

Traffic Accident Risk Assessment on National Roads: A Case Study in East Aceh Regency

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Abstract : Transportation plays an important role in people's daily activities but is often marred by traffic accidents. In Indonesia, traffic accidents are the third leading cause of death after coronary heart disease and tuberculosis, according to the World Health Organization (2013). Several roads in East Aceh District are strategic access points for economic growth in the Aceh region. There were 446 traffic accidents in 2023, which is the highest case in the last five years. This study aims to analyze black spot locations on national roads in East Aceh District and evaluate road safety deficiencies in the area. The research methodology began by selecting the locations with the highest accident rates based on data from East Aceh Police from 2019-2023. Next, Average Daily Traffic (ADT) was measured by projecting population growth data. The analysis of road safety deficiencies included measurements of road geometrics, traffic signs and markings, and traffic volumes at black spot locations. The study results showed deficiencies in lane width, shoulder width, and inadequate road safety facilities at several locations. Recommendations for improvements include increasing lane and shoulder widths and adding signs and markings to improve safety. This study is expected to serve as a reference for the government and relevant stakeholders in improving traffic safety in East Aceh District.

Keywords : black spot, traffic accident, severity index, road safety

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