

# capitalbridges universal MINIBRIDGES solutions



- All FRP (Fibre reinforced polymer - composite) pre-assembled construction.
- Maintenance free: Durable quality finished moulded materials.
- Design Life: 100 years. UV resistant Polyurethane surface finish.
- Standard configurations:
  - Spans: to 11 metres
  - Widths: enquire for custom dimensions
- Balustrades: Multiple options; factory or site fixed.
- Lightweight modular construction.
- Convenient procurement: Immediate pricing, documentation and certification.
- Factory direct or delivered.
- Easy installation: Simple abutment and pylon seating details.
- Fully compliant engineering: See data sheet.



International Patent No. PCT/AU2016/000305

Selected balustrade style to client requirements



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## Engineering

Engineering design is in accordance current international standards for FRP, including;

- EN 1990:2002 Basis of Structural Design (Design load and capacity reduction factors)
- Eurocomp, Structural Design of Polymer Composites (Code & Handbook)
- Prospect for New Guidance in the Design of FRP Report EUR 27666 EN
- Australian Standard AS 5100 Bridge Design

## Design Load Criteria

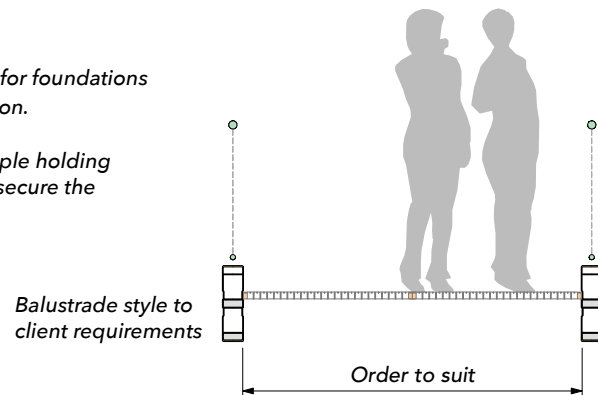
Design loads comply with the following:

- 1.0 Deck Imposed Loads
  - To BS EN1990:2002 Basis of Structural Design, for defined bridges, general walkways, gangways and other building structures.
  - Basic imposed load 5kPa, adjusted for tributary length, as appropriate. i.e. Minimum of 5kPa and  $2 + [120/(\text{Span}+30)]$
  - Park Tractor loads to Australian Standard AS 5100.2 Bridge Standard 20kN point load
- 2.0 Imposed Lateral Balustrade Load
  - To Australian Standard AS1170.1 Permanent, Imposed and other Actions 0.75 kN/m
- 3.0 Wind and River Flow: Drag, Buoyancy, Debris and Log Impact Loads
  - To Australian Standard AS1170.2 Wind Actions, and
  - Australian Standard AS 5100.2 Bridge Design.
  - Assessed on a case by case basis.

## Foundations

Load reactions and requirement for foundations are prescribed for each application.

Footings require just four (4) simple holding down attachments necessary to secure the superstructure.



## Quality Assured

Manufactured in compliance with ISO 9000 QA procedures, all materials are endorsed by product manufacturers and recorded to ensure traceability. Pre-fabricated components, such as the moulded e-glass flooring and pultruded sections are independently tested and certified to confirm they meet required standards.

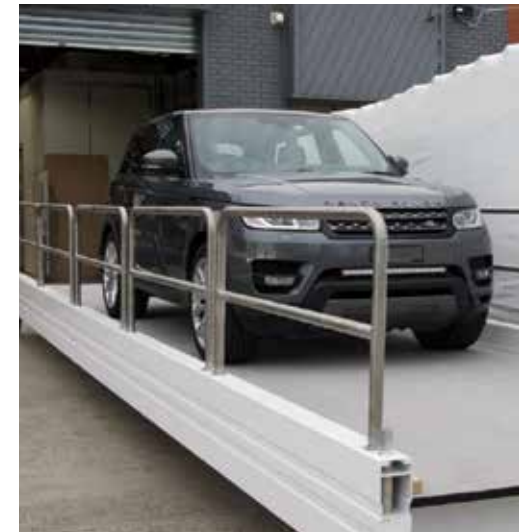
Engineering properties and geometric tolerances of manufactured standard components are load tested for compliance with European FRP guidelines via EN and /or ASTM specifications.

