



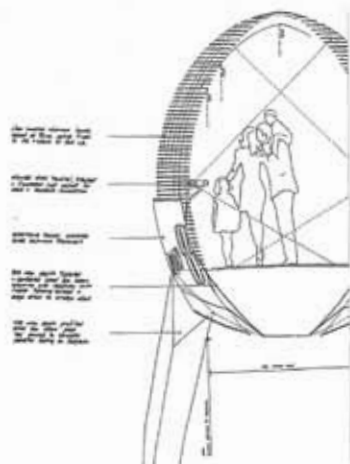
# Bridging the suburbs

Strangeness in suburbia. Lippmann Associates have designed a series of carefully crafted pedestrian bridges for Sydney "black spots". Catherine Martin looks at the first bridge at Fairfield.

**Better known for well-crafted** houses in photogenic locations, Sydney-based Lippmann Associates are now working on the apparently endless uniformity of the highway with a series of pedestrian bridges over major Sydney "black spots". These bridges are the first (and so far the only) outcome of the RAI's Emerging Practices Program, which aimed to generate opportunities for younger practices to work in the public realm. The first initiative was an invited competition, run in 2000, to design a footbridge. This competition was also an opportunity to get practices more accustomed to urban environments working in the architecturally "uncharted" territory of sprawling suburbia.

There's nothing like a good bridge to whet the architectural appetite, but, with the Lippmann Associates entry designed in the two days before the deadline, Ed Lippmann is happy to admit that their's was a last minute approach. He considers that this urgency was vital for retaining "the quality and clarity of the idea over the procrastination for detail". Indeed, a few days proved long enough to establish the essence of what the designers thought a bridge should do, and the clarity of the concept – presented in a few sketches and a CAD perspective – won out over other more extensive submissions.

The Lippmann Associates proposal was one of three selected from the eight invited entries by representatives of the RAI, the Department of Public Works and the Road Transport Association (the other selected bridges were by Tony Caro/C3D Design, and David Haertsch/David McGregor). Local councils were then asked to select one of the three winning designs for specific locations. To date, the Lippmann Associates scheme has been selected for thirteen of the twenty-eight sites around Sydney.

