Identification of Hazardous Locations: A Suggested Methodology Through Comprehensive Accident Survey and Analysis for Irbid City

By

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Abstract

In this study, a methodology for identifying hazardous locations in the studied area, and in areas with similar data systems is suggested. This methodology starts with identifying what are referred to as "dangerous sections". These sections are identified based on data available in monthly accident summaries. In their identification, a simple technique is developed, used, and checked against other methods, and against different accuracy indicators. Then, what are referred to as "hazardous locations" (specific locations at the previously identified dangerous sections) are identified. These locations are identified based on data extracted from the detailed accident reports, and through using a specially developed triple mixed criteria. After this step, the methodology joins the usually used methodologies in conducting detailed analyses, making field inspections, and suggesting the proper countermeasures.

In addition, the usually used accident and accident severity rate forms are studied. Systems of data reporting, filing, and storing, and the significance of using experience-based and the recommended Jordanian criteria to identify hazardous locations in the studied area are also investigated. As a result, some modifications to the usually used accident and accident severity rate forms are suggested. Sometimes, new forms are developed. Considering identification methods, it was found that, experience-based methods are more significant than the recommended Jordanian criteria.

Accident analysis results showed that, improving road surface quality and friction properties, enforcing the use of tires with sufficient tread depth, providing special turning lanes, channelizing the side open spaces at intersections, providing and/or enforcing traffic control signs, increasing access control, improving night visibility, visibility at work zones, and visibility of the, at street, workers, providing the proper neighborhood playgrounds for children, and improving pedestrian qualification levels in traffic safety fields through different learning programs can markedly reduce accident problems in the studied area and in other areas suffering from similar problems.