

### 0-6821: Safety Impact of Texas Travel Information Centers

#### Background

The Texas Department of Transportation (TxDOT) currently operates and maintains 12 Travel Information Centers that serve travelers entering the state. These public facilities serve a broad range of visitors, including vacation/recreational travelers, commercial vehicle operators, commuters, travelers on bus tours, motorcyclists, and others. Travel Information Centers provide the distinct advantage of quick and convenient access, some with facilities that are open 24 hours a day.

A recent legislative appropriation prompted TxDOT to reassess the functional value of Travel Information Centers and develop a methodology to determine their economic and safety impact for taxpayers. The overall goal of this research was to develop a methodology and gather sufficient data to quantify the impact of Texas Travel Information Center staff and services on the safety of travelers on Texas roadways. Data and analytical tools that quantify the value of person-to-person contact with visitors that provides information about travel route, road condition, destination, weather, and disaster evacuation were used. Several tasks were performed under this study to provide a response to this legislative request.

#### What the Researchers Did

A four-tiered approach was established to provide evidentiary data supporting the safety impact of Texas Travel Information Centers, using the following methodologies:

- Sourcing existing literature and current precedent research studies that are relevant to establishing baselines of safety benefits of Travel Information Centers, particularly for risks of drowsy/fatigued driving, impacts of large trucks, and influences of traveler behaviors.
- Analysis of crash data for segments of roadway preceding and following access to and from Travel Information Centers, which demonstrated notable reduction in crash rates for roadway segments immediately downstream of Travel Information Center facilities.
- Collection and analysis of on-site visitor surveys at Texas Travel Information Centers, and assignment of a weighted safety index corresponding to each response.
- Analysis of dramatic peaks in DriveTexas™ toll-free Travel Information Line calls routed to Texas Travel Information Center staff during emergency or extreme weather events affecting roadways (ice, snow, hurricanes, flood, road closures, etc.) to obtain valuable traveler safety information during emergency/weather events.

#### Research Performed by:

The University of Texas at San Antonio

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## What They Found

There is no doubt that the existence of Travel Information Centers results in reduction of crashes caused by driver fatigue, shoulder parking, driver distraction, hazardous road and weather conditions, and vehicle malfunction. In addition, since the center user survey clearly showed that the center users use the information provided at the center, the provided information must have positive impacts on travelers' safety. For the three rural Travel Information Centers that were part of the study scope where the impact on crash statistics is not affected by cofactors (such as adjacency to urban centers), crash analysis revealed a statistically significant reduction in crash rates for two centers and a reduction in the number of crashes for three centers. Crash rate reductions were from 30 to 45 percent for the directions of travel that benefit from the enticement to stop and rest provided by the Travel Information Centers. This is certainly a significant benefit that needs to be taken into account in any cost-benefit evaluation of the centers.

Results from the Travel Information Center user surveys implemented in the study showed that about 50 percent of the respondents were driving for a period longer than 3 hours before stopping at the Travel Information Center. In addition, when asked about the driving time expectation after leaving the Travel Information Center, about 50 percent of the Travel Information Center users were planning to drive for more than 3 hours.

Travel Information Centers also contribute to travelers' safety through direct communication. For example, analysis of phone inquiries received by the centers showed that the number of calls increased by multiple orders of magnitude during inclement weather and that the vast majority of the calls were about road conditions and shelter availability. Travel Information Centers provide general safety information to travelers and collaborate with local authorities on safety promotion. The researchers proposed a safety index to estimate how the center users perceive the impact of the usage on the safety of their travel experience. This safety index was based on the results from the field questionnaires. Results suggested that Travel Information Centers have significant impact on the safety of travelers as remarked by the computed value of the proposed safety index.

## What This Means

There are numerous safety benefits of the Texas Travel Information Centers that were not addressed in this study. Many of these benefits were unquantifiable. Among the benefits that can be quantified in future studies are comfort and convenience benefits, the relationship between the crash reduction rate and the distance from a center, and the safety benefits of the reduction of excess travel.

### For More Information

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