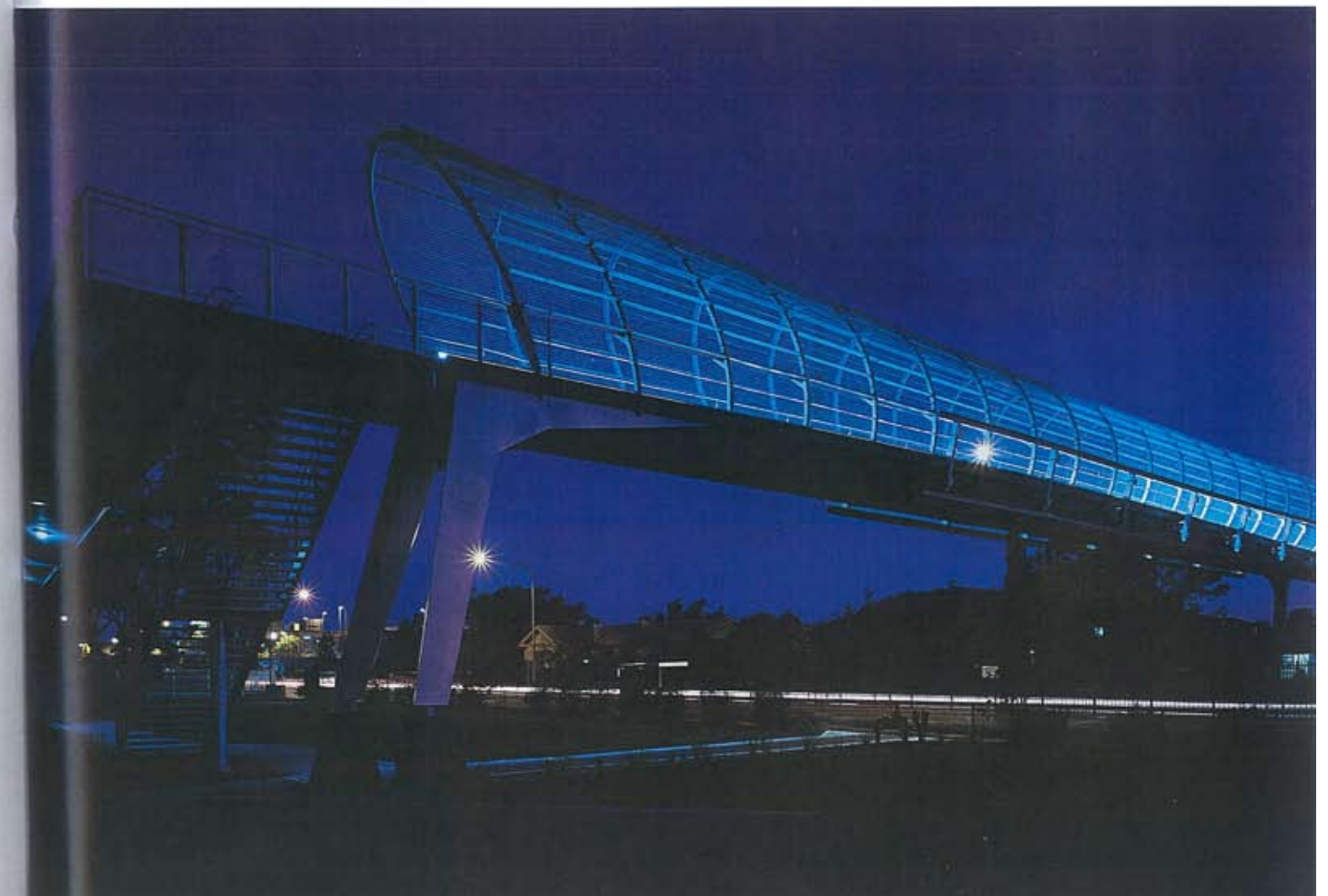


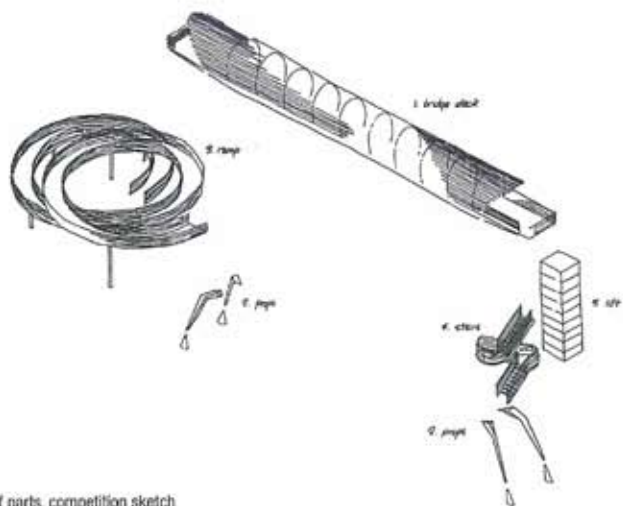
Section, competition sketch



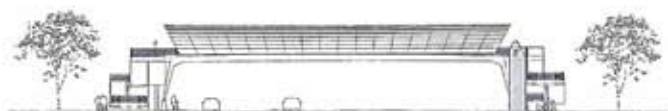
Photography by Ross Honeysett

Opposite page The double curved ribbed enclosure of the prototype bridge spanning Horsley Drive, Fairfield. This page, top The long ramped approach. Left The conjunction of ramp, stair, props and bridge deck. Below The dramatic night-time transformation of the bridge into an ethereal object with a combination of bright white and blue lighting.





