ABSTRACT

The Intersection of HR. Muhammad Street – Buitk Darmo Boulevard Street – Darmo Permai Selatan Street – Darmo Permai II Street intersection was initially signalized intersection, and one of them intersection in Surabaya western region have traffic volume becomes so crowded in rush hours at morning, afternoon, and evening. That was because the existence of schools, commercial and residential area’s. In addition to not far from the intersection HR. Muhammad Street – Buitk Darmo Boulevard Street – Darmo Permai Selatan Street – Darmo Permai II Street will be operated Modern Market Puncak Permai, which will add to trip
generation and affect of traffic volume in the area. Therefore, need to evaluate how the performance of this intersection.

An Analysis of intersection performance for existing conditions and analysis for the next 5 years in 2017 using the MKJI 1997 method with the help KAJI program. This research starts from the collection of population data, land use and data obtained the volume of vehicles by BAPPEKO and Dishub Surabaya as secondary data, and calculate volume of traffic due to the rise of Modern Market Puncak Permai Surabaya in intersection area. And conduct surveys of traffic volume to obtain the primary data.

Based on the result of the analysis existing conditions in 2012 level of services at intersections in the rush at morning produces LOS F Intersection delay = 101 det/smp, at afternoon produces Intersection delay = 66 det/smp (LOS F) and for evening produces Intersection delay = 51 det/smp (LOS E). Then the conditions of intersection is can’t be maintained and need repairs to the alternative 1 make change traffic management and cycle time obtained DI = 40 det/smp (LOS E). In alternative 2 then make change to the geometric intersection and cycle time obtained DI = 35 det/smp (LOS D) In alternative 3 then make change to the geometric intersection, traffic management, and cycle time obtained DI = 30 det/smp (LOS D), alternative 3 is the selected alternative. As for the next 5 years at morning and afternoon period level of services in 2012 to 2017 obtained LOS D and in 2012 to 2016 obtained LOS D. As for the evening peak in 2017 LOS E thus obtained in 2017 needs re-evaluation.

Keyword : Signal Intersection Performance, Post Modern Market Reconstruction, LOS.