

**PERENCANAAN GEOMETRIK DAN TEBAL PERKERASAN KAKU
JALAN SP. PANGKAL BERAS – LIMANG KABUPATEN BANGKA
BARAT PROVINSI KEPULAUAN BANGKA BELITUNG**

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ABSTRAK

Pembangunan infrastruktur jalan memiliki peran strategis sebagai penggerak utama aktivitas perekonomian, baik di tingkat pusat maupun daerah. Proyek pembangunan Jalan Sp. Pangkal Beras – Limang di Kabupaten Bangka Barat, Provinsi Kepulauan Bangka Belitung, dirancang untuk meningkatkan konektivitas dan memperlancar distribusi hasil pertanian serta aktivitas perdagangan lokal. Berdasarkan hasil analisis lalu lintas harian yang mencapai 17.606,43 kendaraan per hari, jalan ini diklasifikasikan sebagai Jalan Kolektor Kelas II, dengan lebar badan jalan 7 meter dan bahu jalan 2 meter, serta konfigurasi jalan 2 jalur 2 arah. Jalan sepanjang 5.708 meter ini melintasi medan datar dengan kecepatan rencana 60 km/jam. Perencanaan geometrik meliputi alinyemen horizontal dengan tujuh tikungan, terdiri dari 1 tikungan *Full Circle (FC)* dan 6 tikungan *Spiral-Circle-Spiral (SCS)*, serta alinyemen vertikal dengan 12 lengkung, yang mencakup 7 lengkung cekung dan 5 lengkung cembung. Struktur perkerasan menggunakan sistem perkerasan kaku (*rigid pavement*) berupa beton bersambung tanpa tulangan dengan spesifikasi tebal pelat 30 cm, lapisan *lean mix concrete* 15 cm, lapisan fondasi agregat kelas A setebal 20 cm, serta lapisan stabilisasi semen 20 cm. Sistem drainase samping direncanakan menggunakan u-ditch berukuran 1 x 1 meter, serta dilengkapi tiga unit box culvert tipe single berukuran 200 x 150 cm dengan tebal dinding 23 cm. Total biaya konstruksi diperkirakan sebesar Rp103.602.025.000,00 (Seratus Tiga Miliar Enam Ratus Dua Juta Dua Puluh Lima Ribu Rupiah) dengan durasi pelaksanaan selama 161 hari kalender.

Kata Kunci :Perkerasan Jalan, Desain Geometrik, Tebal Perkerasan, Rancangan Anggaran Biaya (RAB)

**GEOMETRIC DESIGN AND RIGID PAVEMENT THICKNESS
ON SP. PANGKAL BERAS – LIMANG ROAD, WEST BANGKA REGENCY,
BANGKA BELITUNG ISLAND PROVINCE**

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ABSTRACT

The development of road infrastructure plays a strategic role as a key driver of economic activities, both at the central and regional levels—the construction project of the Sp. Pangkal Beras – Limang Road in West Bangka Regency, Bangka Belitung Province, is designed to improve connectivity and facilitate the distribution of agricultural products and local trade activities. Based on traffic analysis results showing a daily traffic volume of 17,606.43 vehicles per day, this road is classified as a Class II Collector Road, with a roadway width of 7 meters and 2-meter shoulders, configured as a 2-lane, 2-way road. The road spans a total length of 5,708 meters across flat terrain, with a design speed of 60 km/h. The geometric planning includes a horizontal alignment consisting of 7 curves: 1 Full Circle (FC) curve and 6 Spiral-Circle-Spiral (SCS) curves, as well as a vertical alignment with 12 vertical curves, comprising 7 concave and 5 convex curves. The pavement structure uses a rigid pavement system with jointed plain concrete pavement (JPCP), featuring a 30 cm thick concrete slab, a 15 cm thick lean mix concrete layer, a 20 cm thick aggregate base course (Class A), and a 20 cm thick cement-stabilized subgrade. The side drainage system is designed using U-ditch channels measuring 1 x 1 meter and is equipped with three single-type box culverts measuring 200 x 150 cm with 23 cm wall thickness. The total estimated construction cost is IDR 103,602,025,000.00 (One Hundred Three Billion Six Hundred Two Million Twenty-Five Thousand Rupiah), with a planned construction duration of 161 calendar days.

Keywords: *Road Pavement, Geometric Design, Pavement Thickness, Cost Estimation*