2018 Galvanized Project of the Year

Level Crossing Removal Project Wins 2018 Galvanized Project of the Year Award

The Galvanizers Association of Australia (GAA) is pleased to announce that the 2018 Galvanized Project of the Year Award was won by the Level Crossing Removal Project (Carnegie, Clayton, Hughesdale, Murrumbeena and Noble Park), entered by van der Meer Consulting.

Presented in late December at the Australian Steel Institute's annual awards ceremony, the Galvanized Project of the Year Award recognises high standards of design, fabrication, construction and corrosion protection achieved when hot dip galvanizing features as a key component of a project.



L to R: Peter Golding (CEO, Galvanizers Association of Australia), Brian Cardelli (Associate – Structural, van Der Meer Consulting) and Andres Viveros (Project Manager Detailing, van Der Meer Consulting) at the awards ceremony.

The finalists included: Baldivis South Secondary School by Parry and Rosenthal Architects and BPA Engineering; Coopers Malting Facility by Ahrens Group; and Mars Stadium by Plinius Engineering.

Project Overview

The Level Crossing Removal Authority (LXRA) is removing 50 dangerous and congested level crossings across Melbourne.



The Caulfield to Dandenong package of works will see nine level crossings removed along the Caulfield to Pakenham rail corridor, as well as the upgrade of power and signalling. The \$1.6 billion project also includes five new stations at Carnegie, Murrumbeena, Hughesdale, Clayton and Noble Park.

The innovative design featured in the package of works centres on three sections of modern elevated rail, which will create 22.5 hectares – the equivalent of 11 MCGs – of community open space. Together with the 65 new High-Capacity Metro Trains on order, the project will create space for 11,000 extra passengers to catch the train on Melbourne's busiest rail line.

Engineering Innovation

The project scope encompassed five main canopies (one for each of the new train stations) and 34 auxiliary buildings, which saw van Meer Consulting undertake the detailed fabrication of over 2,200 tonnes of



2018 Galvanized Project of the Year

steel, and the processing of over 50,000 drawings.



The focus of each station was its main canopy, which took the form of an inverted horseshoe shape that was curved in both directions for a length of 100 metres and a width of 22 metres. Each canopy was then mounted on the train track viaducts.

The Use of Galvanizing

Both the architectural and engineering consultants specified a range of corrosion resistance systems for the main canopies at each of the five stations. van der Meer Consulting took into consideration corrosion resistance requirements before proceeding with galvanizing for the main canopies.



Galvanizing was selected for maximum corrosion resistance and long-term protection. It delivered a protective coating manufactured to last for the life of the canopies. In comparison, 'paint over steel' offered a shorter life span, which would have contributed to additional costs in scheduled maintenance to retain corrosion protection.



Over the course of approximately six months, GAA member GB Galvanizing Services undertook the galvanizing of all members for the five main canopies. According to Vince Gucciardo (Operations Manager, GB Galvanizing Service), "Galvanizing was a perfect solution for this project because everything was delivered on a 'just in time' construction schedule. We had the galvanized members on-site with 24 or 48 hours."

"The project was an interesting one to work on—it featured single sections that were quite long and unusually shaped.



2018 Galvanized Project of the Year

There were even some nodes that were three-dimensional short pieces that given their unique shape—took some time to determine how to hang them on headframes," said Gucciardo.



GB Galvanizing operates two of the most modern galvanizing facilities in Australia, located at Bayswater and Dandenong in Victoria. A workforce of over 200 employees, 24-hour operations and a fleet of 15 semi-trailers ensures that GB Galvanizing can service the galvanizing needs of both local and interstate customers with ease.

Structural Steel Detailing

At all times throughout the structural steel detailing process, van der Meer Consulting collaborated with the fabricators and design consultants to provide fabrication drawings and reports that ensured a smooth fabrication process and, in turn, seamless erection.

All disciplines collaborated in a central cloud-based BIM structure operating on Autodesk's GLUE360 platform.



Due to the complexity of some of the structures involved, van der Meer Consulting was provided with the architectural, engineering and fabrication models as a reference for use in 3D CAD modelling. These highly detailed, accurate and comprehensive 3D CAD models proved invaluable—they enabled the design consultants to efficiently review and give feedback to insure their design intent was carried through to the fabrication stage.



van der Meer Consulting was also commissioned to detail the temporary support structures for the main canopies. As the main canopies were constructed from pre-assembled modules off-site, they all required temporary propping. All propping locations were pre-determined to ensure that each module could be installed safely and successfully in the tight time-frames available to the site crews.

Project Team

- Architect: COX Architecture
- Structural Engineer: Aurecon and WSP
- Head Building Contractor: Lendlease and CPB Contractors
- Steel Fabricator: GVP Fabrications and Best Fab
- Steel Detailer: van der Meer Consulting
- Galvanizer: GB Galvanizing Service

































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