IMPROVING TRAFFIC FLOW CONDITIONS FOR INTERSTATE WORK–ZONES:  
EVALUATION OF THREE TRAFFIC CONTROL DEVICES  

Nawaz M. Shaik  
Dr. Kristen L. Sanford Bernhardt, Thesis Supervisor  

ABSTRACT  

Highway departments, which are responsible for maintenance of different highway facilities, have the continuing responsibility to make the highway as safe and efficient as possible. Traffic control approaching and within a work-zone is a major concern for these departments. The objective of this study was to test three traffic control devices – white lane drop arrows, orange rumble strips, and the CB wizard alert system – for their effectiveness in improving merging, and reducing speed and speed variance at an interstate highway work-zone in Missouri.  

Statistical tests were conducted on the speed related data collected along the approach to the work-zone lane closure when the devices were not in place and when they were in place. Results of implementing the white lane drop arrows and the CB wizard alert system indicate decreases in the percentage of vehicles in the closed lane, mean speed and speed variance. It also appears that the CB wizard alert system may be more effective than the white lane drop arrows. The CB wizard alert system in conjunction with the orange rumble strips did show similar reductions, but they were much smaller in comparison to the CB wizard alert system alone.