



Chief William Commanda Bridge Rehabilitation

OWNER	City of Ottawa
CONTRACTOR	Green Infrastructures Partners (GIP)
ENGINEER	Parsons Engineering
LOCATION	Ottawa, ON

The Chief William Commanda Bridge was first built in 1870, with the superstructure reconstructed in 1926. The City of Ottawa purchased the railway bridge from the Canadian Pacific Railway (CPR) in 2005, and in 2019, the decision was made to construct a multi-use pathway (MUP) on the inactive bridge and rehabilitate the bridge's substructure. This unused rail structure rehabilitation was part of the City of Ottawa's active transportation strategy to provide alternative travel options across the Kichi Sipi Ottawa River between eastern Ontario and Western Quebec. It would connect pathways near Bayview Station in Ottawa and the southern tip of Gatineau Park, filling an approximate 4 km gap in river crossings between the Portage and Champlain bridges.



The Challenge

The disused rail bridge sat on eleven piers, requiring rehabilitation and reinforcement using concrete forms. The form material also needed to act as a jacket around the piers to protect from floating ice and river debris. The contractor could only supply drawings dating back to the 1970s. These could be used as a starting point to design the pier jackets; however, underwater inspection, including riverbed variations, would be required before manufacturing.



The Solution

In 2019, Armtec was involved in the rehabilitation of Gannon's Narrows Bridge. Multi Plate was used to construct the concrete forms, which remained in place to provide additional pier protection. Parsons Engineering contacted Armtec for assistance with a similar design. Multi Plate structural plates were again recommended to construct the forms. The lightweight, bolted corrugated sections lent themselves to the intricate underwater construction and deep riverbed variations. The plate shape design was customized to fit each individual pier. The jackets were flat on the sides and back, excluding the radius on the back end, and fully curved at the nose.

The plates were modified as needed throughout the design and installation phases to match changes to the pier shape and riverbed. The installation went smoothly, with onsite support provided by Armtec. Overall, this project has had a significant impact on the communities of Ottawa and Gatineau. Approximately 9,000 to 10,000 walkers and cyclists now cross the Chief William Commanda Bridge daily, offering an active transportation solution linking two provinces and communities.



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