



REQUIREMENTS FOR VIDEO INSPECTION OF STORM SEWER SYSTEMS

General

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, and the ability to operate in 100% humidity conditions. The lens shall have not less than a 65-degree viewing angle with either automatic or remote focus and iris controls.
2. All work described herein shall be completed in accordance with NASSCO Pipeline Assessment and Certification Program/ Manhole Assessment and Certification Program (PACP/MACP) guidelines.
3. The City of Wilmington (COW) reserves the right to refuse any recording or report on the basis of substandard quality.

Execution

1. All storm pipe installations shall be completely installed a minimum of 30 days prior to video inspection. Generally, inspections shall occur 30 days prior to asphalt paving.
2. The contractor's cleaning operations shall be performed prior to the video inspection, and shall fully clean the pipes and structures as well as remove all sediment, roots, debris, etc.
3. Inspections of each pipe segment shall begin in the center of the start drainage structure and end in the center of the end 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).
4. The camera shall be stopped at each pipe joint, defect, imperfection, etc. At these locations, the camera shall be panned, tilted and rotated to fully view and document the condition of the joints, defects, imperfections, etc.
5. The digital recording shall be free of electrical interference and shall produce a clear and stable image.
6. Video overlay shall include, at a minimum, the owner name, project name, street name, diameter of pipe, pipe material, date and time of inspection, direction of video (upstream or downstream), drainage structure number designation for each drainage structure on the pipe segment inspected that corresponds to the construction plans. A constant overlay display of the street name, drainage structure designations (i.e. MH start#/MH 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.
7. Inspection of each pipe segment shall be provided in a separate video file. In situations where reverse inspection is necessary, the reverse inspection shall be provided in a separate video file.
8. All observations/defects shall be noted by the inspector, where a text display shall appear describing the observation/defect. Text shall display for a minimum of 4 seconds. The video file recording shall pause as the operator selects the observation/defect notation, eliminating "on hold" video.
9. An inspection form shall be completed and submitted for each pipe segment and drainage structure inspected and videoed. At a minimum, observation/defect notes shall include general info, distance within the pipe segment, description, a severity rating, and a still photograph.

Deliverables

1. Correspondence from the Engineer of Record confirming that he/she has reviewed the video inspection package for compliance to content and has made an evaluation with recommendations for repair as needed per the City guidelines.
2. Video inspections captured live off of the inspection camera to be submitted to on a DVD compatible with Windows Media Player. The inspections must be in order and complete.
3. All inspection reports completed for each pipe segment and drainage structure whether videoed or not shall be submitted.

This document provides minimum video-inspection and submission requirements for contractors to ensure consistency and quality of work being submitted for COW review and approval. Certain conditions may warrant equipment beyond that specifically noted above. Failure to adhere to COW requirements, or the identification of defects during an inspection, may result in the contractor being required to conduct additional video-inspection(s).