

***PERFORMANCE EVALUATION OF SIGNALIZED
INTERSECTION 3 USING PKJI 2023 METHOD AND PTV
VISSIM SOFTWARE
(Case Study: HR. Soebrantas - SM Amin, Pekanbaru City)***

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Abstract

Pekanbaru City is one of the largest economic centers on the island of Sumatra. This causes high traffic flow during rush hours, often causing congestion which results in delays and long queues at the intersection area. Based on the results of the analysis and calculations, the performance of the intersection with the existing conditions, the degree of saturation in the East arm is $0.670 < 0.85$, while the degree of saturation in the West arm is $0.668 < 0.85$ and the degree of saturation in the North arm is $0.656 < 0.85$. The road will be problematic in 5 years on the East arm with a DJ value of $0.875 > 0.85$, while on the West arm with a DJ value of $0.881 > 0.85$ and the North arm with a DJ value of $0.892 > 0.85$, and the next 10 years on all East arms with a DJ value of $1.319 > 0.85$, while on the West arm with a DJ value of $1.316 > 0.85$ and the North arm with a DJ value of $1.343 > 0.85$. And also based on the results of the analysis of existing conditions, it was found that the average service level is C, namely stable flow, while the 5-year condition is still safe at an average service level of E, and the 10-year condition is the service level of F.

Keywords: Capacity, PKJI 2023, PTV Vissim, Saturation Degree,