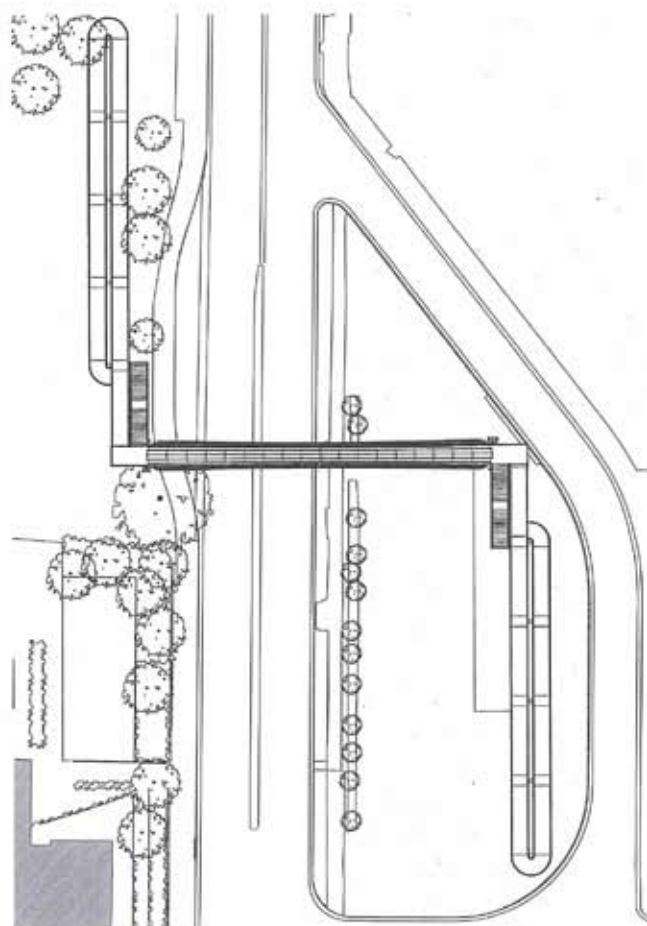
Kit of parts, competition sketch



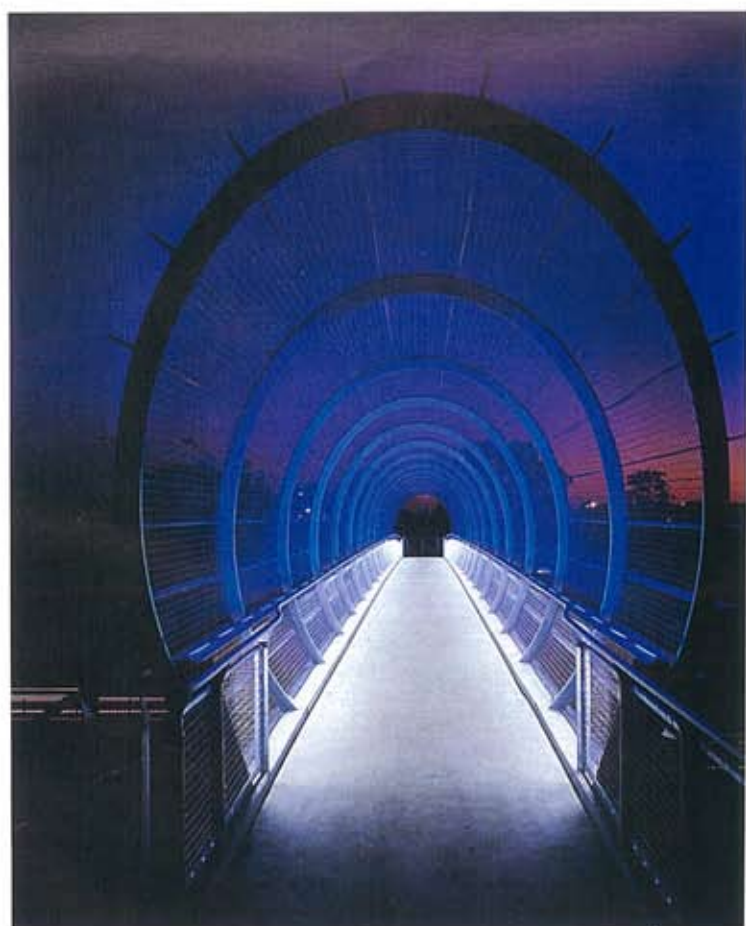
