Evaluation of Low-Cost Treatments on Rural Two-Lane Curves

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The objective of this project was to evaluate low-cost measures to reduce speeds on high-crash horizontal curves. The researchers evaluated two low-cost treatments in Iowa to determine their effectiveness in reducing speeds on rural two-lane roadways. This report summarizes how the research team selected sites and collected data, and the results.

The team selected six sites. Retroreflective post treatments were added to existing chevrons at four sites and on-pavement curve markings were added at two sites.

The researchers collected speed data before and after installation of the two treatments. The study compared several speed metrics to assess the effectiveness of the treatments. Overall, both were moderately effective in reducing speeds. The most significant impact of the treatments was in reducing the percentage of vehicles traveling over the posted or advisory speed by 5, 10, 15, or 20 or more mph. This result suggests that the treatments are most effective in reducing high-end speeds.