

**PERENCANAAN GEOMETRIK DAN TEBAL PERKERASAN KAKU
JALAN ALTERNATIF TALANG JAYA-CENGAL STA 0+000 – STA 7+500
KABUPATEN OGAN KOMERING ILIR
PROVINSI SUMATERA SELATAN**

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ABSTRAK

Pembangunan infrastruktur jalan memiliki peran strategis dalam mendukung mobilitas masyarakat dan pertumbuhan ekonomi daerah. Jalan alternatif Talang Jaya–Cengal di Kabupaten Ogan Komering Ilir, Provinsi Sumatera Selatan direncanakan untuk mengatasi kemacetan, memperpendek waktu tempuh, dan meningkatkan konektivitas antar wilayah. Perencanaan ini mencakup desain geometrik sesuai Spesifikasi Umum Bina Marga, mencakup alinyemen horizontal, vertikal, penampang melintang, serta tikungan dan superelevasi. Perhitungan tebal perkerasan kaku (rigid pavement) dengan memperhitungkan beban lalu lintas, nilai CBR, dan mutu beton. Selain itu dirancang pula bangunan pelengkap sistem drainase. Data lalu lintas, topografi, dan kondisi tanah digunakan untuk mendukung analisis teknis sehingga diperoleh desain yang optimal dan sesuai standar. Hasil perencanaan menunjukkan panjang jalan $\pm 7,5$ km dengan tebal pelat beton 27 cm untuk mendukung beban lalu lintas berat. Volume pekerjaan dihitung secara rinci mulai dari pekerjaan tanah, perkerasan, hingga bangunan pelengkap. Rencana Anggaran Biaya (RAB) diperoleh sebesar Rp 176.272.785.475,00 termasuk PPN 11%, dengan estimasi waktu pelaksanaan 240 hari kalender. Perencanaan ini diharapkan dapat menjadi acuan dalam pembangunan jalan yang aman, nyaman, dan berkelanjutan, serta memberi manfaat signifikan bagi masyarakat di sepanjang koridor jalan.

Kata kunci: Jalan alternatif, perkerasan kaku, perencanaan geometrik, RAB.

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ABSTRACT

The development of road infrastructure plays a strategic role in supporting community mobility and regional economic growth. The Talang Jaya–Cengal alternative road in Ogan Komering Ilir Regency, South Sumatra Province, is planned to reduce traffic congestion, shorten travel time, and improve connectivity between regions. This planning includes geometric design based on Bina Marga General Specifications, covering horizontal alignment, vertical alignment, cross-sections, as well as curves and superelevation. The rigid pavement thickness is calculated by considering traffic loads, CBR values, and concrete quality. In addition, supporting drainage system structures are also designed. Traffic, topographical, and soil condition data are used to support technical analysis to produce an optimal and standard-compliant design. The planning results indicate a road length of approximately 7.5 km with a concrete slab thickness of 27 cm to accommodate heavy traffic loads. The work volume is calculated in detail, including earthworks, pavement structures, and supporting facilities. The total project cost (RAB) is estimated at IDR 176.272.785.475,00 including 11% VAT, with an estimated construction period of 240 calendar days. This design is expected to serve as a reference for building a safe, comfortable, and sustainable road that provides significant benefits for the community along the road corridor.

Keywords: Alternative Road, Rigid Pavement, Geometric Design, Budget Plan (RAB).