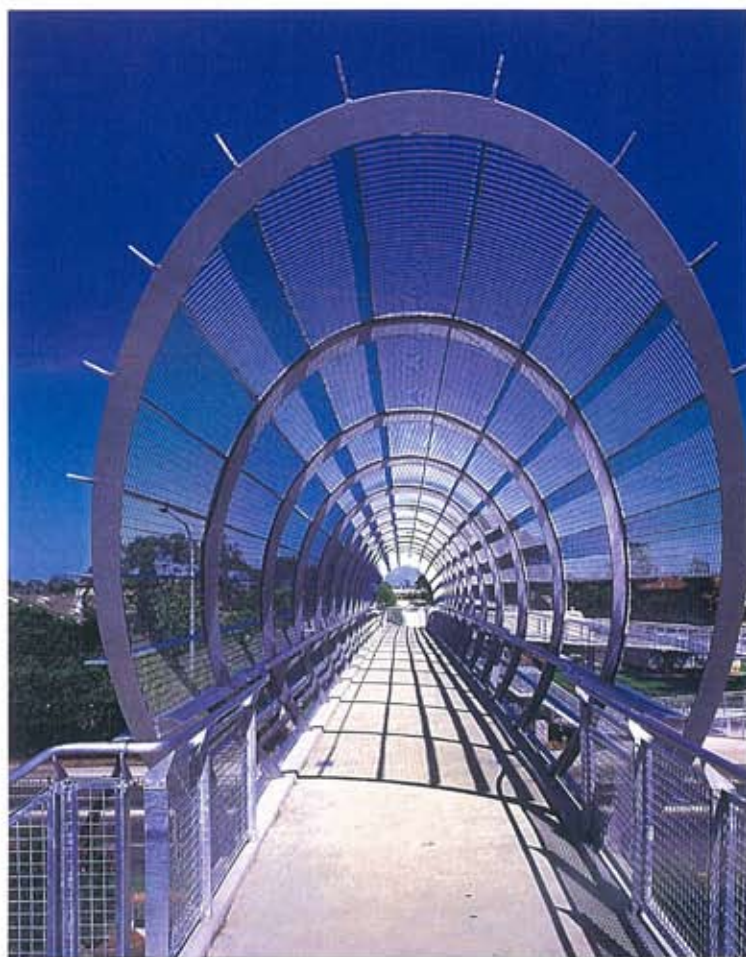
Fairfield bridge, street elevation

