CITY OF WILMINGTON ENGINEERING

REQUIREMENTS FOR VIDEO INSPECTION and REPORTING OF STORM SEWER SYSTEMS

General

1. All stormwater video formatting and reporting shall be completed in accordance with NASSCO Pipeline Assessment and Certification Program (PACP) guidelines. https://www.nassco.org/pipeline-assessment-and-certification-program.
2. Generally, the public storm pipe and structures shall be videoed a minimum 20-30 days after installation and 45 days prior to construction of curbing, streets or sidewalks, allowing sufficient time to assemble reports, conduct engineering review and make repairs as needed.
3. Pipe cleaning operations shall be performed prior to the video inspection, and shall fully clean the pipes and structures as to remove all sediment, debris, etc. This may require dewatering of pipes.
4. The City of Wilmington (COW) reserves the right to refuse any recording or reports on the basis of improper formatting, substandard quality or compatibility with technology.
5. In the event of needed repairs to the pipe or structures, the contractor shall obtain written approval by the City Engineer for all site-specific repair methods before proceeding.
6. Certain conditions may warrant equipment beyond what is specifically noted herein. Failure to adhere to COW requirements, the identification of defects or concerns with any repairs made, may result in the contractor being required to conduct additional video-inspection(s).

Execution

1. All equipment used for cleaning and video inspection shall be specifically designed for the work described herein. All cameras shall be self-powered units with color, pan-and-tilt, minimum resolution of 640x480 min., and the ability to operate in 100% humidity (wet) conditions. The lens shall have not less than a 65-degree viewing angle with either automatic or remote focus and iris controls
2. Inspections of each pipe segment shall run from center of the starting drainage structure to the center of the ending drainage structure. The camera shall be moved through the line in either direction at a uniform rate but not greater than 30 feet per minute (0.5 ft/sec).
3. The camera shall be stopped at each pipe joint, structure, defect, etc. At these locations, the camera shall be panned, tilted and rotated to fully view and document the condition of the joints, defects, etc.
4. CCTV software shall be a commercially available product. CCTV video shall be captured in MPEG format with a clear and stable image and be compatible with Windows Media Player. Still pictures shall be captured in JPEG format at 640x840 min. resolution.
5. Videos shall follow NASSCO standard formatting and codes for file naming, screen text including start, stop and running screens, header displays and observation codes. For each file, a constant overlay display of the street name, drainage structure designations (i.e. MH start#/ CB end#), date and distance shall appear on the screen. The inspector shall move the constant overlay display, so it does not interfere with the inspection review. Observation(s) and defect(s) text shall display for a minimum of 4 seconds.
6. A video inspection report produced from the CCTV software shall be submitted in a separate file for each pipe segment videoed. At a minimum, observation/defect notes shall include general info and codes, distance within the pipe segment, description, a severity rating, and a still photograph. In situations where reverse inspection is necessary, the reverse inspection shall be provided in a separate video file.

Deliverables

1. Video inspection files (MPEG) along with electronic written reports (JPEG) shall be delivered to the City, preferably on a flash drive. These reports shall typically be delivered 30 days prior to any roadway construction. See above. These deliverables shall be provided with correspondence from the Engineer of Record confirming that he/she has reviewed the video inspection package for compliance, made an evaluation and provided recommendations for repair.