



Understanding Sewer Pipes

Orangeburg Pipe

Orangeburg pipe is bituminized fiber pipe made from layers of wood pulp and pitch pressed together. It was used from the 1860s through the 1970s, when it was replaced by PVC pipe for water delivery and ABS pipe for drain-waste-vent (DWW) applications.



Lifespan - approx. 50 years



Issues

- Pipe deterioration
- Common for the pipe to become egg shaped and limit flow
- We do not recommend water-jetting as it can shred the pipe



Also Known As

- Fiber Conduit
- Bituminous Fiber Pipe
- Bermico

Cast Iron Pipe

Cast Iron pipes are commonly found in older homes. Compared to the newer PVC pipes, cast iron drains are much quieter during operation; but at the same time they might prove to have significant, and quite expensive, problems.



Lifespan - approx. 50 - 75 years



Issues

- Corrode and crack overtime
- Cracks can lead to root intrusion and cause odors
- Continually cleaning thins the pipe leaving it vulnerable to punctures

Clay Tile Pipe

Clay tile is very good in many aspects. It doesn't rust, rot, or decay. It is unaffected by sewer gases and acid action. However, it was typically installed with cement at joints every three feet which can deteriorate from sewer gasses.



Lifespan - approx. 50 - 60 years



Issues

- Common root intrusion which can break the tile
- Weight of clay Increases freight and labor costs
- Concrete joints are susceptible to deterioration from sewer gasses

PVC Pipe

PVC is believed to have a life span of 100-300 years. However, if there was improper engineering or installation problems can arise. The most common issue we see in the area is sagging lines caused by a lack of proper bedding or excessive ground settling. These lines hold water which traps toilet paper and solids, which causes sludge to build up.



Lifespan - approx. 100 - 300 years



Issues

- Requires proper installation

Combinations

It is very common to see 4" cast iron leave the house and change to 6" clay in the yard. If there is not a **cleanout** in the 6" portion of the line, it's not possible to clean that portion of the line adequately. They put a 4" tool into the line which pokes a hole in the roots of the 6" line, leaving roots behind that catches toilet paper and solids, which eventually plugs the line.

Positive Slope

A line should flow with a Positive Slope. This slope allows the waste to move down the line as it should. Without a slope, the waste will not move. This will cause drains to move slow and will eventually backup when the wrong types of products are flushed.

Belly | Low Area | Sag

A belly in a sewer line, sag, or low area is often caused by geological events such as soil erosion, foundation settlement, earthquakes, or by human error such as poor soil compaction or poor installation.

Channeling | Troughing

Sewer line channeling occurs when the pipe has eroded away a line over time.

Separation | Offset Joint

Separation can happen at a fitting, where two pipes connect, causing a gap. This is often due to ground movement.



Causes of Sewer Line Damage

Tree Roots

One of the most common causes of sewer line damage is tree roots. Roots follow sources of water as they grow, so they are naturally attracted to sewer lines that carry liquid waste. Roots that come in contact with a sewer pipe begin to wrap around and break into pipes. Clay sewer pipes, typically found in older homes, are the most susceptible to damage from tree roots.

Corroded Pipes

Cast Iron pipes are at a high risk of corroding due to calcium and magnesium build-up from regular wear and tear. If corrosion is left untreated, it can leave the pipe susceptible to leaks and cracks.

Clogged Pipes Due to Debris

Sewer lines are only capable of handling human waste and toilet paper. We recommend avoiding flushing trash like wrappers, paper towels, wipes, and feminine products as they're unable to properly disintegrate and can cause blockages.

Pro Tip: Cooking oil and grease can also clog pipes if they're poured into the sink. Wipe and toss or pour these liquids into a container and then dispose of them in a trash can.

Extreme Temperatures

During cold weather, frozen pipes can bust as a result of the expanding ice. Extreme heat can also lead to broken pipes.



Signs of Sewer Line Damage

Flooding or Smells

Sewer lines can be buried anywhere between a couple of feet to six feet below the ground. Sewer lines closer to the surface with a broken pipe can quickly begin to pool water which seeps through the grass and becomes visible on the surface. You may be able to smell the sewage before it surfaces, as sewage gas can seep through your yard's soil.

Draining Issues

You can detect a blockage in the main sewage line if multiple draining areas in the home are clogging. Toilets can warn of severe blockages if strange gurgling sounds occur when air gets pushed back up the line.

Water Damage

Water damage can occur if a drain line leaks or breaks in the home. One of the first signs is mold spreading on the floors or walls. This could point to a broken sewer line within the home, in which case you should call a plumbing service immediately.