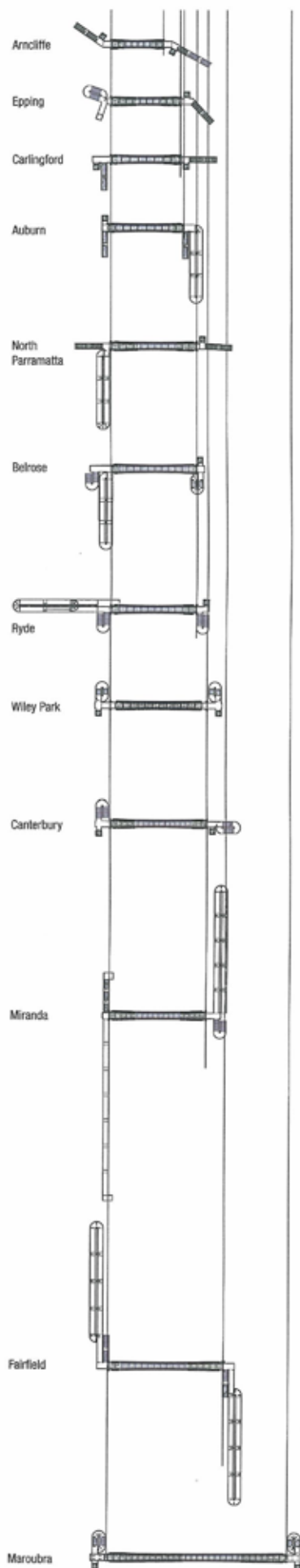


Fairfield bridge, ramp elevation



Fairfield Bridge, site plan





The debut bridge links two schools across Horsley Drive in Fairfield, where living dangerously used to involve simply trying to cross the fast-flowing traffic. Completed in April and opened by the NSW State Minister for Roads and Transport, Carl Scully, the \$1.4 million bridge will act as a test case for the "simple uncomplicated strategy" that the architects have devised for the thirteen sites. They envisage the bridge as "a large-scale iconic futuristic piece of industrial design intended to provide some visual relief to very boring stretches of road". Working closely with Peter Bailey of Arup, the team has developed each bridge from a kit of five elements: bridge deck, stair, ramp, props and lift. Combinations are modified according to specific contextual requirements, but the essential ingredients remain the same.

The 40 metre footbridge at Fairfield is the longest single span in a series which vary in total length from 18 metres to 60 metres. A steel ribbed enclosure, fabricated from flat plate on the outside with a galvanised mesh interior, gives the initial impression that the bridge is inside out. Closer inspection reveals a gradual curve in the steel box-girder deck, which tapers in depth and width. Project architect (and driving force behind the design) Rolf Ockert explains that previous level proposals "just looked too flat". The girder of simple curves and single curved members achieves a subtle visual impact, but it is also economical in material usage – the structure works as a portal frame in both longitudinal and transverse directions. In addition, the sculpted steel form has to work alongside the advertising, which is the basis of the bridge's economic viability. This advertising neatly occupies a horizontal band between the handrail and the underside of the bridge. Visibility is maintained without adding bulk.

Construction of the bridge was simplified by maximising the amount of fabrication and assembly done off site. The ramps and stairs were prefabricated as steel frames with precast concrete slabs or in-situ treads respectively, and assembled and finished on site. Cantilever beams extending from central CHS columns support the landings. The deck was brought to site fully assembled on a specially designed trailer. On site, the inclined and tapered columns were spliced on at both ends and set on concrete-encased steel pedestals. The structure is designed to withstand the required impact loads, yet it manages to appear fragile, hovering above the road and barely tethered to the ground.

While the bridge displays an engineering audacity usually reserved for higher profile locations, the real eye-opener is a carefully concealed fifth element – the transformation of the bridge once the sun goes down. Bright white fluorescents concealed in the handrail provide the necessary lighting to the concrete deck, while blue is projected from above, illuminating suburbia with deep intense colour. In series, the bridges will deliver a curiously unravelled collection of urban fragments, bringing welcome relief to an otherwise grey morass.

For Lippmann Associates a spate of competition winning designs (the Andrew "Boy" Charlton Pool, Toyota Sydney Headquarters) has enabled the practice to gradually increase their repertoire and the office can no longer be described as "emerging". These are the kinds of opportunities that ideally come out of competitions. In this instance, the practice is fortunate that extensive political pressure to produce more interesting bridges drove the RTA to invest in a new vision that did not compromise architectural design.

Always seen as a prototype in a rolling program, the airborne electric bridge has a rawness in some of its detail, but a few nips and tucks should easily resolve these issues in the next instalment. The careful composition of few elements, the porosity of volume, and the inherent shifts between transparency and opacity ensure the dynamic form is a stunner from every direction. Designed to take the drag out of downtown drag strips, this is one clever convertible. More impressively it fits right in – it is at once an ordinary and bizarre addition to low-key urban sprawl.

*Catherine Martin is a Sydney-based architectural writer ■*

#### RTA Footbridge, Fairfield

**Architect** Lippmann Associates—project team Ed Lippmann, Rolf Ockert, Melissa Doherty. **Structural Engineer** Arup—Peter Bailey, Victor Andrade. **Electrical Consultant** Barry Webb & Associates—Les Mikolajczyk. **Landscape Tract Consultants**—Matthew Easton. **Client** RTA Traffic Projects.

Opposite page, right Daylight view along the bridge deck under the finely woven curved mesh sheath. Bottom The dramatic, fluorescent white and electric blue night-time experience.