal dimension. Also, the view from the lateral camera shall appear on screen simultaneously with the mainline camera view. These two views shall appear as a picture-in-picture (PIP) view. The Contractor shall be able to toggle between the main line view and the lateral view using this equipment.
- C. Camera Movement – The movement of the lateral camera shall be controlled remotely by the Contractor in conjunction with the mainline CCTV camera. The lateral system shall be capable of entering and moving within the sewer lateral for a minimum of seventy feet (80'). The lateral system shall also be capable of operating in lateral sewer connections with a nominal internal diameter ranging from four inches (4") to eight inches (8").
- D. Camera Features – The lateral camera shall record all images in color. Illumination sensitivity shall be three (3) lux or less and provide a minimum of 460 lines of resolution. There shall be no geometric distortion of the image.
- E. Camera Lighting - Camera lighting shall be supplied by a lamp on the lateral device itself and shall be capable of being brightened or dimmed remotely by the Contractor. Lighting shall be capable of lighting the entire periphery of the sewer lateral pipe. Lighting and picture quality shall be adjustable to provide a clear picture of the entire periphery of the lateral for all conditions encountered.
- F. Measurement of Distance - The distances traveled by the lateral camera shall be measurable to one tenth of one foot (0.1') by an onboard measuring device and shall provide video display readout of said distances in units of one tenth of one foot (0.1').

## **PART 3 - EXECUTION**

### **3.01 CCTV INSPECTION OF SEWER LATERALS**

- A. Standards – Video inspection shall be completed per the Pipeline Assessment Certification Program (PACP®) and Lateral Assessment Certification Program (LACP®) as promulgated by the National Association of Sewer Service Companies (NASSCO).
- B. Certified Technicians – Video inspection shall be completed by technicians who have been certified by NASSCO as PACP/LACP compliant and trained. The technician's PACP certification number shall be included in all line segment reports as furnished as part of this project.

- C. Certified Software – All video inspection and subsequent reports shall be compiled using the latest version of a PACP compliant software package as certified by NASSCO.
- D. Video of Lateral Line Segments – Each sewer lateral shall be video inspected one at a time. Each lateral segment shall have its own video file (with distinct file name) and corresponding line segment report (if done without mainline CCTV inspection). If the lateral inspection is done as part of a mainline CCTV inspection video, the data file generated shall include both mainline information and lateral information.
- E. Corresponding Data – Each video clip or file and each digital photograph or file shall correspond to inspection data in the database, and each set of inspection data listed in the database shall be properly linked to the appropriate video file or photo(s).
- F. Video Inspection Parameters – The following information shall constitute the desired parameters for video inspection for this project:
  - 1. Video Format – The Contractor shall make a continuous color digital recording in Motion Picture Experts Group (MPEG) 1 format.
  - 2. Minimum Resolution – Video files shall have a minimum resolution of six hundred forty by four hundred eighty (640 x 480) pixels and an interlaced frame rate at a minimum of twenty-nine point nine (29.9) frames per second.
  - 3. Rate of Inspection – Video inspection will not exceed a traverse rate of thirty feet (30') per minute.
  - 4. Video Text Overlay – Each lateral pipe segment video, if done as part of a mainline camera inspection, shall begin with the video text overlay as specified in Section 3.02 (I)(4) above. If the lateral pipe segment video is done independently of (i.e. without) mainline pipe inspection, said video shall begin with a video text overlay (displayed for a minimum of five (5) seconds) and completed in accordance with PACP's CCTV inspection form headers and instructions as follows:
    - a) Line 1: Upstream/Downstream Manhole Number(s);
    - b) Line 2: Clock position;
    - c) Line 3: Distance from Manhole;
    - d) Line 4: Lateral Address;
    - e) Line 5: Lateral Material;
    - f) Line 6: Lateral Diameter; and
    - g) Line 7: Street Name.
  - 5. Text Shown During Video – Each lateral pipe segment video, if done as part of a mainline camera inspection, shall begin with the video text overlay as specified in Section 3.02 (I)(5) above. If the lateral pipe segment video is done independently of mainline pipe inspection, the video text overlay shall show the following text at all times:
    - a) Video footage count.

