



Project Summary

Texas Department of Transportation

0-5446: Guidelines for Signs and Markings on Toll Roads

Background

As toll facilities and managed lanes become more common in Texas, the Traffic Operations Division of the Texas Department of Transportation (TxDOT) has been working to develop new standards and guidelines for traffic control devices for these new facilities. The Texas Transportation Institute has conducted focus groups and surveys with Texas drivers to evaluate understanding of signs and markings for use on toll and managed lane facilities.

What the Researchers Did

The research team conducted a thorough state-of-the-practice review of signing practices for toll facilities in the U.S. and abroad. These results are presented in research report 0-5446-1 – *Preliminary Guidelines For Signing On Toll Facilities*. The researchers also conducted a series of focus groups over two years in seven Texas cities with a total of 115 participants. Researchers presented illustrations of candidate signs and markings in roadway contexts. The discussions focused on drivers' understanding of toll road regulations, forms of payment, and access areas. The researchers also conducted a survey of signs for toll and managed lane facilities in four cities with a total of 142 participants. This survey used video animation clips of sign sequences along with still images of candidate signs. The survey asked multiple-choice questions concerning comprehension of sign messages.

Research Performed by:

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Example toll tag plaque and route marker from Texas Manual on Uniform Traffic Control Devices (2006) Chapter 2J used in focus group research.

What They Found

The research reports associated with this project detail the findings for specific sign and pavement marking designs in the following areas:

- Toll Route Markers
- Guide Sign Banner Design
- Frontage Road Signing
- Toll Plaza Signing
- Pavement Markings for Managed Lanes
- Managed Lane Use Regulatory Signs
- High-Occupancy Vehicle (HOV) Diamond Symbol
- Express Lane Terminology
- TxTAG Payment Plaque
- Price Signing
- Interchange Sequence Signing
- Tolling Gantry Lane Selection
- ACCESS TO Terminology
- LEFT LANE Plaque
- Form of Payment
- Importance of Travel Time Information



Example payment regulatory sign tested in the research.

What This Means

The preliminary findings of this research were incorporated into the 2006 *Texas Manual on Uniform Traffic Control Devices*, Chapter 2J. Subsequent additions and revisions to this document are forthcoming in the form of interim guidance documents from TxDOT's Traffic Operations Division. These TxDOT guidelines incorporate the findings of this research project.

Published research reports associated with this project can be found at:

<http://tti.tamu.edu/documents/0-5446-1.pdf> and <http://tti.tamu.edu/documents/0-5446-2.pdf>

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