



## PROJECT TITLE: USING LIGHTING AND VISUAL INFORMATION TO ALTER DRIVER BEHAVIOR

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Inappropriate traffic speeds are a major cause of traffic fatalities. The use of lighting and visual information such as signage could assist in encouraging appropriate driving speeds. Along sharp roadway curves, an overall reduction in driving speed might be desirable to prevent rollover crashes. At other locations, such as those prone to chronic congestion, uniformity of vehicle speeds might be desirable in order to optimize safety and traffic flow. A method of modifying the size and spacing of traditional chevron signs along curves was tested to convey the perception of increased curve sharpness.



The treatment was field tested in a controlled driving experiment, and then deployed along two highway curves in New York State. Based on the real-world test results, when the perception of curvature sharpness was increased using the chevron sign treatment, vehicle speeds were reduced enough to show a statistically significant change.

To address the issue of reducing speed variance at congested locations, conditional speed display messages were displayed on a changeable message board based on the speed of oncoming traffic. In a controlled field experiment, it was found to have the desired impact in terms of driving speed and variance in measured speeds.



In a real-world test installation, drivers modified their speeds which reduced speed variance in response to a similar conditional speed display sign. The results of the research project suggest that chevron size and spacing modifications can be readily implemented.

Additional limited trials at different types of congested locations should be performed to better understand the impact of conditional speed displays; however, the present results of this research project are promising.