6. Evaluation of Defects and Observations – During the lateral CCTV inspection, the camera shall stop at all defects, observations, and connections to ensure a clear view of the pipe condition.
7. Text Overlay of Observation – All defects and observations shall include a video text overlay of the appropriate PACP/LACP code/description.
8. Naming of Video Files – The naming of the video file shall consist of the following: “UPSTREAM/DOWN STREAM MH #\_LATERAL ADDRESS\_STREET NAME as shown in the following example (plus the appropriate file extension). The naming of all video files shall be consistent throughout the project:

123-124\_307MOSS.mpg

#### 3.04 QUALITY CONTROL

- A. NASSCO Specifications – All video inspection performed, and reports subsequently generated, under this contract shall be per the specifications and requirements of NASSCO’s PACP® and LACP® programs as applicable.
- B. Review by the Contractor - The video recordings, photographs, and data shall be reviewed by the Contractor for focus, lighting, clarity of view, and technical quality.
- C. Blocked or Distorted Video - Videos recorded while a camera has flipped over in the process of traveling or the viewing of laterals, obstructions, or defects are blocked by cables, skids, or other equipment will not be accepted. Shape, focus, proper lighting, and clear, distortion-free viewing during the camera operations shall be maintained.

### **PART 4 - DELIVERABLES AND PAYMENTS**

#### 4.01 MEASUREMENT

- A. Distance Measurement - Measurement of the actual number of feet cleaned and televised in sewer mainlines shall be made from the center of the manhole to the center of the manhole.
- B. Sewer Laterals Inspected – All sewer laterals that are video inspected shall be done on a “per each” basis.

#### 4.02 ACCEPTANCE

- A. Defective Work – Within sixty (60) days of the final delivery of written and video reports, the Engineer will notify the Contractor of any defective work. Defective work (if any) will be corrected by the Contractor within sixty (60) days of receipt of this written notification. These corrections will be made to the satisfaction of the Owner and Engineer.

#### 4.03 DELIVERABLES

- A. Video Files - As part of the final submittal on this project, the Contractor shall submit all video recordings and database information (in approved PACP format), on DVDs or external hard drives (as dictated by the size and quantity of the files submitted). If a

hard drive is submitted, the submittal shall include the power cord and USB connection cable. The external hard drive shall become the property of the Owner unless otherwise indicated or specified.

- B. Written Reports – As part of the final submittal on this project, the Contractor shall provide two copies of a bound written report in the approved PACP format. This report shall include a cover page with the name of the project, scope of the project, and date of submission; an index page with listing of line segment reports; a complete set of line segment reports and a page or pages of holders containing the DVDs of this project's data (if applicable).
- C. Software – The Contractor shall provide the Owner one (1) copy of the “read only” version of its inspection software (and appropriate license(s), if any).
- D. Incidental Costs – All reports, DVDs, hard drives, printing, copying, software, and other costs associated with developing and rendering these deliverables to the Engineer or Owner shall be considered incidental to the project.

#### 4.04 PAYMENTS

- A. Pay Estimates - Pay estimates will be submitted on a regularly scheduled basis to the Engineer by the Contractor.
- B. Approval of Quantities - The Engineer shall review the quantities submitted by the Contractor, and shall immediately inform the Contractor of its certification or disallowing of any quantities submitted for payment. If the quantities of work in question by the Engineer can't be immediately resolved to the satisfaction of both parties, the pay estimate shall move forward without those quantities included. Said denied quantities may be resolved and submitted on the next pay estimate.

**END OF SECTION**

**RECOMMENDED PAYMENT SCHEDULE**

Item Number	Description	Est. Qty.	Unit	Unit Price \$	Total Price \$
	<b>GENERAL ITEMS</b>				
1.	Mobilization	1	Lump Sum		
2.	Traffic Control	1	Lump Sum		
3.	<b>CCTV INSPECTION – SEWER LATERALS</b>				
4.	CCTV Inspection of 4"- 8" sewer laterals	32	Per Each		
	<b>TOTAL BID</b>				<b>0,000,000.00</b>





## Potential Services

1. 6900 Hickman (commercial)
2. 2226 68<sup>th</sup> St (apartment complex, 3 buildings)
3. 2220 68<sup>th</sup> St
4. 2214 68<sup>th</sup> St
5. 2212 68<sup>th</sup> St
6. 2208 68<sup>th</sup> St
7. 2206 68<sup>th</sup> St
8. 2000 68<sup>th</sup> St
9. 1940 68<sup>th</sup> St
10. 1936 68<sup>th</sup> St
11. 1920 68<sup>th</sup> St
12. 1916 68<sup>th</sup> St
13. 1900 68<sup>th</sup> St
14. 1801 68<sup>th</sup> St
15. 1913 68<sup>th</sup> St
16. 1917 68<sup>th</sup> St
17. 1923 68<sup>th</sup> St
18. 1927 68<sup>th</sup> St
19. 1931 68<sup>th</sup> St
20. 1935 68<sup>th</sup> St
21. 6614 Lincoln Ave
22. 2011 68<sup>th</sup> St
23. 2015 68<sup>th</sup> St
24. 2019 68<sup>th</sup> St
25. 2025 68<sup>th</sup> St
26. 2101 68<sup>th</sup> St (potentially two services)
27. 6720 Hickman Road