CASE STUDY

Precast Concrete ITS Pits, Risers, Covers and Frames

M1 ITS & Street Lighting works, Tobco, December 2018

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The $391.6 million M1 Upgrade for Transport NSW aims to provide a safer and more reliable motorway for all. There are three major upgrades being carried out, with this article focussing on the Kariong and Somersby interchange.

Major upgrades to ramps will ease congestion thereby improving traffic flow near the Kariong intersection. As one of Australia’s busiest roads, the upgrades are necessary to cater for predicted traffic increases and greater freight demand on the Central Coast and beyond.

Acclaimed construction firm Fulton Hogan began work at the Central Coast site in December 2017. As workers continue to make solid progress on this project, the requirement for traffic signals and lighting has now come to the fore. With this purpose in mind, our customer Tobco has been contracted as a specialist electrical engineering provider.

Tobco needed to deliver street lighting and intelligent traffic systems that would light the way for more than 50,000 motorists that use the Kariong interchange each day.

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**THE PROJECT**

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**SCOPE OF SUPPLY**

- 118 Precast Concrete ITS Pits
- 72 Precast Concrete ITS Risers
- 450 pre-installed conduit bell mouth couplings
- 118 Ductile iron infill cover and frames in precast concrete surrounds

**Customer:** Tobco
**Project:** ITS and Street Lighting works M1 Kariong to Somersby Interchange
**Location:** Kariong NSW, Australia
THE CHALLENGES

Tobco specialises in civil and electrical infrastructure with particular expertise in concrete structures and earthworks. With a host of industry and ISO accreditations, the company has a strong focus on procedural excellence. Therefore Tobco sought a supply partner that could deliver high quality precast concrete pits to house the substantial cabling.

The extensive street and traffic light cabling needed to be installed in line with NSW RMS’s strict requirements. Concrete pits needed to be constructed to Roads and Maritime Services QA Specification R155. Tobco required a supplier who could deliver precast concrete pits, covers and frames on time and within budget.

JAYBRO’S SOLUTION

Jaybro is supplying over 100 precast concrete pits and structures to Tobco for the M1 project.

Jaybro opened a purpose built pre-cast concrete factory at the beginning of 2018. This means that we can oversee production and ensure a superior quality product. We are able to manufacture the precast concrete pits and risers to RMS R155 standard 900 mm2 and 600 mm2 sizes. This also includes manufacturing with conduit bell mouth couplings pre-installed prior to delivery.

These Class D communications and electrical precast concrete pits are required to contain the cableways for the ITS and street lighting at the Kariong and Somersby interchange.

RMS require engineering certification and appropriate lifting methods, and Jaybro was able to incorporate lifting lugs to enable easy positioning on site.

Additionally, the pits need to be sealed with Class D concrete infill covers and frames encased in precast concrete surrounds, according to specifications. Jaybro can manufacture the precast concrete surrounds to the RMS R155 specification, including brass label plates. The exposed face of each pit lid needed to be flush with the surrounding ground surface. This therefore ensured it would not be a trip hazard to pedestrians.

Supply to this project is ongoing, and the Kariong and Somersby interchange project is due for completion in early 2020.

KEY DATA

- System used: Jaybro Concrete ITS Pits, Risers, Infill Covers and Frames
- Time Period: Installed December 2018
- Customer: Tobco
- Quantity: 118 Pits, 72 Risers, 450 pre-installed conduit couplings, 118 infill covers and frames
SITE PHOTOS