

This and several future issues of Technology News will include summarized excerpts from a new manual Best Practices for Low-Cost Safety Improvements on Iowa's Local Roads. The first in the series is based on Chapter 1: Signing and Delineation. Feel free to pull it out, post it, photocopy it, and distribute it to your staff.

Signing and Delineation

Post-Mounted Delineators and Chevrons (Curves)

Post-mounted delineators and chevron signs have been implemented in several scattered locations in Story County since the 1980s. These signs, which are effective not only during the day but also at night, are primarily used on curves to give drivers a better awareness of the degree of sharpness of an approaching curve and guidance as they travel through the curve. Post-mounted delineators and chevron signs have been shown to reduce the numbers of run-off-road crashes on curves and help reduce 35 percent of all crashes and up to 20 percent for fatal/injury crashes on curves.

Project Contact

Darren Moon, P. E.
Story County Engineer
837 N Avenue
Nevada, IA 50201
Phone: 515-382-7355
engineer@storycounty.com



Chevrons installed on a curve. (Photo courtesy of Bob Sperry)

Solar-Powered Flashing Beacons (Red or Yellow)

Solar-powered flashing beacons can be used in many different applications including general lighting on bridge sidewalks and pedestrian/bike paths or as luminaries. Flashing yellow lights emphasize caution and warning situations, while red lights emphasize stop applications. Washington County implemented a flashing beacon in July 2007 at the junction of a quarry entrance/exit and W55. Because the flashers use solar panels, the cost is approximately \$2,200 per flasher plus \$500 for software, if programming is desired. Despite the cost, flashing beacons reduce up to 30 percent for all crashes.

Project Contact

David Patterson, P. E.
Washington County Engineer
201 West Main Street, Suite 2
Washington, IA 52353-1723
Phone: 319-653-7731
engineer@co.washington.ia.us



Flashing beacons installed in Clinton (left), Dubuque (middle), and Washington County (right). (Photos courtesy of Doug Pershall, Brown Traffic Products)

Blinker Signs

Blinker signs were installed in Iowa in 2006 in Davenport, Des Moines, Dubuque, Fort Dodge, Spencer, LeClaire, Asbury, and Glenwood. Some of the applications of the innovation are at new Stop sign locations and high incident and rural road intersections. With the potential to reduce up to 15 percent of crashes, blinker signs increase visibility at high incident intersections and heighten driver awareness by emphasizing signs where driver inattention has resulted in violations or problems in the past. The signs, which install easily onto new or existing sign posts, can be integrated into an Intelligent Transportation System or synchronized with multiple signs. Blinker signs use high intensity Day-Viz™ light-emitting diodes that command attention day and night, adjust light output for maximum visibility and battery efficiency, and can be programmed to operate continuously or on solar time clocks, push buttons, and/or motion (vehicle) detectors.



Perimeter blinking lights provide additional emphasis. (Photos courtesy of Tapco, Inc.)

Project Contact

Tapco Inc.

800 Wall Street
Elm Grove, WI 53122
Phone: 262-814-7000
Toll free: 800-236-0012
www.tapconet.com
www.tapcostore.com

Sign Sheeting Alternatives

Higher grade sign sheeting provides better visibility and longer sign life, increasing driver awareness and enhancing safety. The sheeting technology has been developing for the past 15–20 years and is now used for signs in every local agency in Iowa. There are diverse alternatives for sign sheeting and a range of costs for each, meaning that every agency needs to balance their needs for high sign visibility with the money they have to spend. The FHWA has new retroreflectivity requirements for signs that may require that balance to shift in the future. See http://safety.fhwa.dot.gov/roadway_dept/retro/index.htm for more information.



Comparison of engineering grade, HIP, and DG3 sign sheeting during the day (left) and at night (right). (Photos courtesy of 3M Company)

Project Contact

Kyle Kovar

3M Company
W. Dodge Road #344
Omaha, NE 68114
Phone: 402-598-8527
Cell: 651-732-7996
kkovar@mmm.com