

**ANALISIS KINERJA SIMPANG BERSINYAL  
(STUDI KASUS SIMPANG GUNUNG SABEULAH KOTA  
TASIKMALAYA)**

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**ABSTRAK**

Simpang Gunung Sabeulah merupakan jalan penghubung beberapa kecamatan di Kota Tasikmalaya yang memiliki permasalahan lalu lintas dikarenakan meningkatnya volume kendaraan dan tingginya hambatan samping di sekitar ruas jalan. Penulis berinisiatif untuk menganalisis permasalahan tersebut dengan manajemen lalu lintas. Penelitian ini bertujuan untuk meningkatkan kinerja Simpang Gunung Sabeulah Kota Tasikmalaya sehingga dapat mengurangi permasalahan lalu lintas yang ada. Penelitian dilakukan dengan cara observasi dimana pengambilan data primer dilakukan di lokasi penelitian selama 2 minggu pada saat waktu puncak. Data tersebut dianalisis dengan metode Manual Kapasitas Jalan Indonesia (MKJI) 1997 serta simulasi lalu lintas menggunakan *software* PTV Vissim. Hasil analisis digunakan sebagai acuan untuk mengevaluasi kinerja Simpang Gunung Sabeulah sehingga dapat menghasilkan solusi terbaik. Berdasarkan hasil analisis MKJI 1997 pada kondisi eksisting diperoleh nilai arus lalu lintas total ( $Q_{tot}$ ) = 2.107 smp/jam, tundaan rata-rata simpang = 31,04 detik/smp dengan tingkat pelayanan (*Level Of Service*) D atau kurang, serta Derajat Kejenuhan (DS) = 0,851 dengan tingkat pelayanan (*Level Of Service*) E. Hasil pemodelan *software* PTV Vissim kondisi eksisting yaitu panjang antrian ( $Q_{len}$ ) = 18,78 meter dengan tundaan ( $VehDelay$ ) = 30,82 detik/kendaraan, dan tingkat pelayanan (*Level of Service*) = C atau sedang. Hasil yang didapat pada kondisi eksisting dinilai kurang memuaskan sehingga direncanakan alternatif guna meningkatkan kinerja simpang yaitu alternatif 1 perancangan ulang waktu siklus dan alternatif 2 perancangan ulang fase sinyal lalu lintas sesuai dengan metode MKJI 1997 dan pemodelan PTV Vissim.

**Kata Kunci :** Derajat Kejenuhan, MKJI 1997, PTV Vissim, Simpang, Tingkat Pelayanan, Tundaan

**ANALYSIS PERFORMANCE OF THE SIGNALIZED INTERSECTION  
(CASE STUDY OF GUNUNG SABEULAH INTERSECTION OF  
TASIKMALAYA CITY)**

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**ABSTRACT**

*The Gunung Sabeulah intersection is a connecting road for several sub-districts in Tasikmalaya City which has traffic problems due to the increasing volume of vehicles and high side barriers around the road. The author took the initiative to analyze these problems with traffic management. This study aims to improve the performance of the Gunung Sabeulah Intersection in Tasikmalaya City so that it can reduce existing traffic problems. The study was conducted by means of observation where primary data collection was carried out at the study site for 2 weeks at peak time. The data were analyzed using the 1997 Indonesian Road Capacity Manual (MKJI) and traffic simulation using Vissim PTV software. The results of the analysis are used as a reference to evaluate the performance of the Gunung Sabeulah Intersection so that it can produce the best solution. Based on the results of the 1997 MKJI analysis in the existing conditions, the total traffic flow value ( $Q_{tot}$ ) = 2,107 smp/hour, the average delay at the intersection = 31.04 sec/smp with the level of service (Level Of Service) D or less, and the degree of saturation (DS) = 0.851 with the level of service (Level Of Service) E. The results of the modeling of the PTV Vissim software for the existing condition are the queue length ( $Q_{len}$ ) = 18.78 meters with a delay ( $VehDelay$ ) = 30.82 seconds/vehicle, and the level of service (Level of Service) Service) = C or moderate. The results obtained in the existing conditions are considered unsatisfactory so that alternatives are planned to improve the performance of the intersection, namely alternative 1 redesigning the cycle time and alternative 2 redesigning the traffic signal phase according to the 1997 MKJI method and PTV Vissim modeling.*

**Keywords :** Degree of Saturation, MKJI 1997, PTV Vissim, Intersection, Level Of Service, Delay