

Pre & Post Installation Pipe Cleaning & Inspection | AIMS Companies

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New technology advancements have made cleaning and televising of new and rehabilitated sewer, storm and pressurized pipes safer, more efficient and cost effective while providing an added sense of assurance. The new installation and trenchless process allows for miles of existing or aging pipe to be replaced or rehabilitated and inspections have become a critical step in these processes.

A thorough pre-inspection of pipes selected for replacement or rehabilitation will identify critical items such as pipe lengths, sizes, precise locations, bends or transitions. This information collected from the inspection is often different from the original drawings where information from past projects was not transferred or precise information was simply not available.

A pre-inspection is extremely valuable to the contractor in terms of exact locations to dig or excavate and cutting area. The exact location for these services often have an allowable tolerance of less than two inches and the pre-inspection process helps with planning for the next phase of the project. From this inspection, the contractor and owner can better assess the project and assure that proper materials are ordered. All unknown conditions or design changes are identified during this inspection -- allowing any needed adjustments to occur early on in the project timeline.

Once the new pipe or liner is installed, cleaning and inspection can provide the contractor and owner assurance that the pipes are free of any debris that may have been collected during the installation process and that the product was properly installed. It also helps identify any issues that may need to be corrected and provides documentation that the project specifications were met to support project closeout, invoicing, payment and historical records. This attention to detail and collaborative effort between the contractor and the owner helps assure work was completed properly and that any issues with the pipe are addressed quickly and safely.

A variety of equipment is used in the cleaning process, including a combination truck with water jetting to clean and vacuum for debris removal. The equipment is capable of cleaning a pipe from four inches and larger using a variable pressure and variable flow pump. Pressure can be as high as 2500 PSI and water flow as high as 160 GPM for larger pipes. Cleaning nozzles are attached to hoses and used to spray the inside of the pipe to remove fixed and loose debris. Large amounts of debris must be removed to allow the

transport of the inspection equipment through the pipe. Using the cleaning nozzle, the operator brings the debris to the manhole or pit. The trucks' vacuum system removes the debris from the pipe and relocates it into the sealed debris tank for transport to a designated disposal facility.

Inspection equipment utilized for this service is a wheel or track transporter capable of inspecting pipe from 4 inches and larger. The camera has pan, tilt and zoom capabilities with 360-degree head rotation and records in color. The camera equipment is also capable of adapting a laser profiler for more precise measurements and inspecting ovality. The inspection recordings can be saved electronically or to a disk and shared easily. Inspection reports are typically generated identifying upstream and down stream manhole numbers, flow direction, manhole depths, pipe size, precise footage and precise location of service lines. These inspection reports also call out any found defects and are inspected using NASSCO PACP standards.

The following are a few key questions to address during a routine post-installation cleaning and inspection:

- Was the pipe installed properly?
- Is it the correct type, size and length?
- Are the pipe joints correct?
- Were joint gaskets installed and installed properly?
- Are there any sags in the pipe?
- Were all tie-ins properly installed?
- Is the pipe clean of all debris?
- Is the pipe ready for acceptance by the owner?

The cleaning and inspection process provides early detection of any unknown conditions or design changes to allow for corrections. Project planning and precise details are collected to help keep the project on schedule and provide assurance and visual documentation that the work performed underground was properly completed, meets the project specifications and can be turned over to the owner without concern.