

Thet Phyo Wai 2011: Traffic Safety Assessment at Major Intersections on Yangon-Pyay Road in Yangon City. Master of Engineering (Civil Engineering), Major Field: Civil Engineering, Department of Civil Engineering. Thesis Advisor: Associate Professor Pongsak Suriyavanagul, Ph.D. 78 pages.

This thesis describes one of the effective methodologies in determining the traffic safety at signalized intersections. The research was based on three major at-grade signalized intersections. These were selected according to the severity of accident rates and crash rates, traffic related injuries and fatalities. The main objective is to study the traffic safety assessment based on conflict observations at these intersections on Yangon-Pyay Road in Yangon City, Myanmar. The police reported accidents data from the past five-year period of each intersection was compared with the conflict observation data collected by using Traffic conflict technique which was used as the proximal and short-term traffic safety measure. The results from serious conflict observation data for each intersection were compared with the police reported accident data and then a comparison of intersections was made using the statistical correlation. Conflict observation data from the 16 hours for each intersection were calculated with Time to Accident (TA) to classify into serious and non-serious conflicts. Inter-observer variance based on the three separate conflict studies is also considered. The limitations and potential of vehicle-vehicle (rear-end and exclusive rear-end) collision, and vehicle-pedestrian collision have also been compared with each other from a theoretical and practical perspective, which resulted in the need for the reliable and effective methodology.

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