

ABSTRACT

Intersections are an important part of urban roads because efficiency, safety, speed, and quality of traffic are highly dependent on intersection planning. The study was conducted in residential areas and shopping areas that are alternative roads, precisely at the unsignalized intersection of Jalan Hasanuddin - Pasar Tuminting. The purpose of this study was to determine the performance and level of service at the unsignalized three-arm intersection using MKJI 1997. This study was conducted for 7 days starting from 05.00 to 20.00. From the calculation results carried out at unsignalized intersections Capacity (C) = Monday morning: 1969, Monday afternoon: 2059, Monday evening: 2079. Degree of Saturation (DS) = Monday morning: 0.99, Monday afternoon: 1.05, Monday afternoon: 1.09, Intersection Delay (C) = Monday morning: 18.72 sec/smp, Monday afternoon: 21.52 sec/smp, Monday afternoon: 24.39 sec/smp, Queue Probability (QP%) = Monday morning: 40-78, Monday afternoon: 44-89, Monday afternoon: 48-98, Monday is the highest Delay. With the analysis of handling intersections with changes in road geometry, it was found that during the peak hour period the delay value (D) decreased to: 14.02 sec/smp.

Keywords: Intersection, Unsignalized intersection, Intersection performance, MKJI 1997.

ABSTRAK

Persimpangan merupakan bagian penting dari jalan perkotaan karena efisiensi, keselamatan, kecepatan, dan kualitas lalu lintas sangat bergantung pada perencanaan persimpangan. Penelitian dilakukan di kawasan pemukiman dan tempat perbelanjaan yang menjadi jalan alternatif, tepatnya di Simpang tak bersinyal Jalan Hasanuddin – Pasar Tuminting. Tujuan penelitian ini untuk mengetahui kinerja serta tingkat Pelayanan pada persimpangan lengan Tiga Tak Bersinyal menggunakan MKJI 1997. Penelitian ini dilakukan selama 7 hari yang dimulai dari pukul 05.00 hingga pukul 20.00. Dari hasil perhitungan yang dilakukan pada simpang tiga tak bersinyal Kapasitas (C) = Senin pagi : 1969, Senin siang : 2059, Senin sore : 2079. Derajat Kejenuhan (DS) = Senin pagi : 0,99, Senin siang : 1,05, Senin sore : 1,09, Tundaan Simpang (C) = Senin pagi : 18,72 det/smp, Senin siang : 21,52 det/smp, Senin sore : 24,39 det/smp, Peluang Antrian (QP%) = Senin pagi : 40-78, Senin siang : 44-89, Senin sore : 48-98, hari Senin merupakan Tundaan tertinggi. Dengan analisis penanganan simpang tiga dengan perubahan geometri jalan, didapati hasil pada periode jam puncak nilai tundaan (D) berkurang menjadi : 14,02 det/smp.

Kata kunci : Persimpangan, Simpang tak bersinyal, Kinerja simpang, MKJI 1997

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