IOWA STATE UNIVERSITY
Institute for Transportation

Development of Iowa Road Safety Assessment (RSA) Guidelines

tech transfer summary

Road safety assessments are an effective tool for improving roadway safety.

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RESEARCH PROJECT TITLE
Development of Iowa Road Safety Assessment (RSA) Guidelines

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The mission of the Institute for Transportation (InTrans) at Iowa State University is to develop and implement innovative methods, materials, and technologies for improving transportation efficiency, safety, reliability, and sustainability while improving the learning environment of students, faculty, and staff in transportation-related fields.
The Iowa Local Technical Assistance Program (LTAP) is dedicated to providing technical and management assistance to Iowa's local governments through a variety of programs and resources.

Iowa LTAP
Local Technical Assistance Program

Background

A road safety assessment (RSA) is a formal review of the safety performance and features of a roadway (or a series of sites) by a multidisciplinary team that has no prior experience with the site(s). RSAs have been conducted for counties, cities, and the Iowa Department of Transportation (DOT) for many years and encourage implementation of effective safety improvements.

Project Description

For this project, the team reviewed current national and state RSA literature and surveyed a small sample of states on their RSA practices to define RSA guidelines and practice. That information, as well as the current approach to RSAs in Iowa, was used to develop a suggested RSA process for the future.

Field reviews of two two-way stop-controlled intersections, one of which also has an overhead flashing beacon, during previous RSAs in Iowa

Field review near an unprotected culvert on a secondary roadway on a previous RSA conducted in Iowa

Key Findings

- The literature review found that states generally follow the 2006 Federal Highway Administration (FHWA) eight-step RSA process. The eight steps in the FHWA process include project identification, team selection, pre-meeting, field review, analysis and report preparation, presentation of findings, preparation of formal response, and incorporation of findings.
- An in-depth review of RSA processes in four states (Nevada, Ohio, South Dakota, and Virginia) found that each state generally followed the FHWA guidelines.
- Some variations in the FHWA process are in use by some states, but these are largely related to the expansion of specific steps.
- A limited number of software applications were identified that will help facilitate the completion of RSAs. In general, the software that is available is fee-based or spreadsheet-based. The software guides RSA team members with checklists and prompt lists of items to examine in the field.

Implementation Readiness and Benefits

The Iowa process has evolved and changed to meet the needs of those requesting RSAs in the state, and this evolution will likely continue in the future. The Iowa RSA process is flexible. Consequently, changes, updates, or revisions to the process can and should be incorporated as necessary in the future.

The approach outlined here can be employed by any agency that conducts an RSA in Iowa. The application of this approach should result in more consistency between RSAs, regardless of who conducts them and the agency with jurisdiction along a given roadway.

Iowa RSA Process Guidelines

1. Project Identification – Roadway owner identifies site(s) to assess and makes RSA request.
2. RSA Team Development – Team is assembled that generally consists of engineers, planners, law enforcement, and other specific disciplines as needed (i.e., pedestrian or bike experts, etc.).
3. Background Data Compilation – Relevant data to the site(s) is collected (crash records, traffic, etc.).
4. Pre-Assessment Meeting – A meeting with the roadway owner for background information about the site(s) and to discuss the crash data, etc.
5. Field Review – A site visit(s) and review by the team follows the pre-assessment meeting. Typically, this is performed during the day, unless crash history suggests a night review is needed.
6. Memorandum Development – A summary is created of the safety issues identified by RSA team during the field review, suggested safety improvements, and potential funding sources.
7. Memorandum Delivery –The memorandum document is provided to the requestor.
8. Incorporate Suggestions – The RSA team improvement suggestions selected by the requestor are implemented at their discretion.

Field review of a rural roadway segment in Iowa during a previous RSA