

TECH NEWS

TECHNOLOGY NEWS

March-April 2005

Improving traffic safety on a shoestring budget: Iowa's take on a California model

If you've taken the road quiz (see page 1), then you already know this: Safety is the highest priority for the FHWA, rural two-lane roads have the highest crash rate, and local agencies generally manage the most roads with the fewest resources.

Improving safety on county roads on what often seems like a shoestring budget is a hefty task indeed. To learn how one county in California is significantly reducing crashes using low-cost improvements, four Iowa county engineers attended a conference last fall hosted by Mendocino County, California.

Iowa attendees were

- Steven Camp, Pocahontas County
- Michael McClain, Jones County
- Roger Patocka, Emmet County
- David Patterson, Washington County
- Jerry Roche, FHWA Iowa Division
- Duane Smith, Iowa LTAP

What is the Mendocino County Traffic Safety Review program?

From 1992 to 1998, Mendocino County reduced crashes by 42 percent using the Road System Traffic Safety Review (TSR) program they developed.

The TSR program uses annual reviews of low-volume roads to improve safety through better signing. It involves using sign management systems to track the signs used on the roads, and crash data to spot problematic locations.

According to Mendocino County, proper signing and markings are one of the most effective methods for reducing crashes. Signs must be MUTCD-compliant, used consistently, and used primarily to warn drivers of upcoming conditions and guide them to their location.

Reviewing the roads

The TSR program involves dividing the county's roads into three or four geographical areas, each with about the same number of miles of the higher classification roads. Mendocino County recommends making each group small enough so that one person can review an area each year.

One area is then reviewed each year so the whole county is reviewed in three or four years. The cycle then starts over and is ongoing. Not sure where to begin? Start on the area with the highest number of crashes.

TSR Tool 1: Sign management system

Track which signs are used and their condition through a sign inventory or management system. Ahead of the curve, many Iowa counties already use sign management systems.

"We've been doing this for decades, so it was great to see Iowa out in front with something like traffic safety," said David Patterson, Washington County engineer.

Pocahontas County Engineer Steve Camp noted, "Since we already have a sign management system, it seems like improving sign uniformity across the state and country is the next big step to improving safety."

TSR Tool 2: Crash data

The second tool is crash data and analysis. Analyze crash data to find the most problematic locations in the county and improve signing there.

Patterson took it a step further and talked to local deputies. "Deputies in my county pointed out two curve locations where cars were regularly running off the road, but since there was no damage, the locations were not identifiable as hot spots from the crash data," he explained.

Washington County uses a geographical information systems (GIS) sign management system that can integrate crash data from the Crash Mapping Tool (CMaT), letting Patterson see his sign inventory and crash data together.

"For me, the integration of crash data with our sign system is the biggest step to improving safety, and then actually taking the time to review the data and do something about it," said Patterson. "There is no deadline for safety. It has to be a priority you set for yourself," he continued.

Emmett County Engineer Roger Patocka said, "It was great to see that we were already practicing the two main strategies, but the conference reinforced for me the importance of good recordkeeping for our signs and taking advantage of the crash data we have access to."

Free crash data analysis

The Iowa Traffic Safety Data Service (ITSDS) analyzes crash data for city, state, and county engineers. This free service is a great way to spot problematic intersections, curves, or other locations. Learn more about [ITSDS online](#).
