PERANCANGAN OVERPASS STRUKTUR JALAN TOL BETUNG - JAMBI STA 19 ± 00 SEKSI 1 A SUMATERA SELATAN

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ABSTRAK

Jembatan Beton Prategang yang berada di STA 19 ± 00 jalan Tol Betung – Jambi Sumatera Selatan merupakan jembatan yang berfungsi menghubungkan ruas jalan tol yang terpisah oleh jalan tol. Memiliki bentang 40,6 meter dengan lebar 12,7 meter. Jembatan ini menggunakan sistem Prategang dengan gelagar memanjang berupa Gelagar bentuk I dengan tinggi 1,6 m. Perencanaan jembatan ini mengacu kepada SNi 1725:2016 (Pembebanan Untuk Jembatan), RSNI T-14-2004 (Perencanaan Struktur Beton Untuk Jembatan), SNI 2833-2016 (Perencanaan Jembatan Terhadap Beban Gempa), dan sumber Pustaka lainnya. Perancangan Jembatan Beton Prategang ini meliputi bangunan atas yaitu pelat lantai, paraphet, pipa saluran air, balok diafragma, balok girder, dan bangunan bawah yaitu elastomer, abutmen, pondasi tiang pancang, pilar. Spesifikasi yang digunakan merupakan Spesifikasi Umum Untuk Pekerjaan Kontruksi Jalan dan Jembatan Revisi2 tahun 2018 oleh Kementerian PUPR Direktorat Jendral Bina Marga. Berdasarkan hasil analisis, perancangan Overpass STA 19 ± 00 membutuhkan biaya sebanyak Rp 5.391.478.107,00 (Lima miliar tiga ratus sembilan puluh satu juta empat ratus tujuh puluh delapan ribu seratus tujuh rupiah) dengan waktu pelaksanaan selama 255 hari kalender.

Kata Kunci : Overpass, Beton Prategang, Gelagar Tipe I.

DESIGN OF THE OVERPASS STRUCTURE FOR THE BETUNG - JAMBI TOLL ROAD STA 19 ± 00 SECTION 1 A SOUTH SUMATRA

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ABSTRACT

The Prestressed Concrete Bridge located at STA 19 ± 00 of the Betung–Jambi Toll Road in South Sumatra serves as an overpass that connects two sections of the toll road separated by another roadway. The bridge has a total span of 40,6 meters and a width of 12.7 meters. It utilizes a prestressed concrete system with longitudinal I-shaped girders measuring 1.6 meters in height. The design of the bridge refers to several national standards, including SNI 1725:2016 (Loading for Bridges), RSNI T-14-2004 (Design of Concrete Structures for Bridges), SNI 2833:2016 (Seismic Design for Bridges), and other relevant technical references.The bridge design includes both superstructure and substructure components. The superstructure consists of the deck slab, parapets, drainage pipes, diaphragm beams, and main girders. The substructure includes elastomeric bearings, abutments, piers, and a pile foundation system. All specifications used in the planning and construction process follow the General Specifications for Road and Bridge Construction Works – Revision 2, 2018, issued by the Ministry of Public Works and Housing, Directorate General of Highways.Based on the design and analysis, the construction of the overpass at STA 19 is estimated to require a total cost of IDR 5.391.478.107,00 (Five billion three hundred ninety one million four hundred seventy eight thousand one hundred seven rupiah), with an estimated construction period of 255 calendar days

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Keywords : *Overpass, Prestressed Concrete, Type I Beams.*