Cardno is a leading provider for bridge designs, reviews and temporary works design.

What sets us apart is our commitment to your success, as an equal partner striving towards the same goal.

As an integrated professional services provider, Cardno has had considerable success in the competitive Australian market and against international competitors in Asia.

Our bridging expertise is extensive, with local and international experience gained over 40 years. With our company rapidly expanding, every day we increase and enhance our skills. Our comprehensive experience and knowledge inspires confidence.

Our aim is to work collaboratively to find the best solution. We understand the challenges of building robust transport networks. We know that bridges connect people and places. Cardno links communities through cost-effective, locally-delivered solutions:

> Cable-stayed bridges
> Suspension bridges
> Pre-stressed concrete girder bridges
> Standard steel bridging systems
> Steel composite girder bridges
> Arch bridges
> Railway bridges
> Pre-fabricated bridges

Cardno plans, designs, develops and delivers bridge services tailored to suit your requirements. Your need determines our level of involvement. Optimum performance and partnership is our recipe for success.

> Preliminary, concept and tender designs
> 2D and 3D static and dynamic analysis, including non-linear and time-dependent analysis
> Advice on wind tunnel testing
> Catchment hydrology and bridge site hydraulic studies
> Detail design and documentation to Australian and international standards
> Independent proof checking and project verifications

Design and drafting review
> Construction engineering
> Condition assessment
> Load capacity ratings
> Fatigue assessment
> Refurbishment including widening, lengthening and strengthening of existing structures
> Construction inspections
> Provision of construction stage services
> Management of bridge subject to mining subsidence
> Demolition plan for existing structures

“Cardno are leaders in the area of bridge design and we’ve found them to be one of the leading consultants. Certainly, for bridge design and construction, they would be one of our first choices. They are responsive and have a high level of client understanding… they’ve always delivered. When you’re confronted with time pressures, responsiveness is a factor that is very highly regarded by me and certainly by Baulderstone as well.”

Hugh Bishop
Project Director – Major Projects, Baulderstone Pty Ltd
Key projects

Transmission Gully ILM, New Zealand (under construction)
Freyssinet Australia / Wellington, New Zealand
Cardno assisted Freyssinet Australia with the construction engineering of the Bridge over Cannon Creek for the above project. The bridge comprises four steel box girders, composite with a concrete slab cast on permanent precast formwork panels. The box girders were erected by the incremental launching method. Cardno carried out a structural integrity check of the effects of the launching on the steel box girders. Cardno also carried out independent proof engineering of the steel truss launching nose and other launching equipment. The proof engineering was carried out using specialist Finite Element Software including non-linear analysis and dynamic analysis for earthquake loading.

ANZAC Bridge Maintenance Upgrade Project
Bridge Solution Alliance / Sydney, New South Wales
Cardno was engaged by the Bridge Solution Alliance for the ANZAC Bridge maintenance upgrade to address rain-wind induced vibration (RWIV) of the stay cables that has been experienced since the bridge was opened in 1995. Cardno, as part of the design team for the alliance, helped developed a solution to eliminate the RWIV. It consisted of hydraulic dampers for the stays at deck level and a helical fillet weld surface treatment that was applied remotely to the HDPE stay sheathing by robot, a world first. A structural assessment of the stays and deck capacity was also undertaken for a number of live load cases. This included a Bridge Specific Assessment of Live Loading (BSALL) based on the development of a live load model from a statistical analysis of recorded traffic data. Cardno also carried out design and checking services for the upgrade of the maintenance access underdeck gantry, access walkways and the installation of lifts in the towers and so forth.

Northwest Rail Link – Proof Engineering of Temporary Works
VSL Australia / Sydney, New South Wales
Cardno was engaged by VSL Australia to carry out the independent structural review to Australian Standards of major temporary works for the elevated “sky train” between Bella Vista and Rouse Hill. The viaduct comprises multiple 40m spans, constructed by the precast segmental method. The components reviewed included underslung temporary beam (UTB for spans up to 42m), pier brackets, stressing platform, lifting beams, and proprietary falsework system for span 69. A site inspection was also performed to check that the UTB and other work elements were installed in accordance with the design drawings.

WestConnex – New M5 – St Peters Interchange
VSL Australia / Sydney, New South Wales
Cardno was engaged by VSL Australia to provide independent structural review to Australian Standards of major temporary works for the construction of the precast segmental superstructure of the New M5-St Peters interchange. The temporary works elements included a steel frame for lifting reinforcement, two different steel working platforms for the fabrication of the reinforcement cage for the precast segments and two types of lifting beams for the erection of the precast segments.
About Cardno

Cardno is a global provider of integrated professional services which enrich the physical and social environment for the communities in which we live and work around the world. We are a dynamic, global team of multidisciplinary specialists with expertise and more than 70 years’ experience in designing, developing and delivering sustainable projects and community advancement programs. Established in 1945, Cardno listed on the Australian Securities Exchange in 2004. [ASX: CDD].

Cardno’s commitment to Zero Harm

Cardno’s goal is to always conduct our business in a way that protects our people, clients, visitors and members of the public from harm. In an effort to move toward the ultimate objective of zero harm, we are committed to implementing safety systems and awareness throughout our operations globally.