



DENVER
THE MILE HIGH CITY

CITY AND COUNTY OF DENVER

DEPARTMENT OF PUBLIC WORKS
Development Engineering Services

Public Works Permit Operations
2000 W. 3rd Avenue, Room 107
Denver, Colorado 80223-1027
Phone: (303) 446-3759
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www.denvergov.org/pwpermits

Trenchless Sewer Line Rehabilitation

Entrance Requirements

Authority:	<ul style="list-style-type: none"> ✦ Revised Municipal Code (RMC) of the City & County of Denver, Chapter 56, Section 56-41, Purpose (Administrative Authority). And “Utilities”, Article III. ✦ Public Works Rules & Regulations Governing Sewerage Charges and Fees & Management of Wastewater. ✦ Department of Public Works, Wastewater Management Division <i>WMD Standard Details</i>.
Purpose:	The purpose of this document is to summarize the key issues and process related to the rehabilitation of an existing building sewer line by means of either a pipe bursting or cast in place method, whether full line or partial.
Document Date:	June 1, 2010
Customer Interface:	Most communications between the Customer and the City will be done through Public Works Permit Operations (PWPO) and the PWPO Inspectors.

It is the intent of the Department of Public Works that all existing building sewer lines being repaired or replaced, partial or full, should be fully excavated, replaced with approved material and properly bedded to meet WMD standards. It is also required that all existing sewer lines installed or replaced be inspected by the PWPO Plumbing Inspector. Applicant should understand that trenchless rehabilitation of an existing sewer line can follow or imitate existing problems and that is in the best interest of the current and or future property owners to install new pipe with a fully trenched and bedded installation.

