

Locating Problematic Road Sections: Comparisons between Crash Data and Composite Index Method

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ABSTRACT

Aware on the importance of upgrading and maintaining the safety level of existing road network, several attempts on localizing problematic road areas have been made. In current practice, the identification of those problematic sections was recognized based on the road's safety level and one of the most common and acceptable method is by using crash data of the particular road network as a starting point for further actions. However, the information provided by crash data is far from providing good and broad pictures of the factors leading to crash. These circumstances have bringing out the needs to have another road safety indicator that can extensively describes actual situations at problematic road areas as well as can be used as a basis for further maintenance works. By focusing on the environment aspect of the roads, fourteen road environment indicators were chosen based on their abilities to portrayed current road environment conditions and its potential in triggering road traffic crashes. Data of these indicators were collected by means of naturalistic driving method within 80 km length road of Federal Road 2 connecting Kuantan and Maran Town in Pahang State. Composite road environment risk index was developed using these data where combination of risk generated from these environments aspects were evaluated and used in localizing problematic road sections. Apart from that, the outcomes were also used as basis in planning for road improvement plans. The development of composite road environment risk index as a proactive method in defining poor sections has proved to be very useful in identifications of problematic road sections requiring urgent road improvement works especially when crash data is not available or in poor quality.

KEYWORDS: Composite Index, Crash Data, Road Environment

DOI: 10.4028/www.scientific.net/AMM.802.345