



2015 AWARDS FOR ENGINEERING EXCELLENCE

Lieutenant Governor's Award for Engineering Excellence

Design & Construction Engineering of the Champlain Bridge Superbeam and Modular Truss



Consultant

Buckland & Taylor

Owner/Client

Jacques Cartier and Champlain Bridges Inc.

Category

Transportation & Bridges

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The main objective for this project was to quickly and safely stabilize the Champlain Bridge – Canada's busiest bridge – after a major flexural crack was discovered in one of its essential post-tensioned girders. This resulted in an emergency situation that led to the closure of the majority of the lanes on the bridge. Buckland & Taylor (B&T) responded quickly with a solution that would allow the bridge to reopen and restore public confidence in the safety of the Champlain Bridge.

Working closely with the Owner, Jacques Cartier and Champlain Bridge Incorporated, B&T's early design, erection procedure planning and fabrication of a stabilizing component – the Superbeam – the Champlain Bridge was fixed in a short 48 hour window and safely reopened to the public just two weeks after the emergency situation was detected. Importantly, there was minimal impact to commuters and the flow of commercial goods on the bridge, despite challenging winter working conditions.

After the winter weather subsided, a steel truss was discreetly installed from barges beneath the bridge as a permanent solution and the temporary Superbeam was removed. This allowed the bridge to reopen to its full capacity – including its essential public transit lane.

The combination of these two components, the Superbeam and steel truss, has kept Canada's busiest bridge open and safe despite the challenges of weather and working from the weakened bridge itself. B&T's innovative approach, responsiveness and expertise played a critical role in the safe completion of such a large and complex project.