

**PERANCANGAN GEOMETRIK DAN TEBAL PERKERASAN KAKU
RUAS JALAN TEMPIRAI – MANGKUNEGARA KABUPATEN PALI
STA 0+000 – 9+505 PROVINSI SUMATERA SELATAN**

ABSTRAK

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Ruas Jalan Tempirai – Mangkunegara STA 0+000 – STA 9+505 di Kabupaten Penukal Abab Lematang Ilir (PALI), Provinsi Sumatera Selatan, Memiliki peran strategis sebagai sarana Transportasi yang menunjang pergerakan masyarakat serta kegiatan distribusi hasil hasil perkebunan dan pertambangan. Perancangan ruas jalan ini bertujuan untuk merencanakan geometrik jalan, tebal perkerasan kaku, bangunan pelengkap jalan, serta menyusun manajemen proyek yang meliputi *Network Planning*, *time schedule*, dan Rencana Anggaran Biaya (RAB). Hasil perancangan menunjukkan bahwa trase jalan yang direncanakan memiliki panjang 9,505 km dengan kondisi medan datar dan kemiringan medan rata-rata sebesar 3,874%. Ruas jalan direncanakan sebagai Jalan Lokal Primer Kelas III (2/2-TT) dengan kecepatan rencana 60 km/jam. Berdasarkan analisis perkerasan kaku diperoleh tebal pelat beton *Jointed Plain Concrete Pavement* (JPCP) sebesar 250 mm, lapis beton kurus (*lean concrete*) 125 mm, lapis pondasi agregat kelas A 200 mm, dan stabilisasi tanah dasar semen setebal 200 mm. Struktur perkerasan dinyatakan aman dengan nilai *fatigue* 0,00% dan erosi 28,53%. Volume pekerjaan tanah yang diperoleh meliputi galian sebesar 307.129,31 m³ dan timbunan sebesar 297.491,33 m³. Perancangan manajemen proyek menghasilkan durasi pelaksanaan selama 189 hari kerja menggunakan metode *Network Planning*, *Barchart*, dan Kurva S. Adapun total Rencana Anggaran Biaya (RAB) pembangunan ruas jalan sebesar Rp 112.486.597.000,00 (Seratus dua belas milyar empat ratus delapan puluh enam juta lima ratus sembilan puluh tujuh ribu rupiah) termasuk Pajak Pertambahan Nilai (PPN) 11%.

Kata kunci: Geometrik Jalan, Perkerasan Kaku, JPCP, *Network Planning*, RAB.

**GEOMETRIC DESIGN AND THICKNESS OF RIGID PAVEMENT FOR
THE TEMPIRAI – MANGKUNEGARA ROAD SECTION, PALI REGENCY
STA 0+000 – 9+505, SOUTH SUMATRA PROVINCE**

ABSTRACT

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Tempirai – Mangkunegara Road Section STA 0+000 – STA 9+505 in Penukal Abab Lematang Ilir (PALI) Regency, South Sumatra Province, has a strategic role as a means of transportation that supports community movement and distribution activities of plantation and mining products. The planning of this road section aims to plan road geometry, rigid pavement thickness, road complementary buildings, and compile project management which includes Network Planning, time schedule, and Budget Plan (RAB). The planning results show that the planned road route has a length of 9.505 km with flat terrain conditions and an average slope of 3.874%. The road section is planned as a Class III Primary Local Road (2/2-TT) with a design speed of 60 km/hour. Based on the rigid pavement analysis, the thickness of the Jointed Plain Concrete Pavement (JPCP) concrete slab is 250 mm, the lean concrete layer is 125 mm, the class A aggregate base layer is 200 mm, and the cement base soil stabilization is 200 mm thick. The pavement structure was declared safe with a fatigue value of 0.00% and erosion of 28.53%. The volume of earthwork obtained included excavation of 307,129.31 m³ and embankment of 297,491.33 m³. Project management planning resulted in an implementation duration of 189 working days using the Network Planning, Barchart, and S-Curve methods. The total Budget Plan (RAB) for the construction of the road section was Rp 112.486.597.000,00 (One hundred twelve billion four hundred eighty-six million five hundred ninety-seven thousand rupiah) including 11% Value Added Tax (VAT).

Keywords: *Road Geometric, Rigid Pavement, JPCP, Network Planning, RAB.*