



Modular Bridge Facilitates Bristol Airport's Terminal Upgrade

Acrow's temporary steel structure supports critical airport operations during construction works

Serving southwest England since the 1920s, Bristol Airport has grown alongside the surrounding region's increasing population and continues to invest in major infrastructure upgrades. A current multi-year expansion program includes terminal upgrades designed to enhance the passenger experience, together with airfield improvements that will support an annual capacity of up to 12 million passengers.

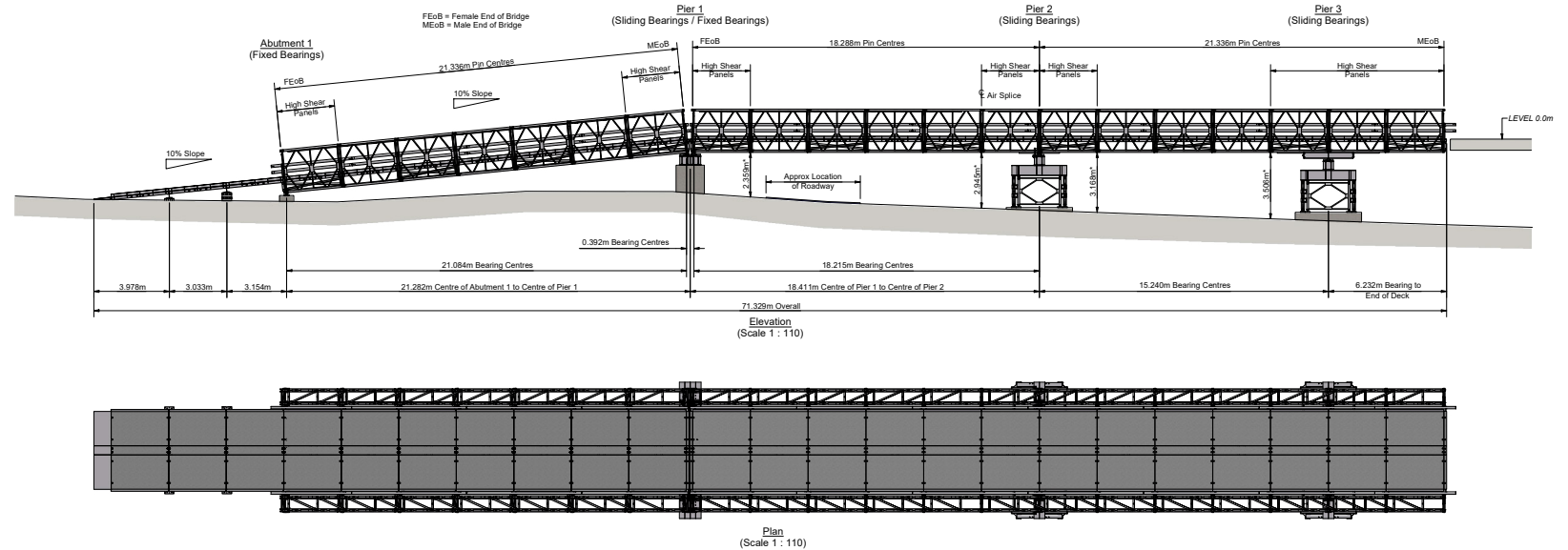
As part of the project, an Acrow 700XS® modular steel bridge was hired by Farrans, a Sisk Company, to connect both landside and airside areas on the construction site. The temporary installation allows construction vehicles to travel from landside, directly over the airside zone to an elevated coach deck approximately 3 metres above ground level, eliminating the need to enter restricted airside areas. This solution has increased efficiency by reducing special permitting requirements, accelerating material delivery times and helping manage overall project costs.

Maintaining uninterrupted access was a critical project requirement. The route beneath the structure provides the only access for baggage handling operations, and baggage delivery vehicles would need to pass freely at all times

during the expansion works. The completed bridge provides a minimum clearance of 2.2 metres from ground level to the underside of the structure, ensuring continuous 24-hour access for airport operations.

The bridge total length measures 71.33 metres, with three fabricated spans of 21.28 metres, 18.41 metres and 21.47 metres, plus an additional 10.17m access ramp. The single-lane bridge is 4.2 metres wide and incorporates an epoxy anti-skid deck. Designed to accommodate a single 44-tonne vehicle as defined in CS454, the structure was lifted into place by crane. Acrow also provided four support towers, with installation completed under challenging site conditions, including restricted overhead clearance and a four-hour lifting window.

The Bristol Airport installation demonstrates how modular steel bridges can help keep complex infrastructure projects on schedule while enhancing safety and minimising disruptions to day-to-day operations. Rapidly deployed and engineered to meet site-specific requirements, Acrow's temporary bridge solution provided the versatility needed to support efficient construction logistics while maintaining uninterrupted access to critical airport functions.



Specifications

Bridge length:

71.33m total - 3 spans plus 10.17m access ramp

Roadway width:

4.2m

Towers:

Acrow supplied 4 steel towers, constructed with 4 half-bay (1.524m high) bridge panels arranged in a square, connected with corner brackets.

Parapets:

TL-2 Parapets

Deck surface:

Anti-skid epoxy aggregate

Bridge erection method:

Crane lift in

Design load:

Single 44t vehicle as defined in CS454

Standard Acrow bridge finish:

- All major components galvanized to AASHTO M111-ASTM A123
- All bolts are hot-dip galvanized
- All pins are electrogalvanized

Standard Acrow bridge specification:

- (A) Panel chords, diagonals, verticals, reinforcing chords, rakers to AASHTO M223 GD 65
- (B) Raker braces, transoms, top chord braces, swaybraces, transom braces, diagonal chord braces, decking to AASHTO M223 GD 50
- (C) Panel pins to ASTM A 193 GD B7
- (D) Bolts to AASHTO M164M - A325