

# Project Spotlight

## Frost Gully Culvert U.S. Route 1- Freeport, ME

Owner: Veterans MaineDOT

General Contractor: CPM Constructors

Sub Contractor: CLH and Sons



### Background Information

Freeport, Maine has long been known for its storefronts, perhaps particularly the L.L. Bean store in the center of town. As one of the main thoroughfares through Freeport, US Route 1 is vital to the area commerce. In 2016, the Frost Gully Crossing on U.S. Route 1 about a mile north of Freeport began to degrade, and a sturdy rehabilitation solution was needed.

Many aspects of this location made this project a perfect sliplining application including heavy traffic and an adjacent building in the embankment. They were visible signs of the host structure failing, such as road cracking and the loss of the slopes soils.

### Project Details

A rehabilitation of the Frost Gully Crossing using a Tunnel Liner Plate Structure (manufactured by Contech and specified by Don LeBlanc of ISCO Industries) included shoring up the embankment, repairing and filling the culvert and finally resurfacing the roadway. "The original plan was to slipline with a circular pipe culvert, but the host pipe had varying dimensions through the length. The tunnel liner was chosen to meet the required waterway area", said Mr. LeBlanc.

The culvert structure rehabilitation required the filling of significant annular space, and contractor CPM Constructors chose to use Aerix Industries Aerlite-iX™ non-pervious cellular lightweight concrete as the annular fill material.

The Aerlite-iX™ was chosen because of its extreme lightweight, flowability, and high compressive strength. Using lifts, the crew installed 150 cubic yards of Aerlite-iX™ cellular lightweight concrete, pumping it approximately 100 linear feet into the culvert space. The installation began on August 8, 2016 and was completed in less than two days.

### Aerix Added Value

The use of Aerix's Aerlite-iX™ on this project not only provided efficient installation but also offered the compressive strength and durability required to support this culvert and its overlying roadway. Because of Aerix, U.S. Route 1 and the town of Freeport quickly returned to business as usual.

