PERANCANGAN GEOMETRIK JALAN ALTERNATIF PADA SIMPANG UNIT 9 PT. MHP - PT. MHP AIR KEMANG KABUPATEN MUSI RAWAS PROVINSI SUMATERA SELATAN

ABSTRAK

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Infrastruktur jalan yang andal memegang peranan penting dalam menunjang kelancaran transportasi dan efisiensi distribusi logistik, khususnya di kawasan industri seperti Kabupaten Musi Rawas, Provinsi Sumatera Selatan. Tugas akhir ini merancang geometrik jalan alternatif yang menghubungkan Simpang Unit 9 PT Musi Hutan Persada (MHP) dengan PT MHP Air Kemang sebagai jalur logistik pengangkutan hasil hutan tanaman industri. Permasalahan yang dihadapi meliputi kemacetan, percepatan kerusakan jalan, serta menurunnya kenyamanan dan efisiensi lalu lintas akibat tingginya volume kendaraan berat. Perancangan dilakukan melalui analisis dan perhitungan alinyemen horizontal dan vertikal, dimensi perkerasan kaku (rigid pavement), serta bangunan pelengkap seperti drainase dan box culvert. Acuan yang digunakan adalah Pedoman Desain Geometrik Jalan (2021) dan Manual Desain Perkerasan Jalan (2024). Selain itu, disusun juga manajemen proyek berupa estimasi anggaran biaya, penjadwalan pelaksanaan (barchart, network planning, dan kurva S), serta rencana kerja pelaksanaan. Perancangan ini diharapkan menjadi solusi untuk mengurangi beban lalu lintas pada jalan utama, meningkatkan keselamatan dan kenyamanan berkendara, serta mendukung distribusi hasil hutan secara optimal. Di sisi lain, proyek ini memberikan pengalaman praktis bagi mahasiswa dalam mengaplikasikan ilmu teknik sipil sesuai standar nasional.

Kata kunci: perancangan jalan, geometrik jalan, perkerasan kaku, jalan alternatif, Musi Hutan Persada, transportasi logistik.

THE GEOMETRIC DESIGN OF AN ALTERNATIVE ROAD AT THE INTERSECTION OF UNIT 9, PT. MHP - PT. MHP AIR KEMANG, MUSI RAWAS REGENCY, SOUTH SUMATRA PROVINCE.

ABSTRACT

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Reliable road infrastructure plays a crucial role in facilitating transportation and enhancing logistics distribution efficiency, particularly in industrial areas such as Musi Rawas Regency in South Sumatra Province. This final project involves the geometric design of an alternative road connecting the Unit 9 intersection of PT Musi Hutan Persada (MHP) with PT MHP Air Kemang, serving as a logistics route for transporting industrial plantation forest products. The challenges encountered include traffic congestion, accelerated road deterioration, and a decline in comfort and traffic efficiency due to the high volume of heavy vehicles. The design process is conducted through the analysis and calculation of horizontal and vertical alignments, rigid pavement dimensions, and supplementary structures such as drainage systems and box culverts. The references utilized include the Road Geometric Design Guidelines (2021) and the Road Pavement Design Manual (2024). Additionally, project management is outlined, encompassing budget estimations, implementation scheduling (including bar charts, network planning, and S-curves), as well as a work execution plan. This design is anticipated to provide a solution for alleviating traffic loads on the main road, enhancing safety and driving comfort, and supporting optimal distribution of forest products. Furthermore, this project offers practical experience for students in applying civil engineering knowledge in accordance with national standards.

Keywords: *road design, road geometry, rigid pavement, alternative road, Musi Hutan Persada, logistics transportation.*