



A typical deteriorated culvert close to failure, potentially leading to road collapse and danger to the motoring public.

A Snap-Tite® installation. Faster. Easier. Safer.

Although every culvert project is different depending on location of the culvert and condition of materials in place, almost any culvert can be rehabbed using the Snap-Tite® Culvert Lining System.



The same culvert, excavated and prepared for Snap-Tite® rehab. Since the pipe was so deteriorated, this project required the installation of a corrugated metal sleeve to accept the new pipe. A concrete footer was also poured.



The first piece of Snap-Tite® HDPE is lowered into position and inserted into the host pipe.



A gasket is installed on the next piece of pipe, assuring a watertight seal when connected, meeting ASTM D3212 requirements.



The second piece of pipe is lowered into position, and lined up with the first piece.



Using chains and pressure from the excavator, the two pieces of pipe are 'snapped' together. The process is repeated until connected sections of Snap-Tite® are pushed through the entire length of the culvert.



Different length PVC pipes that will deliver the grout flow are installed, and both ends of the pipe are sealed.



Workers prepare the low density cellular grout that will be pumped into the pipe.



The grout is pumped into the entire length of the pipe, filling in all voids between the new and host pipe, and the areas between the pipe and roadway.



The totally rehabbed Snap-Tite® culvert. Nearly all the work was completed off-road in the culvert itself. No road closure or traffic interruption occurred.



Snap-Tite® Culvert Lining System



The problem.



State Departments of Transportation, counties and municipalities are facing a critical problem. Culverts installed forty to fifty years ago are failing at an alarming rate nationwide. Thousands of corrugated metal culverts are so significantly rusted that a danger of sink holes, road collapse or flooding exists. Concrete culverts have cracked or pulled apart at the joints, creating similar dangerous scenarios. Conventional repair methods of the past have been to dig and replace the failed pipe. There is now a dash to find a solution that is economically feasible, quick, and avoids road closures and detours for the motoring public.

The no-dig trenchless solution.

SnapTite®

The Snap-Tite® HDPE Lining System is ideal for failing metal and concrete culverts.

Today, there's an economical, no-dig solution with field-tested benefits, proving that rehabilitation is a better solution – with the Snap-Tite® Culvert Lining System.

Utilizing solid wall high density polyethylene pipe (HDPE), a Snap-Tite® system actually outperforms the pipe it replaces. HDPE's smooth interior surface delivers better throughput – and with the inclusion of a gasket, assures a watertight seal at all joints, meeting ASTM D3212 requirements.

Snap-Tite's® patented male/female machining at each end of the HDPE allows it to be 'snapped' together, piece by piece, and pushed into the full length of the existing pipe. It is available in lengths from 2 feet to 50 feet long, and is available for existing culverts with diameters from 8 inches



to 84 inches. Unlike other so-called 'rehab systems,' the annular space between the host pipe and the new Snap-Tite® pipe is filled with a low density cellular grout, which fills in any voids between the roadway and culvert, delivering a truly 'rehabbed' culvert.

Snap-Tite® is easy to install. Nearly all the culvert renewal can be done off road with minimum disturbance to the right of way, without road closures. Most jobs can be completed with a backhoe, shovels, a come-a-long and chains – and most highway or road contractors can use their own crews without the need for special training or specialized equipment.

Flow Comparison Snap-Tite® vs. Corrugated Metal Pipe												
	I.D.= Interior Dimension						O.D.= Outer Dimension					
Existing CMP	15" I.D.	18" I.D.	21" I.D.	24" I.D.	30" I.D.	36" I.D.	42" I.D.	48" I.D.	54" I.D.	60" I.D.	72" I.D.	84" I.D.
O.D. Snap-Tite	12.75" O.D.	14" O.D.	18" O.D.	20" O.D.	24" O.D.	32" O.D.	36" O.D.	42" O.D.	48" O.D.	54" O.D.	63" O.D.	63" O.D.
% of Flow	142%	112%	145%	135%	121%	160%	145%	154%	160%	166%	154%	102%

n CMP = 0.024, n Snap-Tite® = 0.00914

Other size Snap-Tite® liners are available for the existing sizes above.



The bottom line...

Snap-Tite® is the better solution for three key reasons:

- 1** The rehabilitated culvert will have the same – or greater flow – than the existing culvert. This is a true 'rehab' since the space between the host pipe and the Snap-Tite® pipe, as well as the space between the pipe and roadway, is filled with cellular grout.
- 2** Installation is easier, safer and less disruptive to traffic and property. Existing crews can be used without the need for special training or specialized equipment.
- 3** The joints are watertight and secure, and the HDPE delivers a nearly indefinite service life.



Turn page for installation photographs