

ABSTRAK

PERENCANAAN PELEBARAN RUAS JALAN LINTAS TIMUR SUMATERA PALEMBANG – BETUNG STUDI KASUS KM 14 – KM 19 KABUPATEN BANYUASIN

M. Rifqy Assalam Kuswoyo, Sophie Alia Putri Apriliana

Program Studi D-III, Jurusan Teknik Sipil, Politeknik Negeri Sriwijaya

Jalan Lintas Timur Sumatera merupakan salah satu ruas jalan strategis yang berperan penting dalam mendukung mobilitas masyarakat, distribusi barang dan jasa, serta pertumbuhan ekonomi wilayah. Seiring meningkatnya volume lalu lintas, kapasitas ruas jalan eksisting pada KM 14–KM 19 Kabupaten Banyuasin dinilai tidak lagi mampu memberikan tingkat pelayanan yang optimal. Oleh karena itu, dilakukan perencanaan peningkatan ruas jalan untuk meningkatkan kapasitas, keamanan, dan kenyamanan pengguna jalan. Metode perencanaan meliputi pengumpulan data lalu lintas, analisis kapasitas jalan, perencanaan geometrik jalan berdasarkan Pedoman Desain Geometrik Jalan (PDGJ) 2021, perencanaan tebal perkerasan menggunakan Manual Desain Perkerasan Jalan (MDPJ) 2024, serta penyusunan rencana anggaran biaya (RAB) dan penjadwalan proyek. Hasil analisis menunjukkan bahwa ruas jalan yang semula bertipe 2/2 TT direncanakan ditingkatkan menjadi 4/2 TT dengan penambahan lebar jalur dan bahu jalan guna mengakomodasi pertumbuhan lalu lintas di masa mendatang. Perencanaan geometrik menghasilkan 12 tikungan yang terdiri dari 6 tikungan full circle dan 6 tikungan spiral-circle-spiral. Berdasarkan analisis perkerasan diperoleh umur rencana 20 tahun dengan nilai CBR tanah dasar sebesar 5% dan nilai CESA5 sebesar 192,029,128. Struktur perkerasan yang digunakan berupa perkerasan lentur yang terdiri atas lapisan AC-WC, lapisan fondasi atas, lapisan fondasi bawah, dan tanah dasar yang memenuhi persyaratan daya dukung. Total biaya pekerjaan yang dibutuhkan berdasarkan perhitungan RAB adalah sebesar Rp.107,958,350,000.- Perencanaan ini diharapkan dapat meningkatkan kinerja ruas jalan, mengurangi kepadatan lalu lintas, serta mendukung perkembangan kawasan dan aktivitas ekonomi di Kabupaten Banyuasin.

Kata kunci: geometrik jalan, jalan lintas timur sumatera, kapasitas jalan, pelebaran jalan, perkerasan lentur, rencana anggaran biaya.

ABSTRACT

PLANNING TO WIDENING THE EAST SUMATRA CROSS ROAD SECTION PALEMBANG – BETUNG CASE STUDY KM 14 – KM 21 BANYUASIN REGENCY

M. Rifqy Assalam Kuswoyo, Sophie Alia Putri Apriliana

D-III Study Program, Department of Civil Engineering, Sriwijaya State Polytechnic

The East Sumatra Cross Road is one of the strategic roads that plays an important role in supporting community mobility, distribution of goods and services, and regional economic growth. As the traffic volume increases, the capacity of the existing road section at KM 14-KM 19 Banyuasin Regency is considered no longer able to provide an optimal level of service. Therefore, planning is carried out to improve road sections to increase the capacity, safety, and comfort of road users. The planning method includes collecting traffic data, analyzing road capacity, geometric road planning based on the 2021 Road Geometric Design Guidelines (PDGJ), planning the thickness of the pavement using the 2024 Road Pavement Design Manual (MDPJ), as well as the preparation of cost budget plans (RAB) and project scheduling. The results of the analysis show that the road section which was originally 2/2 TT type is planned to be upgraded to 4/2 TT with an increase in lane width and road shoulders to accommodate future traffic growth. The geometric planning results in 12 turns consisting of 6 full circle turns and 6 spiral-circle-spiral turns. Based on the analysis of the pavement, the plan life was obtained for 20 years with a basic soil CBR value of 5% and a CESA5 value of 192,029,128. The pavement structure used is in the form of flexible pavement consisting of an AC-WC layer, an upper foundation layer, a lower foundation layer, and a base soil that meets the requirements of carrying capacity. The total cost of work required based on the calculation of RAB is Rp.107,958,350,000.- This planning is expected to improve the performance of road sections, reduce traffic density, and support the development of areas and economic activities in Banyuasin Regency.

Keywords: road geometry, east Sumatra cross net, road capacity, road widening, bending pavement, cost budget plan.