

SECTION 336060

TELEVISION INSPECTION

PART 1 - GENERAL

1.1 SCOPE OF WORK

- A. Each designated section shall be visually inspected during sealing operations by means of a closed-circuit television. The inspection will be done one section at a time and the section being inspected will be suitably isolated from the remainder of the sewer line as required.
- B. Video recordings shall be made of the television inspections and both copies of the recordings and printed inspection logs shall be supplied to the Owner and Engineer.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. The television camera used for the inspection shall be one specifically designed and constructed for such inspection. Lighting for the camera shall be suitable to allow a clear picture for the entire periphery of the pipe. The camera shall be operative in 100 percent relative humidity conditions. The camera, television monitor and other components of the video system shall be capable of producing a minimum 500-line resolution video picture. Picture quality and definition shall be to the satisfaction of the Owner and Engineer. The lighting system shall minimize reflective glare.

PART 3 – EXECUTION

3.1 PERFORMANCE

- A. The camera shall be moved through the line against the flow, at a uniform rate, stopping when necessary to insure proper documentation of the sewer's condition but in no case will the television camera be pulled at a speed greater than 30 fpm. Manual winches, power winches, TV cable and powered rewinds or other devices that do not obstruct the camera view or interfere with proper documentation of the sewer conditions shall be used to move the camera through the sewer line. If, during the inspection operation the television camera will not pass through the entire manhole section, the Contractor shall re-set up his/her equipment in a manner so that the inspection can be performed from the opposite

manhole. If, again, the camera fails to pass through the entire section, the Contractor shall remove the obstruction by excavation and replacement of that section of pipe as specified herein.

- B. Whenever non-remote powered and controlled winches are used to pull the television camera through the line, telephones, radios, or other suitable means of communication shall be set up between the two manholes of the section being inspected to ensure that good communications exist between members of the crew.
- C. The accuracy of the measurements cannot be stressed too strongly. Measurement for location of defects shall be above ground by means of a meter device. Marking on cable, or the like, which would require interpolation for depth of manhole, will not be allowed. Measurement meters will be accurate to two tenths of a foot over the length of the section being inspected. Accuracy of the measurement meters shall be checked daily by use of a walking meter, roll-a-tape or other suitable device.
- D. Documentation of the television results shall be as follows:
 - 1. Television Inspection Logs
 - a. Printed location records shall be kept by the Contractor and will clearly show the location, in relation to adjacent manholes, of each source of infiltration discovered. In addition, other data of significance including the locations of building and house service connections, along with an estimation of infiltration from such services, joints, unusual conditions, roots, storm sewer connections, collapsed sections, presence of scale and corrosion and other discernible features will be recorded and a copy of such records will be supplied to both the Owner and the Engineer.
 - 2. Video recordings of the data on the television monitor shall be made by the Contractor copies of which, in digital format, shall be provided to the Owner.

END OF SECTION