All components are fully quality endorsed prior to assembly and delivery.

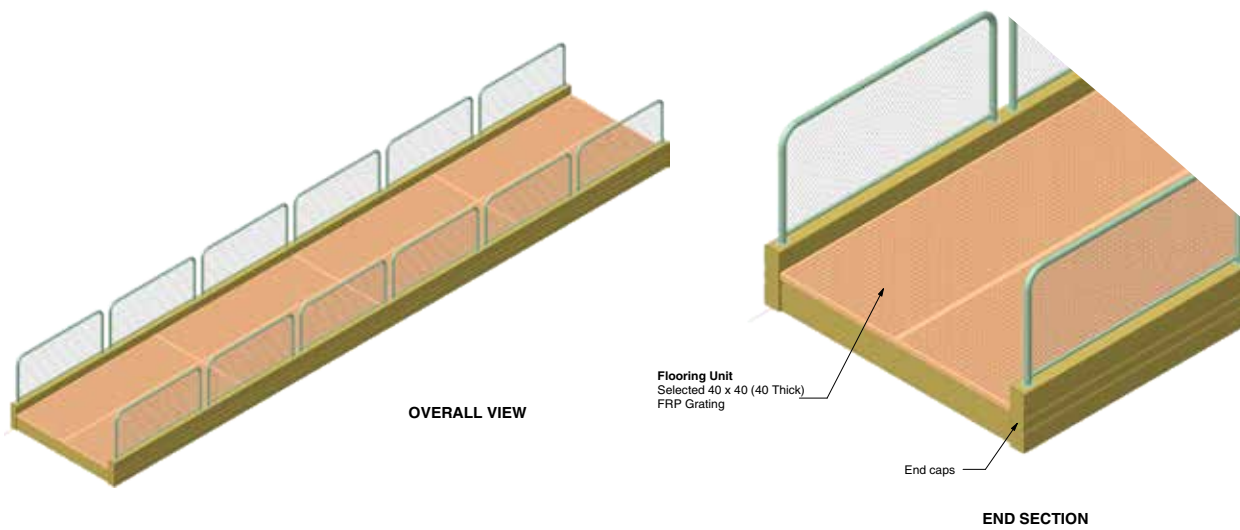
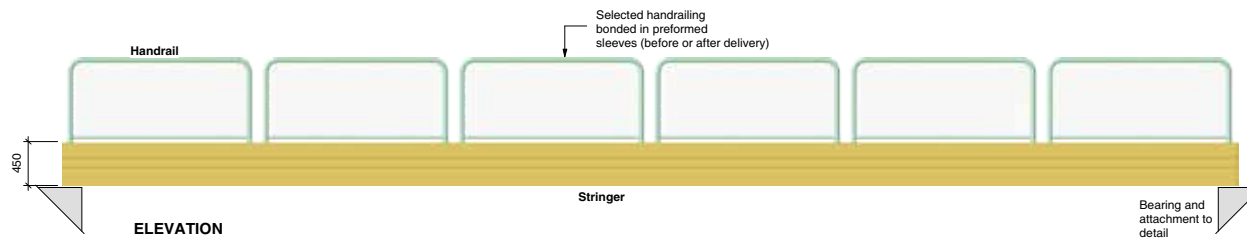
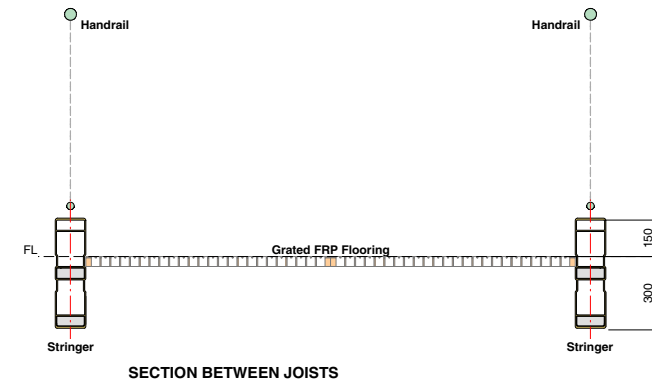
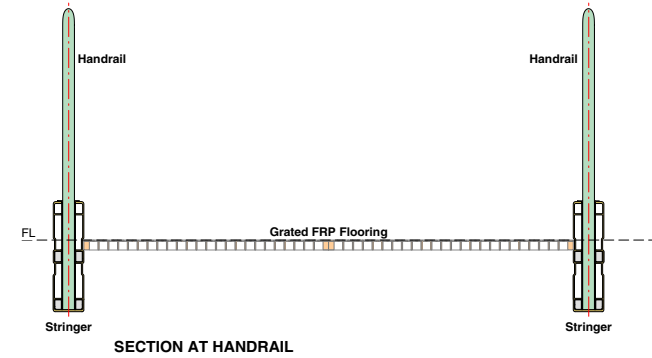
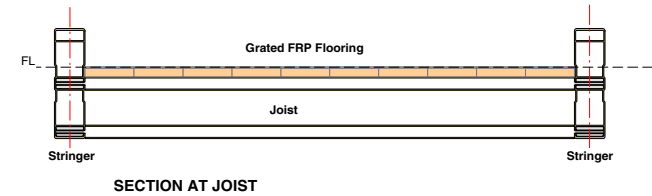
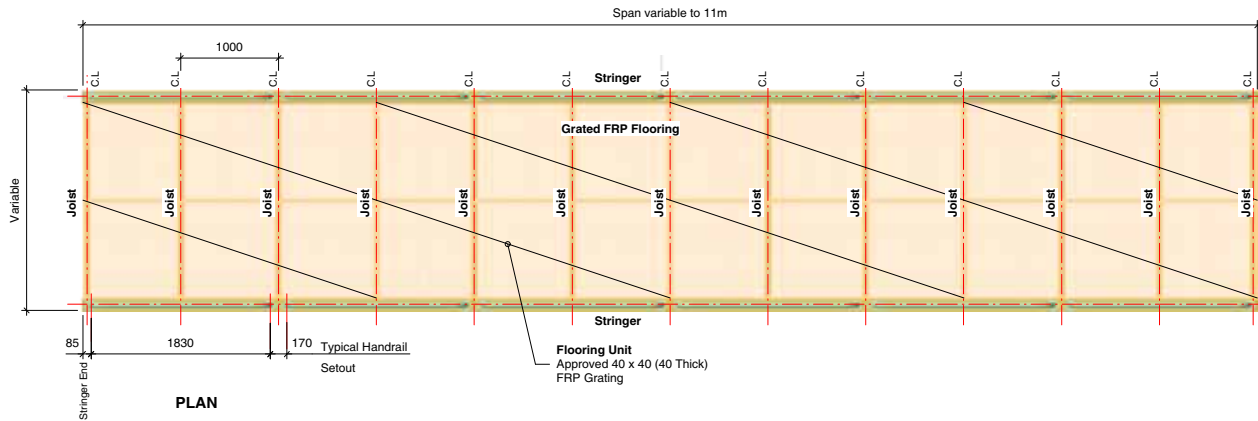
Installation to standard rigging practices.

## Certification

Design documentation, certification & QA documentation is provided for each bridge to satisfy local statutory requirements, and to confirm adherence to international standards.



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