Florida Department of Transportation Research

Longitudinal Channelizing Devices along Business Entrances in the Work Zone

April 2015

Project Number
BDR74-977-02

Project Managers
Jonathan Duazo
Stefanie D. Maxwell
FDOT Construction Office

Principal Investigator
LuAnn Theiss
Texas Transportation Institute

Current Situation

The Florida Department of Transportation's *Design Standards* requires placement of business entrance signs and channelizing devices at business entrances in work zones. The *Design Standards* also specifies the layout of the signs and devices. Typically, highway contractors use orange and white plastic drums as channelizing devices. However, these drums are also used to mark other areas of work sites. The *Design Standards* requires that drums be spaced more closely at business entrances, but in field experience, this does not appear to aid driver detection of entrances. The additional drums at entrances may also contribute to the visual clutter of work sites and impair sight lines for drivers exiting businesses.

This image from this project's field tests compares the use of drums (left) and LCDs (right) to mark the same business entrance.

Research Objectives

Researchers at the Texas Transportation Institute evaluated the effectiveness of alternatives to use of channelizing drums for marking driveways in work zones. The study focused on the use of low profile longitudinal channelizing devices (LCD), which are accepted in the *Manual of Uniform Traffic Control Devices*.

Project Activities

Researchers reviewed the literature to identify driveway delineation alternatives used or considered by other transportation agencies. LCDs were found to have good potential to address concerns with current work zone business driveway delineation practices. The researchers conducted a closed course study at the Texas A&M University Riverside Campus testing facility to identify the best LCD configurations for further evaluation. The researchers then performed field studies in Florida work zones to evaluate LCDs and compare them to the standard drum treatment used in Florida. During field studies, researchers collected video data of turning movements to conduct an erratic maneuvers study. They also recorded speed profiles, which were used to compare speeds and speed changes along the driveway approaches. In addition, a survey of driveway users was administered in order to garner opinions of the driveway treatments.

Project Benefits

The distinctive appearance of low profile LCDs, compared to drums or cones, helps drivers more quickly and confidently identify business entrances, which improves traffic flow and safety in work zones.

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