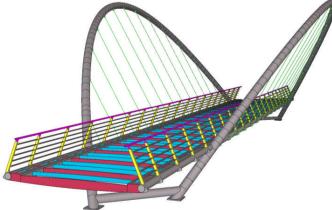


Case Study—Bespoke Butterfly Arch Truss, Manchester—Carillion







Details

Client: Carillion Infrastructure

Location: Manchester Piccadilly

Length: 33m

Width 3.5m

Form: Skewed Bespoke Butterfly Arch Truss Bridge

Project Description

CTS were appointed to design, manufacture and install the attractive bespoke footbridge in the busy and restricted city centre location of Piccadilly, Manchester

From initial architectural concept drawings, CTS developed the bridge design to maintain both aesthetic intent and buildability.

Installation appropriate to the inner city location was the governing parameter in the bridge's design; resulting in a tied arch solution. The constrained site, over a busy road and adjacent to a train line, required a simple, single lift for safe and fast night installation.

Due to the width of the completed structure transportation as a fully assembled form was not possible and the inner city location could not provide an vacant plot for a ground level assembly area. To overcome this challenge CTS used the roof of the adjacent building as the assembly area to fabricate the elements into the final bridge superstructure.

Lighting can be incorporated in landmark schemes to provide interest or security. The soffit of the deck, which is suspended from a tied arch with cables, incorporates feature openings to allow light to spill onto the street below.

The striking design was drawn in a 3D computer package to enable precision in the fabrication of the complex geometry.

The result demonstrates clean lines and elegant detailing to ensure a successful landmark footbridge.

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