

ABSTRAK

TINJAUAN KINERJA PADA PERSIMPANGAN BERSINYAL TERINTEGRASI (RUAS SIMPANG MACAN LINDUNGAN – PARAMESWARA)

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Penelitian ini mengevaluasi kinerja lalu lintas pada koridor terintegrasi Simpang Macan Lindungan – Simpang Parameswara, Palembang, dengan menggunakan pedoman PKJI 2023. Berdasarkan survei lapangan selama 12 jam pada hari kerja dan hari libur, ditemukan bahwa koridor tersebut telah mencapai kondisi jenuh (oversaturated) dengan Tingkat Pelayanan (LOS) F. Pada jam puncak pagi, volume lalu lintas tertinggi mencapai 5.282,3 smp/jam di Simpang Parameswara dan 4.773,2 smp/jam di Simpang Macan Lindungan, dengan derajat kejenuhan (DJ) di seluruh pendekat melebihi 1,00 dan tundaan rata-rata mencapai 253,5 detik/smp. Kondisi ini mencerminkan ketidakseimbangan antara volume kendaraan yang tinggi dengan kapasitas geometrik jalan yang terbatas, serta diperparah oleh rendahnya kepatuhan pengguna jalan terhadap aturan lalu lintas. Mengingat optimalisasi sinyal lalu lintas tidak lagi mampu mengurai kemacetan yang terjadi, penelitian ini menyarankan perlunya langkah strategis berupa manajemen arus lalu lintas dan rekayasa jaringan jalan, serta penegakan hukum yang tegas terhadap pelanggaran lalu lintas sebagai upaya perbaikan kinerja lalu lintas di kawasan tersebut.

Kata Kunci: Simpang Terintegrasi, PKJI 2023, Tingkat Pelayanan (LOS), Derajat Kejenuhan, Infrastruktur.

ABSTRACT

Performance Evaluation of Integrated Signalized Intersections (Macan Lindungan – Parameswara Intersection Corridor)

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This research evaluates traffic performance on the integrated corridor of Simpang Macan Lindungan – Simpang Parameswara, Palembang, using the 2023 Indonesian Highway Capacity Manual (PKJI 2023) guidelines. Based on a 12-hour field survey conducted on weekdays and weekends, it was found that the corridor has reached an oversaturated condition with a Level of Service (LOS) F. During the morning peak hour, the highest traffic volume reached 5.282,3 pcu/hour at Simpang Parameswara and 4.773,2 pcu/hour at Simpang Macan Lindungan, with a Degree of Saturation (DS) on all approaches exceeding 1.00 and an average delay reaching 253,5 seconds/pcu. This condition reflects a significant imbalance between high traffic volume and limited road geometric capacity, exacerbated by low road user compliance with traffic regulations. Given that traffic signal optimization is no longer sufficient to resolve the occurring congestion, this research suggests strategic measures, including traffic flow management and road network engineering, as well as strict enforcement of traffic laws to improve traffic performance in the area.

Keywords: Integrated Intersection, PKJI 2023, Level of Service (LOS), Degree of Saturation, Infrastructure.