

**PERENCANAAN GEOMETRIK DAN TEBAL PERKERASAN LENTUR
RUAS JALAN LUBUK KEPAYANG – KASANG MELINTANG
STA 0+000 – STA 6+565 KABUPATEN SAROLANGUN
PROVINSI JAMBI**

ABSTRAK

Laporan ini membahas perencanaan geometrik dan tebal perkerasan lentur pada Ruas Jalan Lubuk Kepayang – Kasang Melintang, STA 0+000 hingga STA 6+565, yang berlokasi di Kabupaten Sarolangun, Provinsi Jambi. Ruas jalan ini memiliki peranan strategis dalam mendukung lancarnya distribusi hasil pertanian dan perkebunan serta meningkatkan konektivitas antarwilayah di Kabupaten Sarolangun. Tujuan dari skripsi ini adalah merencanakan trase jalan yang aman dan nyaman, menghitung alinyemen horizontal dan vertikal, merencanakan tebal perkerasan lentur, serta menyusun proyek manajemen beserta Rencana Anggaran Biaya (RAB). Perencanaan geometrik mengacu pada Pedoman Desain Geometrik Jalan 2021, sedangkan perencanaan tebal perkerasan lentur menggunakan Manual Desain Perkerasan Jalan 2024. Hasil perencanaan menunjukkan bahwa jalan yang direncanakan termasuk dalam kategori Jalan Kolektor Rural Kelas III dengan kecepatan rencana 60 km/jam dan LHR sebesar 12868 SMP/hari. Lebar badan jalan direncanakan 5 meter dengan kemiringan melintang 3%, lebar bahu jalan 2 meter dengan kemiringan melintang 6%, Terdapat 6 tikungan yang terdiri atas 3 tikungan Spiral-Circle-Spiral dan 3 tikungan Full Circle, serta 22 lengkung vertikal. Volume galian sebesar 14858,21 m³ dan volume timbunan sebesar 5028,64 m³. Struktur perkerasan lentur terdiri atas Lapis AC-WC tebal 4 cm, AC-BC tebal 7,5 cm, AC-Base tebal 10 cm, Agregat Kelas A tebal 20 cm, dan Agregat Kelas B tebal 15 cm. Rencana Anggaran Biaya proyek ini adalah sebesar Rp 46.901.296.790,00 dengan durasi pelaksanaan pekerjaan selama 98 hari kalender.

Kata kunci: Perencanaan geometrik, perkerasan lentur, desain jalan, rencana anggaran biaya.

**GEOMETRIC DESIGN AND FLEXIBLE PAVEMENT THICKNESS
PLANNING OF LUBUK KEPAYANG – KASANG MELINTANG ROAD
SECTION STA 0+000 – STA 6+565 SAROLANGUN REGENCY
JAMBI PROVINCE**

ABSTRACT

This thesis discusses the geometric design and flexible pavement thickness planning of the Lubuk Kepayang – Kasang Melintang Road Section, STA 0+000 to STA 6+565, located in Sarolangun Regency, Jambi Province. This road section plays a strategic role in supporting the smooth distribution of agricultural and plantation products and improving interregional connectivity within Sarolangun Regency. The objectives of this study are to design a safe and comfortable road alignment, calculate horizontal and vertical alignments, design the flexible pavement thickness, and prepare project management planning along with the Cost Budget Plan (Rencana Anggaran Biaya/RAB).

The geometric design was carried out based on the 2021 Road Geometric Design Guidelines, while the flexible pavement design referred to the 2024 Pavement Design Manual. The results indicate that the planned road is classified as a Class III Rural Collector Road with a design speed of 60 km/h and an Average Daily Traffic (ADT) of 12,868 passenger car units per day. The roadway width is designed to be 5 meters with a cross slope of 3%, while the shoulder width is 2 meters with a cross slope of 6%. The alignment consists of 6 horizontal curves, including 3 Spiral-Circle-Spiral curves and 3 Full Circle curves, as well as 22 vertical curves. The calculated excavation volume is 14,858.21 m³, and the embankment volume is 5,028.64 m³. The flexible pavement structure consists of a 4 cm AC-WC layer, a 7.5 cm AC-BC layer, a 10 cm AC-Base layer, a 20 cm Class A Aggregate base layer, and a 15 cm Class B Aggregate subbase layer. The total estimated project cost is IDR 46.901.296.790,00, with a construction duration of 98 calendar days.

Keywords: *Geometric design, flexible pavement, road design, cost estimation.*