



Project: **Cross River Rail – Roma Street Platform 2**

Principal: *CPB Contractors*

Location: *Brisbane CBD, Qld.*



Scope of Work

In August 2022, Neumann Fabrication was entrusted with a significant steel fabrication project for the Roma Street station canopy structure under the Cross River Rail initiative. Our commitment was to supply, manufacture, and deliver approximately 100 tonnes of structural steel. To ensure seamless installation, Mulherrins Cranes and Rigging were subcontracted.

The project's requirements were diverse and intricate, involving supplying and fabricating Grade 450 RHS sections, cambered UC trusses, PFC mounting brackets, roofing purlins, and bridging. Spanning over 145 metres, the canopy structure was designed to integrate seamlessly with existing structural steel at both ends.

A critical aspect of our approach was the use of 3D laser scanning. This technology provided precise as-built data for the existing concrete columns and steelwork at the eastern and western ends, ensuring flawless installation without on-site clashes.

A notable challenge was the project's extremely tight delivery timeline. The structure's proximity to a rail line, scheduled for re-energisation by the Christmas period, added pressure. Any delay in re-energisation would result in significant penalties for the principal, a situation we aimed to avoid at all costs.

Innovations and Strategies for Success

- **Precision through Technology:** Leveraging scan data and overlaying models guaranteed dimensional accuracy in alignment with as-built information.
- **Preemptive Quality Assurance:** Conducting a trial assembly of all steelwork at our workshop was crucial. This step confirmed dimensional accuracy and ensured compliance with all camber and preset requirements.
- **Adherence to Standards:** We strictly followed MRTS78 hold points, witness points, and testing protocols, aligning with project-specific requirements.
- **Collaborative Coordination:** Maintaining close coordination with other trades was essential to adhere to the installation schedule.

Challenges Overcome

- **Accelerated Manufacturing:** We operated two shifts to meet the tight schedule, ensuring we stayed on track.
- **Adapting to Existing Structures:** Installation on existing concrete columns, which were not perfectly aligned, required innovative solutions.
- **Precision in Fabrication:** Meeting the pre-camber and preset specifications for the fabricated truss sections was complex.
- **Night Shift Installations:** Installation was conducted during limited night shift hours, necessitating efficient use of the available lift window.

Outcome

The project's completion within the stringent timeline, without compromising on quality or safety, stands as a testament to Neumann Fabrication's commitment to excellence and innovation. Despite the various challenges, successfully integrating the new canopy structure with existing infrastructure highlights our team's adaptability and skill in complex fabrication projects.

