PERFORMANCE ANALYSIS OF NON-SIGNALED INTERANGES USING THE 2023 INDONESIAN ROAD CAPACITY GUIDELINES (PKJI) METHOD
(CASE STUDY : PRAMUKA ROAD AND SEMBILANG ROAD, PEKANBARU CITY)

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ABSTRACT

The intersection of Pramuka Street and Sembilang Street is a meeting point of provincial roads leading to Pekanbaru City and other cities on major roads, while on minor roads are roads leading to Siak Regency and Bengkalis Regency so that on weekdays and holidays at certain hours there are often delays and queues of vehicles because the traffic flow is quite busy. Therefore, a study was conducted to determine the level of service and how to improve the performance of unsignalized intersections.

This study uses the Indonesian Road Capacity Guidelines (PKJI 2023) method as a reference in the study. The results of the intersection analysis showed that the highest traffic volume occurred in the research results on Monday, February 19, 2023, at 07.00-08.00 with 2.414.8 pcu/hour; degree of saturation 0.75 with a capacity of 2.414.8 pcu/hour, intersection delay (T) of 17.85 sec/pcu, and the queue opportunity value (PA) ranged from 23% - 46%. After the alternative, namely eliminating the right turn direction in existing conditions, the capacity (C) increased to 3207.447 pcu/hour. The degree of saturation (DJ) value decreased by 0.50 with a capacity of 1.595 smp/hour, intersection delay (T) of 11.38 sec/smp and queue opportunity (PA) ranging from 11%-25% for the road performance index to increase to B.

Keywords: Traffic Flow, Unsignalized Intersection Performance.