



Pippingarra Road Upgrade

Civil Engineering Design and Management

Client Pilbara Minerals

Project Location

Indee, Pilbara, Western Australia

Scope

Engenium was engaged to complete the Civil Engineering Design for an alternative transport route for RAV 10 vehicles, for approximately 35 km of unsealed road starting from an existing BHP 91.3 km rail level crossing and heading north to Pippingarra.

This work consisted of a Concept Design, 50% stage Detailed Design and documentation. As well as a hydrology assessment and indicative culvert/floodway sizing for the southern 35 km and also for the northern 40 km section.

Business Objective

The client wanted an alternative transport route that catered for RAV 10 vehicles to reduce transport costs of their product from the mine site to Port Hedland.

Challenges to Overcome

The proposed alternative road route crossed numerous major water courses that required long floodways. The design criteria for the floodways was based on the average length of time the floodway was impassable due to flooding each year.

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Demonstrated Capabilities

- Unsealed road design.
- Drainage design.
- Engineering Management.
- Civil Engineering.

The construction schedule and budget was very tight and required a certain length of road that had to be constructed each week. This meant reducing the earthworks quantities as much as possible and minimising haulage distances.

Sections of the road were designed to have a balance cut to fill volumes every 1 km. In order to achieve this the side drains were widened to generate cut material that could be used as fill.

Smarts

To achieve the tight design schedule and not delay construction Engenium typically supplied design models (as opposed to drawings) which the client then used for construction.

Project Outcome

The project was delivered under budget and on schedule. Cut to fill balance of earthworks quantities every 1 km reduced haulage costs and therefore reduced construction costs for the client.

Want To Know More?

For more information please contact our Perth office on +61 (0)8 6460 0300, email info@engenium.com.au, or visit our website engenium.com.au.

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