

New bridge delivers solution to annual flooding

Bridging Case Study



McCutcheon Bridge, Canada

Customer: The Town of Bracebridge | **Solution:** Mabey Compact 200™



The Challenge

The small town of Bracebridge in Ontario, Canada, is renowned for its waterfalls and scenery. But after 109 years, residents were preparing to say farewell to the historic McCutcheon Bridge as the stone and concrete structure had succumbed to more than a century of wear and tear. The bridge was important to the community, not only because it served as a crossing point, but also because it was a popular point of interest for photographers, painters, and sightseers.

A replacement for the bridge was recommended in the Town's 2008 Bridge Needs Study – a Municipal Environmental Assessment to investigate alternatives to address both the structural and hydraulic deficiencies experienced at the McCutcheon Bridge. The Bridge had needed a lot of upkeep in recent years, but there was also a problem with its narrow streambed opening, which was prone to cause flooding in the area every spring. Whilst the local community was sad to lose a much-loved landmark, they also held out hope that a replacement would soon put an end to the perpetual yearly flood.

The Solution

In April 2014, Fowler Construction Company Limited was awarded the contract for the replacement of the McCutcheon Bridge. The chosen replacement solution was an easy-to-install Mabey Compact 200™ modular panel bridge supplied by Algonquin, the local distribution partner for Mabey. The galvanized steel structure, with its anti-skid, epoxy aggregate decking and 27.4m span would deliver many years of trouble-free service.

The Mabey C200™ system is the most popular pre-fabricated steel panel bridge system in the world. It is the latest development of Sir Donald Bailey's original Bailey Bridge System that played a key part in Allied troop movements during the Second World War and in the reconstruction efforts that followed.

A detailed design was prepared which would see the new McCutcheon bridge installed 13m north of the old bridge. Crucially, the new bridge would have the capacity to comfortably weather a 50 year storm event, and would meet the acceptable parameters expected in the Provincial Policy Statement for infrequent 500 year storm events.

Once the site was prepared with new abutments, Algonquin Bridge provided a site advisor and a customised construction and launching strategy. A local construction team installed the Mabey C200™, without the need for a crane, by launching the structure from one side to the other, attracting interest from many curious onlookers who gathered to observe the ingenious launching process.



The Result

The new McCutcheon Bridge was opened for traffic on Monday September 29th 2014. Installation had taken just three days. The new bridge will ensure safe access for residents and emergency vehicles across the Black River, improving the river hydraulics, and reducing upstream water levels during high flow events, whilst increasing the load carrying capacity of the crossing over the previous structure.

Marvelling at the speed and efficiency of the installation, the local community has rallied around their new bridge and has come to embrace it as the beginning of a new era for the town of Bracebridge. The original bridge may be gone but it is not forgotten, and portions of the old bridge's concrete railings have been saved for potential use as an onsite garden backdrop.

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