

Demonstration and Implementation Recommendations to Integrate the United States Road Assessment Program into Existing Kansas Highway Safety Programs

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Introduction

Vehicle crashes on rural roadways in Kansas continue to be a serious safety concern. Many state agencies are utilizing systemic safety tools to identify, prioritize, and implement countermeasures based on numerous data sources. The United States Road Assessment Program (usRAP) is one such systemic tool which relies on determining areas of risk along a roadway without the need of localized crash data, which can sometimes be hard to obtain depending on the roadway.



Study Corridor Containing a Horizontal Curve

Project Description

Three rural two-lane corridors were selected, including a US highway, Kansas highway, and a rural secondary road. Data collection for the usRAP software included manual speed data collection, system-wide centerline miles and crashes, crash costs, countermeasure costs, and manual roadway coding data every 100 m.

Project Results

The usRAP software evaluated each corridor and developed a star rating for each 100-m segment indicating areas of potential risk to vehicles, motorcycles, pedestrians, and bicyclists. Safer Roads Investment Plans were developed for each corridor based on the coded information. These plans included recommended countermeasures which mainly targeted run-off-road crashes, such as removing fixed objects in the clear zone, enhancing horizontal curves through delineation, and side slope improvements. Additionally, a benefit-cost ratio was provided for each countermeasure and also a program benefit-cost ratio. Output from usRAP for the rural secondary corridor was compared to a road safety audit (RSA) which was recently completed and the results were similar for issues that could be identified from the roadway point of view.

Project Information

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