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Acrow Aids Reconstruction Efforts After Massive Earthquake in Chile

1.47-kilometer-long structure provided emergency access across the Río Biobío in Concepción

Located in the active Ring of Fire region known for seismic activity, Chile has a long history of catastrophic earthquakes. In February 2010, such an event occurred off the country's coast. Registering 8.8 on the moment magnitude scale, the earthquake, followed by the resulting tsunami and strong aftershocks, caused massive destruction. Over 220,000 homes were destroyed and more than 500 people lost their lives.

Concepción, the capital of the Biobío region and Chile's second largest city, was among the areas hardest hit. Three bridges over the Río Biobío serving Concepción had either collapsed or were badly damaged. This made rescue and recovery efforts difficult, and reestablishing a reliable and safe transportation network became a critical need for the city and its economy.

Working closely with the Chilean Government in the immediate aftermath of the earthquake, Acrow presented a bridging solution that would urgently restore connectivity across Chile's widest river. Designing for a structure 1.47 kilometers in length, Acrow's proposed two-lane emergency bridge consisted of 37 spans, each having a length of 39.62 meters (130′).

Upon project approval, Acrow's prefabricated modular steel components were shipped to Concepción, where the bridge was constructed and commissioned in 81 days, in partnership with the Chilean Army and local contractors. After more than 5 years of high-traffic use across the Río Biobío, the Acrow bridge was then disassembled and its 37 separate spans redeployed for permanent use in other parts of Chile, continuing a legacy of service through enhanced connectivity.

acrow.com
bridges@acrow.com
+1.973.244.0080

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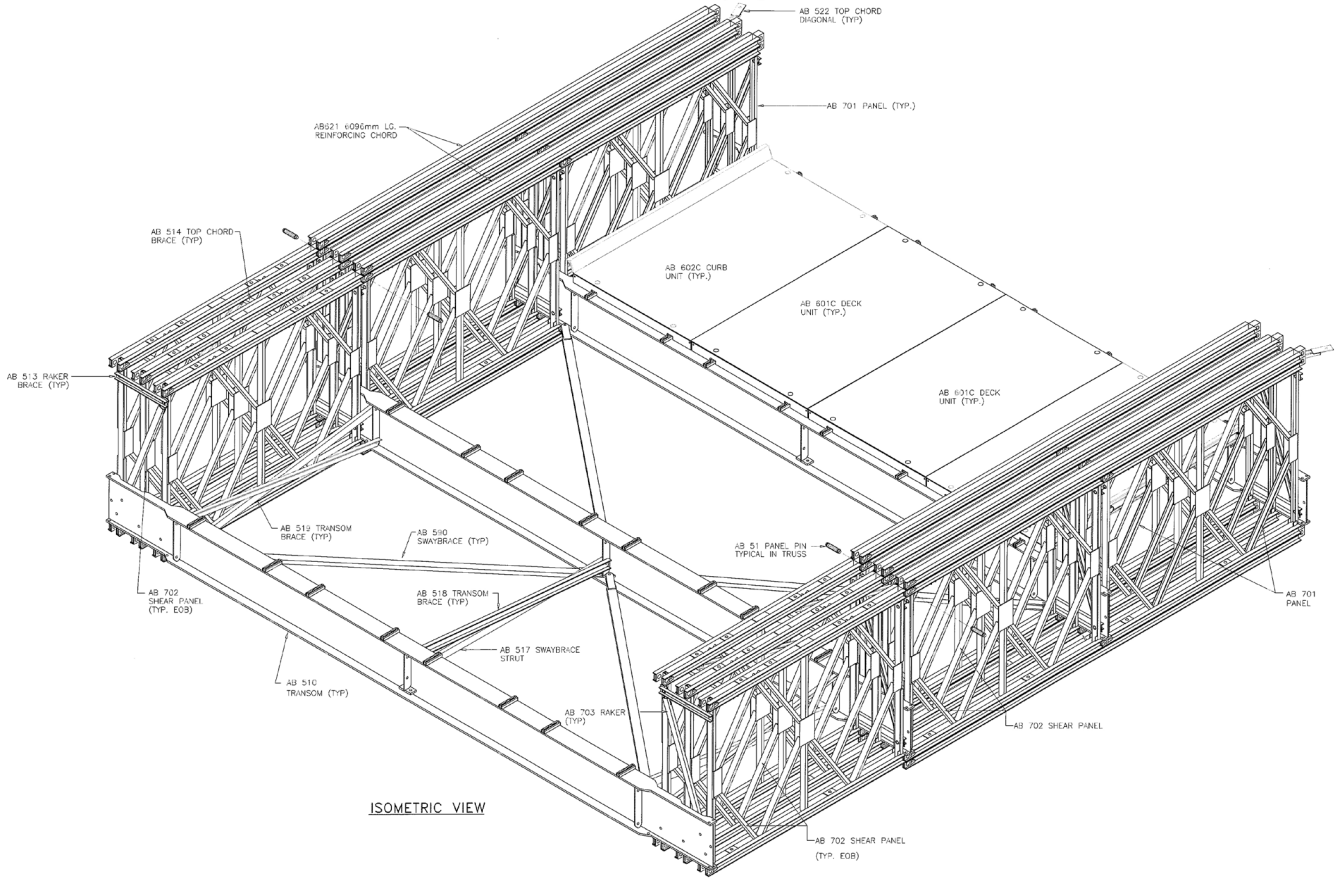

Specifications

Bridge length:

37 spans of 39.62m (130′) for an overall length of 1.47km

Roadway width:

7.35m (24′)

Deck surface:

Epoxy aggregate

Bridge erection method:

Crane lift in

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

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