

Open Cut Trench Excavation



Description

Open cut trench excavation is the traditional and most popular method for sewer lateral sewer construction, repair, or replacement. Open cut trench excavation consists of excavating a trench for the manual installation of each “stick” or piece of pipe. This method is usually the least expensive method if the pipe is located under non-pavement areas such as a front or back yard. The open cut trench method involves excavating down to and exposing the existing pipe so that it can be repaired or replaced and then backfilled. If the open cut trench excavation is located in a non-pavement area the excavation can be backfilled with soil and surface vegetation restored by seed or sod. When the open cut trench excavation is located under pavement the existing pavement must be saw cut and removed, the excavation filled with granular backfill (compacted stone or sand to prevent settlement), and the pavement must be replaced and the end of the pipe repair or replacement.

If a small section of pipe is being replaced a Fernco type coupling is used to provide a water-tight connection to the existing pipe. A Fernco type coupling consists of a rubber sleeve that the pipe fits inside of and is fastened to the pipes using stainless steel bands that wrap around the outside of the sleeve.

Advantages

- Can be less expensive than trenchless methods in non-pavement areas.
- Applicable for collapsed pipe, severely broken pipe, and heavy root blockages.
- Does not require roots or debris to be removed from the pipe.

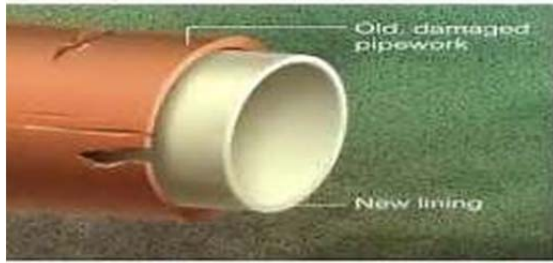
Disadvantages

- More excavation is required than compared to trenchless methods.
- May require remove of street and sidewalk pavement which increases expense of the repair.

Local Contractors

- See Yellow Pages under “Sewer Contractors

Cured-In-Place Pipe Lining



Description

A cured-in-place pipe (CIPP) is a trenchless rehabilitation method used to repair existing pipelines. CIPP is a jointless, seamless, pipe-within-a-pipe with the capability to rehabilitate pipes. A resin-saturated felt tube made of polyester is inverted or pulled into a damaged pipe. It is usually done from the upstream access point usually dug where the lateral exits the home. The liner can be inverted using water or air pressure. Hot water, UV light, ambient cured or steam is used to cure the resin and form a tight-fitting, jointless and corrosion-resistant replacement pipe.

Advantages

- Minimum amount of excavation required.
- May eliminate pavement removal and replacement costs.
- Only requires one access point.
- Jointless pipe that reduces root and water infiltration.

Disadvantages

- Can be more expensive than open cut trench excavation in non-pavement areas.
- Roots and debris must be removed from pipe before installation.
- Not applicable for collapsed, severely broken pipe, or heavy root blockages.

Local Contractors

- Stephens Excavating 217-202-3385

Pipe Bursting



Description

Pipe bursting is a trenchless method of replacing buried pipelines without the need for a traditional construction trench. "Launching and receiving pits" replace the trench needed by conventional pipe-laying. Pipe bursting, which can be either pneumatic, hydraulic expansion or static pull, fractures a pipe and displaces the fragments outwards while a new pipe is drawn in to replace the old pipe.

Typical pipe bursting involves the insertion of a conically shaped tool (bursting head) into the old pipe. The head fractures the old pipe and forces its fragments into the surrounding soil. At the same time, a new pipe is pulled or pushed in behind the bursting head. Typically PVC or HDPE pipe is utilized for the new pipe in the pipe bursting process.

Advantages

- Minimum amount of excavation required.
- May reduce pavement removal and replacement costs.
- Jointless pipe that reduces root and water infiltration.
- Can increase the diameter of existing pipe.

Disadvantages

- Can be more expensive than open cut trench excavation in non-pavement areas.
- Roots and debris must be removed from pipe before installation.
- Not applicable for collapsed, severely broken pipe, or heavy root blockages.

Local Contractors

- Stephens Excavating 217-202-3385
- Mid-State Excavating 217-202-0850