

GALLIPOLI UNDERPASS

DEVELOPER : Adelaide Connect2
MAIN CONSTRUCTION COMPANY : Leed Engineering and Construction, Thiess
PROJECT END VALUE : \$117 Million
COMPLETION : October 2009
STRUCTURAL ENGINEER : BECA
HEAD DESIGNER : Parson Brickerhoff
COMMUNITY RELATIONS : Kath Moore + Associates
GEOTECHNICAL : Coffey Information Pty Ltd
URBAN DESIGN : Hassel

TEAMWORK PUTS UNDERPASS PROJECT AHEAD OF THE GAME

South Australia's Gallipoli Underpass on South Road is an outstanding example of teamwork in action. Not only did AdelaideConnect bring the project in early, under budget and with no days lost due to workplace injury, they won an Earth Award from the Civil Construction Federation this year, and the Engineers Australia Malcolm Kinnaird Engineering Excellence Award in 2007 for the process adopted in developing the design and construction.

AdelaideConnect brought together the talents of Thiess and Leed Engineering and Construction in a joint venture, working as part of a consortium with Parsons Brinckerhoff, Hassell, and Kath Moore and Associates alongside the SA Department of Transport, Energy and Infrastructure, to deliver a design and construct contract utilising Early

Contractor Involvement (ECI). The task was constructing an underpass on ANZAC Highway, to improve traffic flow on this main transport link between the industry of the south and the port in the north. It is Adelaide's busiest arterial road for both freight and commuters. Construction had to take place while maintaining traffic flows of up to 40,000 vehicles a day, and without disrupting adjoining community facilities, including a medical centre.

Thiess and Leed provided project management during the ECI phase, and engineering support and project supervision during construction, including managing the construction of concrete structures, earthworks and pavement construction. The project commenced in March 2006 and was completed late 2009.



from the start in order to reach "Best for Project" outcomes. Working together in a collocated office promoted good communication amongst the team and meant that each party developed a good understanding of all of the issues and drivers for the project. Strong relationships and a cooperative "one team" approach based on collaboration was developed during the early stages of the ECI process. These relationships and behaviours continued throughout the construction phase resulting in a successful project for all parties," he said.

"As a contractor, being involved during the early stages of the project meant that we could have more constructability and planning input in the design. The large amount of time and effort that went into detailed constructability and programming reviews resulted in a project that ran to plan without any major unforeseen issues. The project was completed ahead of programme and under budget.

"The intersection is one of the busiest in Adelaide and it was vital that we maintained traffic flow throughout the construction period. We achieved this through the use of an innovative design and a staged delivery programme. In stage 1 the Southern half of the bridge and underpass were constructed leaving the existing traffic on ANZAC Highway just North of the construction work. The Southern half of the bridge was designed to accommodate live loading prior to the entire bridge being completed. This allowed the ANZAC Highway traffic to be diverted onto the new Southern half of the bridge whilst the new Northern half was built where the traffic had previously been running. In addition to this the underpass was positioned to the West of the existing South Road alignment, further reducing potential traffic impacts."

One of the core values of the project team was the development of our staff and succession planning. This was seen as Leed's George Constantinides was promoted to project manager for the final stages of construction "We all sat down as a consortium to develop the design," he said. "Everyone worked in the one office, which streamlined the design process and allowed every aspect of the concept design to be challenged in terms of constructability and value for money. The ECI process reduced the costs and gave the client the best result."

There's no rest for the excellent – now Thiess is currently working on Adelaide's Coast to Coast Light Rail Project which is extending the existing tramline from North Terrace, down Port Road to the Entertainment Centre and Leed building on their relationship contracting capability are busy with the Glenelg to Adelaide Parklands Project which is the first Alliance Contract with the South Australian Government.

Developing a design that would meet the projected future traffic flows along South Road was the main challenge, according to Leed Engineering and Construction Director, Andrew Millar. "We involved both the urban designer and public consultation teams from the beginning. The design was developed to cater for construction staging, not the other way round," he said. "An excellent relationship has been achieved between all partners in this project to clearly demonstrate a commitment to the successful outcome for the project and the companies involved".

Thiess Project Manager for the early construction stages, Paul Teakle, found many positives in the teamwork approach. "The ECI process allowed the Client, Designer and Contractor to work together right

LEED ENGINEERING AND CONSTRUCTION PTY LTD
95 King William Street
Kent Town SA 5067
t. 08 8132 1044
f. 08 8132 1615
e. pschlosser@leed.net.au
www.leed.net.au

THIESS
South Australia office
Level 2 101 Flinders St
Adelaide SA 5000
t. 08 8274 5200
e. ddally@thiess.com.au