



Atlantic Industries Limited

# PROJECT PROFILE



## Bolt-A-Plate stream crossing used for pipeline's temporary construction access route

As part of TransCanada's Mainline Expansion Project in the City of Vaughan, Ontario, a direct access point was needed to connect one work site to another across a small creek that is protected by an Environmental Protection Plan (EPP). The creek habitat could not be disturbed under any circumstances and only minimum disturbance would be allowed for the surrounding area.

### **Bolt-A-Plate considered best of three options**

The project partners looked at three options — including span bridges with engineered abutment structures or pile supports — before selecting the AIL Bolt-A-Plate Arch with integrated steel footings for its lower cost, faster schedule, ease of installation and minimal environmental impact. This Bolt-A-Plate solution was the best practice to manage the stakeholders' triple bottom line: environmental responsibility, social responsibility and cost.

### **Project at a glance:**

**Name:** Vaughan Mainline Expansion  
Temporary Crossing

**Location:** Vaughan, Ontario

**Owner:** TransCanada

**Contractor:** Banister Pipelines

**Product:** Bolt-A-Plate Arch/Footings

**Sector:** Public Works

**Application:** Temporary Stream Crossing

**Dimensions:** Span 5.49 m, Rise 2.72 m,  
Length 31 m

**Installation Time:** Two weeks





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## **“Black” steel with integrated steel footings**

With its temporary service life, our Bolt-A-Plate Arch was supplied as “black” steel, without the typical galvanized coating. At the end of its use, the structure will be dismantled and reused or recycled — steel being one of the world’s most recycled materials.

## **Comprehensive measures to protect creek habitat**

In the course of the project, the contractor, Banister Pipelines, undertook comprehensive measures to protect the creek habitat. No excavation of vegetation or topsoil was permitted, so a giant green geomembrane was installed over the entire worksite at the outset. This textile will be peeled off when the crossing is disassembled within 6-12 months. On top of this layer, wooden footing structures were created and filled as an extra measure to avoid site impact. Then Bolt-A-Plate footings and arch were assembled. To avoid harmful foot traffic over the stream bed, a suspended wooden working platform was installed over the Bolt-A-Plate footings. Finally, a black geotextile was installed over the completed structure to prevent any possible leachate reaching the stream bed.

AIL representatives ensured that the project was on time and budget by gathering all the required information prior to the final design. Our full-service approach included the pre-construction meetings, design, manufacturing, supply and on-site assistance. Post-project follow-up with Banister indicates that they are happy with the results for this application and that they had adequate settlement ranges.



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