

Analisis Kinerja Simpang Tiga Tak Bersinyal

Studi Kasus : Simpang Tiga Tugu Asmaul Husna Kabupaten Pandeglang

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INTISARI

Masalah lalu lintas sering dijumpai di berbagai daerah khususnya pada persimpangan tak bersinyal. Simpang Pandeglang merupakan simpang tiga tak bersinyal sebagai jalan utama antara Kabupaten Pandeglang dan Kabupaten Serang serta dengan jalan akses menuju terminal Kadubanen. Simpang ini memiliki hambatan samping tinggi karena banyaknya kendaraan yang berhenti di sekitar simpang dengan adanya halte bus, sekolah dan pertokoan, sehingga sering terjadi kemacetan di simpang tersebut. Penelitian ini bertujuan untuk mengetahui kinerja simpang dengan melihat kapasitas dan arus lalu lintas yang melewati simpang, kemudian memberikan solusi dalam menyelesaikan masalah yang terjadi.

Analisa simpang menggunakan data primer berupa geometrik simpang, arus lalu lintas dan kondisi lingkungan, sedangkan data sekunder berupa data jumlah penduduk. Pengambilan data lalu lintas dilakukan pada hari Rabu dan Sabtu pada jam 06.00-09.00, 11.00-14.00 dan 15.00-18.00. Kemudian data dianalisis dengan menggunakan Pedoman Kapasitas Jalan Indoneisa (PKJI 2014).

Berdasarkan hasil analisa kinerja simpang tiga Pandeglang didapatkan nilai Derajat Kejenuhan (D_j) sebesar 1,02, tundaan sebesar 20 det/skr dan peluang antrian sebesar 41,96% - 83,18%. Nilai D_j pada simpang ini melebihi nilai D_j yang disarankan oleh PKJI 2014 yaitu 0,85 sehingga direncanakan alternatif solusi dengan mengurangi hambatan samping dan merencanakan simpang APILL untuk meningkatkan kinerja simpang. Hasil yang didapat setelah mengurangi hambatan samping yaitu D_j sebesar 1,00 dan merencanakan simpang APILL yaitu D_j sebesar 0,78. Hasil tersebut menunjukkan penggunaan APILL pada simpang Pandeglang menghasilkan kinerja simpang yang lebih baik dibandingkan tanpa APILL.

Kata Kunci : arus lalu lintas, kapasitas, derajat kejenuhan, simpang, PKJI

Performance Analysis In Unsignalized Three Way Intersection

Study Case : Monument Asmaul Husna Three Way Intersection Pandeglang

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ABSTRACT

Traffic problem are often found in various regions especially on unsignalized intersection. Pandeglang intersection is unsignalized three way intersection as the main road between Pandeglang Regency and Serang Regency as well as with road access to the Kadubanen Bus Station. The intersection has a height side barriers caused by many vechiles stopped around the intersection due to bus stop, schools and shopping centre so often traffic jam near to the intersection. This study are to know the performance intersection by capacity and traffic flow that passes in intersection, then to determine the solutions to solve the problems that occured.

Analysis of intersection using primary data such as geometric intersection, traffic flow and environmental conditions, meanwhile the secondary data such as data of total population. The data was taken on Wednesday and Saturday at 6.00 – 9.00 am, 11.00 – 14.00 pm and 3.00 – 6.00 pm. Then the data were analyzed by using The Guidelines Highway Capacity in Indonesian 2014.

Based on result of the performance analysis Pandeglang three way intersection showed that the value of Degree Saturation (D_j) is 1,02, value of traffic delay is 20 sec/lvu and value of traffic potential is 41,96 % - 83,18%. The value of D_j suggested by The Guidelines Highway Capacity in Indonesian 2014 is 0,85 so planned alternative solution by reducing of side barriers and plannerd APILL intersection to improve the intersection performance. Results obtained after reducing of side barriers showed that the value of degree saturation is 1,00 and planned APILL intersection showed that the value of degree saturation is 0,78. These results show use APILL on Pandeglang intersection produce performance intersection better compared without APILL.

Keyword : traffic flow, capacity, degree saturation, intersection, PKJI