Considerations:	<ul style="list-style-type: none"> • Applications will only be considered for building sewer services, and not public or private main lines. Main line projects need to be reviewed by the Development Services Engineer. • All video submitted to PWPO become the property of the Department of Public Works. Videos submitted must be physically provided in digital format or available to download via the internet. • If a <i>Sewer Use & Drainage Permit</i> has been issued for the specific property, or it is the property owners intent to build over the existing sewer an <i>Application for Trenchless Sewer Line Rehabilitation</i> will NOT be accepted. • The City and County of Denver is NOT obligated to allow the request for <i>Trenchless Rehabilitation</i> of an existing sewer. • As with any construction the property owner agrees to hold the City and County of Denver harmless from any and all claims for damages which may arise from <i>The Trenchless Rehabilitation</i>. • If authorization is not granted by PWPO, or should a future problem arise associated with the <i>Trenchless Rehabilitation</i>, the Property Owner will immediately replace the building sewer service and connection. The reconstruction is the property owner’s responsibility and disputes about warranty cannot delay the repair. The repair must be made using an open excavation. • Top hat repairs will be allowed at connections if these requirements are met and the City and County of Denver Service Lateral Connection Sealing Specification is followed. For a list of approved methods please contact PWPO Inspections
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Installation and Inspection Requirements:	<p>Pre-Rehabilitation:</p> <ul style="list-style-type: none"> • A video inspection of the jet cleaned piping shall be performed to assure that the piping is clean and conditions are acceptable for <i>Trenchless Rehabilitation</i>. • For Trenchless Liners and Top Hat Repairs: <i>Public Works Plumbing Inspectors</i> will review video
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<p>Installation and Inspection Requirements Cont.</p>	<p>for a \$55.00 Fee. Please allow a minimum of 48hrs for review. Approval must be received prior to commencing with the work.</p> <p>Pre-Rehabilitation Cont.</p> <ul style="list-style-type: none"> • <i>Trenchless Rehabilitation Techniques</i> will not be allowed if there are low points, flat grades, or offset joints anywhere in the pipe greater than ½” for cast in place liners, and greater than 2” for pipe bursting methods. No offset joints will be allowed in the flowline. • <i>Trenchless Rehabilitation Techniques</i> are to be used in areas that make excavation prohibitive. (Example: under garages, small structures, retaining walls, etc.) Communication between the contractor and the Public Works Plumbing Inspector are crucial prior to construction to discuss the conditions that make the installation prohibitive and problems with the existing service. • The inspectors’ verbal acceptance of the specific method and site/pipe condition is critical to prevent incidences where portions of the trenchless line need to be reconstructed with open trench methods. The contractor shall call the Public Works Plumbing Inspector after the pre-video to discuss the site, offsets, low points, flat grades, lateral condition, or other conditions that may affect the project. Photo of the site shall be provided and show the current sewer lines direction with marking paint or cones. • Open excavated point repairs, or obstruction removal shall be performed by the contractor where video inspection reveals heavy solids, dropped joints, sags, collapsed pipe or any condition that might otherwise prevent completion of the <i>Trenchless Rehabilitation</i>. • All point repairs shall be performed in accordance with Public Works specifications and inspection. • The exact number and location of service laterals and/or connections to the building sewer service shall be determined by means of the video inspection and/or in-field verification. It shall be the contractors’ responsibility to accurately field locate, and reconnect all active service connections. • For any methods that expose both ends of the pipe, the contractor must survey both ends of the pipe at the connection points and calculate the average grade of the trenchless pipe. Any grades less than 2% must be brought to the Wastewater Plumbing inspector’s and homeowner’s attention prior to continuing any work. • <i>Pulled Pipe</i> must be the same or larger diameter than the existing pipe. <p>Installation:</p> <ul style="list-style-type: none"> • All polyethylene <i>pulled pipe</i> or <i>cast in place</i> material shall be fabricated and installed in strict conformance with the manufactures recommended specifications by properly certified technicians. Evidence of proper certification shall be available for all in-field installers at the request of the <i>Public Works Plumbing Inspector</i> <p>Inspection Requirements:</p> <ul style="list-style-type: none"> • All work must be done by a properly licensed Plumbing or Sewer Contractor and the licensed Plumbing or Sewer Contractor must call PWPO at 303-446-3759 with valid license no later that 3:30p.m. on the previous business day, to schedule inspections. • An on-site inspection of all connection points is required by <i>Public Works Plumbing Inspector</i>. Inspection to include flow test, air and or water test at the discretion of the <i>Public Works Plumbing Inspector</i>. • Upon completion of the pipe rehabilitation a pre and post inspection video will be required to be submitted, within three business days, to PWPO for review and final approval of the installation by <i>Public Works Plumbing Inspector</i>. Failure to submit the required video within the above stated time will result in restrictions on the ability to continue work in the City of Denver until the video requirements have been satisfied. If upon final review of the video inspection the rehabilitation is deemed unacceptable an open trench repair will be required. <p>✚ Submit video and Attachment A, (attached to this document) to Public Works Permit Operations.</p>
<ul style="list-style-type: none"> • Approval Process: 	<p>Once determination has been made regarding the rehabilitated sewer line, the <i>Public Works Plumbing Inspector</i> will contact Applicant/Property Owner and or the Contractor.</p>
<p>Fees:</p>	<p>✚ An inspection fee of \$55.00 will be charged upon submittal for each video tape review. Checks made payable to Manager of Finance</p>

Attachment A

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Hold Harmless Letter to Use a Trenchless Rehabilitation Technique for Repair

I, the undersigned, am the owner of the property at:

_____, and have read in its entirety the Trenchless Sewer Line Rehabilitation Entrance Requirements, and also agree to hold the City and County of Denver harmless from any and all claims for damages which may arise from the proposed use of a Trenchless Rehabilitation Technique as a portion of my sewer service lateral repair.

I also agree that, should a future problem arise associated with the newly repaired line, I will immediately excavate and repair or replace the sewer line and/or connection, as needed, at my own expense, under the terms and Conditions issued by WMD Plumbing Inspector, and Public Works Permit Operations.

I have also reviewed this document with my contractor making them aware of the requirements as outlined in the opening documents titled "Trenchless Sewer Line Rehabilitation Entrance Requirements" including review of a pre and post construction video of the repair method used.

CONTRACTORS SIGNATURE: _____ LICENSE # _____

Submitted by:

Printed Name of Property Owner _____ Date _____
Address _____ City _____ State _____ Zip _____
Daytime Phone _____ Fax Number _____
Email Address (if available) _____

Signature of Property Owner: _____

PW Approval by: _____ Date: _____
Uninspected Sewer.doc Rev. 06/01/10