



March 6, 2018

## Two Galvanized Girder Bridges skew into Harbourville, Nova Scotia

Harbourville is a tiny village on the shores of the Bay of Fundy — home of the world’s highest tides and the annual High Tide Festival. Givan’s Brook and Hamilton Road criss-cross through a winding ravine into the community where two multiple-culvert crossings were in dire need of replacement. The Nova Scotia Department of Transportation and Infrastructure Renewal issued a tender call for a Design-Build solution.



### Project at a glance:

**Project Name:** Givan's Brook Bridges

**Location:** Harbourville, Nova Scotia

**Owner:** Nova Scotia Department of Transportation and Infrastructure Renewal

**Engineer:** CBCL

**Contractor:** Spicer Construction

**Product:** Prefabricated Girder Bridges

**Application:** Stream Crossings

**First Bridge Dimensions:** Length 16 m, Width 6 m

**Second Bridge Dimensions:** Length 11 m, Width 6 m

**Installation Time:** Total of one week for both bridges



### **Design-Build solutions featured 44° and 46° skews**

Algonquin Bridge designed and supplied two radically skewed Galvanized Beam Bridges in a Design-Build partnership with CBCL Engineering and Spicer Construction. The spans were 16 m and 11 m with a common 6 m width. The degree of skew combined with a galvanized finish created some unique challenges as the elongated sections still had to fit into the tank for full galvanizing.

### **Galvanized finish ideal for coastal region**

Being so close to the coastline, galvanizing was a real benefit for these bridges. We custom-designed each span in three sections so they could still fit in the galvanizing tank. The resulting design innovations also saved fabrication time and allowed for more efficient shipping.

We worked closely with CBCL to have good transition from the abutments to the deck surface and the assembly/placement went very well, according to Spicer. A treated timber wearing surface was installed by Spicer on-site allowing for a minimum amount of joints.



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