

Woburn Library Extension

Lindapter Hollo-Bolts provided a solution for securing a cantilevered entrance canopy.

Project Background

Location: Woburn, Massachusetts, USA
Market: Architectural
Product: Hollo-Bolt® by Lindapter®
Architect: Childs Bertman Tseckares
Engineer: Thornton Tomasetti, Boston

Woburn Public Library was built in 1879 and is a significant landmark within the City of Woburn with listed status on the National Register of Historic Places.

In recent years the exterior envelope and roof had deteriorated resulting in water ingress, furthermore it was recognized that the interior spaces could no longer meet the changing demands of library visitors.



Client Requirement

A feasibility study for renovating the historic library and extending it with a modern wing was conducted. There were two phases to the project, first the restoration of and renovations to the existing building and secondly the construction of a new three level steel framed extension to the rear of the building.

It was on the entrance to the new extension that the engineer identified a need for a method of connecting a steel cantilevered canopy.



Hollo-Bolts connect the canopy to the entrance



New steel framed extension and entrance

Woburn Library Extension

Design Solution

The engineer specified the Hollo-Bolt, an expansion bolt that requires access to only one side of a Hollow Structural Section (HSS).

Hollo-Bolt was chosen as it offered significant benefits including, fast installation, high strength capacity, and a wide range of independent technical accreditations, which include the CE Mark, TÜV and ICC-ES Seismic approvals.



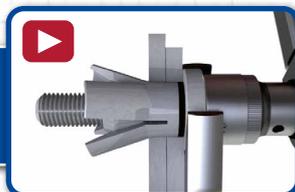
The connection design also incorporated a 1/2" thick non-compressible thermal break between the SHS and canopy to comply with building code regulations.

Installation

Contractors used size 5/8" hexagonal head Hollo-Bolts to connect the cantilevered canopy to the HSS of the entrance. Installation was quick and easy as each bolt is simply inserted into predrilled holes and tightened with a torque wrench to the recommended tightening torque to provide the necessary clamping force.

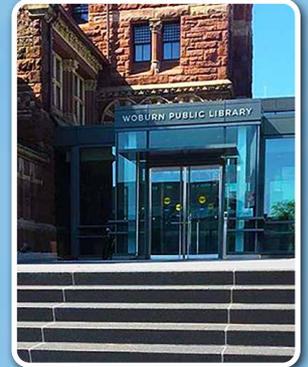


[Click here to watch the installation video >>>](#)



Result

The design of the steel framed extension along with the specification of Hollo-Bolts provided sufficient moment strength to hold the cantilevered canopy.



The result is a covered entrance with no column interference and a clean, modern appearance.



We specified Lindapter Hollo-Bolts to support the cantilevered canopy due to the product's versatility and independently approved loading capacities. We are pleased with the result and intend to highlight the canopy and its detailing in our project portfolio.

Senior Associate, Thornton Tomasetti



Key Benefits

- ✓ Fast, cost saving installation from one side
- ✓ Suitable for square, rectangular and circular hollow sections
- ✓ No field drilling or welding
- ✓ Seismic approved for SDC A through F
- ✓ High resistance to shear and tension



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