

CASE STUDY

TRENCHLESS CULVERT REHABILITATION, CITY OF BRANTFORD

The Challenge

A corrugated steel stormwater pipe ran 20 feet beneath Oxbow Road, a dead-end road serving a small community at its end. The culvert had corroded over years of service and was beginning to sag at the midpoint, putting it at risk of collapse.

Oxbow Road is the community's only access route, so open-cut replacement would have been a massive challenge. Excavating down to the culvert could have taken multiple weeks and closed the road for the duration - cutting off residents and, more importantly, emergency access for police, fire, and ambulance. The alternative was to install a temporary road for the duration, which would have added significant cost and safety risk.

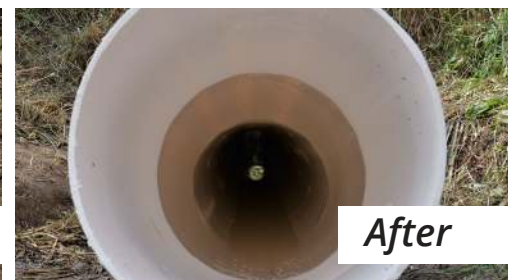


The Solution

Wessuc lined the existing culvert in place with a thermoformed PVC-A liner, a trenchless system that rebuilds the pipe from the inside. The crew completed a single 70-ft run, ditch to ditch, restoring the 15-inch line's structural integrity without excavation.

The Thermoform approach used no chemicals or resins, which mattered on an environmentally sensitive site. It also kept the road open - the crew worked from a single lane with live traffic managed around them, so residents and emergency services kept full access throughout.

The install took less than a day to complete with a six-person crew - one shift, compared to a multi-week open-cut replacement. CCTV inspection was run before and after to confirm the condition of the pipe.



Under 1 Day
INSTALLATION TIME

6 Person
CREW SIZE

0 Road
CLOSURES

0 Harsh
CHEMICALS

The Process:



- 1. Pre-installation CCTV**
Condition assessment and liner sizing.



- 2. Cleaning & preparation**
High-pressure flush; bypasses and point repairs as needed.



- 3. Liner warm-up**
Steam softens the PVC-A material for insertion.



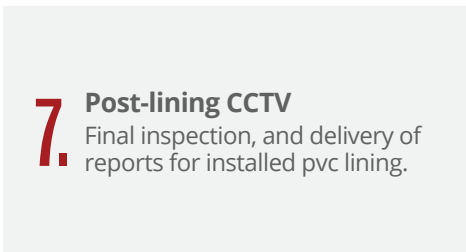
- 4. Pull-through**
Softened liner is winched through host pipe.



- 5. Inflate & form**
Steam and air pressure expand the liner tight to the pipe wall.



- 6. Cool & set**
Cooled air hardens the liner, and extra pipe is cut off.



- 7. Post-lining CCTV**
Final inspection, and delivery of reports for installed pvc lining.



The Result:

- 50-year expected service life.
- No loss of community or emergency access during the work.
- Less than 1 day process versus multiple weeks for open-cut replacement.
- No excavation and no chemicals, with before-and-after CCTV verification.