



Atlantic Industries Limited

PROJECT PROFILE



March 14, 2017

Custom Super-Cor Box Culvert bumps concrete alternative and saves Ontario town 20%

VALUE ENGINEERING CASE STUDY

The Town of Essex, Ontario, originally tendered this replacement project a year earlier, specified as a concrete box. However, the project did not make it past Town Council due to its cost. AIL was subsequently contacted by the Town's consulting engineer to see what we could offer as an alternative. We had an initial meeting and quickly came back with a custom geometry that met their unique hydraulic capacity and height of cover requirements.

Our Super•Cor Box Culvert with partial Best-Kote Polymer Coating and Steel Sheet Pile Headwalls ultimately saved the Town about 20% over the previous concrete box option.

Project at a glance:

Name: Brush Road Replacement Culvert

Location/Owner: Town of Essex, Ontario

Engineer: Baird | AE

Contractor: SheaRock Construction Group Inc.

Sector: Value Engineering, Public Works

Application: Stream Crossing (Replacement)

Product: Custom Super•Cor Box Culvert (Best-Kote legs)

Dimensions: Span 6.25 m, Rise 2.68 m, Length 36.65 m (48 rings)

Installation Time: One week for structure, two days for sheet pile headwalls



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Skewed crossing improves sightline issue

The previous road alignment had dangerous 90-degree turns on each bridge approach, so the project included a significant change to the road alignment to smooth that out and eliminate the dangerous sightline issue. The new culvert was installed at a 57-degree skew to the road. The design also had to conform to a low cover of only 600 mm.

AIL Engineering provided a multiple gauge structure design that included Best-Kote Polymer Coating on the leg portions.

The contractor was new to building Structural Plate Bridges so we offered our support for the first few days of the installation. They quickly got the hang of it and we only dropped back for the initial day of sheet pile headwall construction. Again, they understood the system quickly and were able to complete the walls with great speed and quality workmanship.

Both the contractor and the owner were very pleased with how this came together and they look forward to future projects down the road with AIL Structural Plate solutions. The contractor, ShaeRock Construction Group Inc., had the following to say about the project:

“It was a pleasure to work with a supplier who was so involved with their product from start to finish. Your team was involved prior to the bidding stage with the owner until final completion of the project, including help with the install. The professional sales team took pride in seeing their product and assisted everyone involved along the way. The product itself appeared to be daunting at the beginning, but with careful planning and execution, the project went as smooth as could be. We hope that more of these types of projects come to our area and we look forward to building a lasting relationship.”

—Daryl Rocheleau, General Manager

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