

UTC Spotlight

University Transportation Centers Program

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This monthly report from the University Transportation Centers Program highlights some of the recent accomplishments and products from one of the University Transportation Centers (UTCs) managed by the U.S. Department of Transportation's Research and Innovative Technology Administration.

University Conducts Comprehensive Study of Mexican Border Truck Safety

The Southwest Region University Transportation Center (Region VI), headquartered at the Texas Transportation Institute in the Texas A&M University System, recently reported the results of a detailed safety study of trucks crossing the U.S.-Mexico border into the State of Texas. The results of this study have important implications for public debates allowing Mexican trucks into the United States.

In 1995, the North American Free Trade Agreement (NAFTA) contiguous state cross-border trucking provision was not implemented by the United States in part because of concern that carriers from Mexico could not meet federal safety standards. Mexico took the case to arbitration, and on February 6, 2001, officials ruled that the United States must allow Mexican commercial trucks access to its highways.

The Texas Department of Public Safety (DPS) was made responsible for ensuring truck compliance at the state border and in 2002 began operating border safety inspection facilities (BSIF) at the eight largest truck border crossings. These inspection stations are located as close as possible to the existing Customs and Border Protection (CBP) stations, with the CBP stations ensuring national security while the BSIF facilities ensure U.S. highway safety compliance.

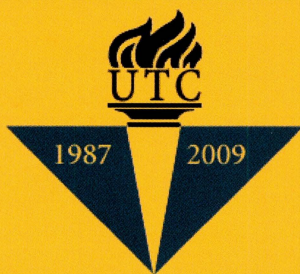
The BSIF sites provide a unique opportunity to evaluate data on the safety performance of all trucks entering the state, including Mexican carriers.

Border Trucking

Trucking moves the majority of NAFTA trade commodities, both by weight and value. Trucking operations and productivity along the U.S.-Mexico border are substantially different from the U.S.-Canada border. Truckers at the northern border are over-the-highway carriers who are allowed free access and do not presently undergo state safety inspections at designated sites. Truckers at the southern border face a more complex system. Typically, long-haul Mexican domiciled carriers transport goods from the interior of Mexico to the border. There another trucking company, most Mexican domiciled—termed a “drayage” company—collects the trailer, crosses the border, and transports goods to a nearby U.S. warehouse or trucking facility while a broker processes import documentation. Today, the process is still largely that which existed when NAFTA was signed, with one important change—trucks that enter the United States are subject to stringent border safety inspections.

Once a truck clears CBP and BSIF inspections, it delivers its consignment to a border warehouse or U.S. over-the-highway trucking facility because Mexican domiciled carriers are not allowed to operate beyond the commercial zone, except for those partaking in a USDOT demonstration project. Today, every truck at the largest Texas gateways passes through BSIFs located close to the CBP facilities.

The views presented in the *UTC Spotlight* are those of the authors and not necessarily the views of the Research and Innovative Technology Administration or the U.S. Department of Transportation.



Texas Border Safety Inspections

In 2006, there were over 3.2 million northbound truck crossings (mostly of Mexican registry) into Texas, most passing through BSIFs where commissioned and civilian employees inspected over 111,000 trucks. The inspection reports provided the data base used for this study.

Texas BSIF facilities are located in El Paso, Eagle Pass, Laredo, Pharr, and Brownsville. Texas DPS personnel look for observable safety violations with the driver, tractor, and trailer. The officer permits the truck to leave the facility or sends the truck to the secondary inspection bay. The secondary inspection determines if the truck should be placed out-of-service. Data on all trucks that undergo the secondary inspection are then compiled by DPS.

These reports are used to calculate out-of-service rates—a ratio of the number of trucks placed out-of service to the total number of inspections performed at the secondary inspection bays.

Border Truck Safety Rates

Since 1995, many discussions of border truck safety have focused on the out-of-service rates for Mexican drayage trucks and compared them with out-of service rates for U.S trucks, most of which are newer over-the-highway vehicles. However, the two types of truck operations are quite different. Drayage trucks, which are limited to crossing the border, are generally much older than typical over-the-highway U.S trucks. The economic assumption is that the older and less reliable drayage vehicles are more likely to fail safety standards. It is therefore important to compare similar operations if Mexican and U.S. safety differences are to be equitably determined. This study

uses data of northbound vehicles domiciled in both countries and therefore offers a comparison of similar trucking operations.

The analysis indicates that Mexican truck safety was superior in many cases to that of U.S. carriers. In fact, the Mexican vehicle out-of-service rate was better at six of the eight facilities as shown in table 1.



Photo courtesy of Robert Harrison

Entrance to the El Paso Border Safety Inspection Facility.

Implications for Truck Safety

The finding that Mexican carriers outperformed U.S. carriers at most Texas BSIFs since 2003 challenges a central argument made by those wishing to keep the southern border closed on safety grounds.

The assumption that Mexican trucking companies cannot comply with U.S. motor carrier safety regulations is not supported by analysis of the substantial BSIF database, which now exceeds 400,000 truck inspection records.

The operations of the safety facilities in place along the Texas/Mexico border have led to improved safety performance as shown in the study report, which provides additional year-on-year evidence. Safety inspection facilities are also operated in New Mexico, Arizona, and California so that Mexican trucks traveling to destinations within the United States will be subjected to a process emphasizing full and effective compliance with U.S. safety standards should the border fully open. ☛

Table 1 Vehicle Out-of-Service Rates (2006) at Border Safety Inspection Facilities (BSIF)

BSIF location	Inspections		Out-of-service rate	
	U.S. carriers	Mexican carriers	U.S. carriers	Mexican carriers
Bridge of the Americas	1,047	18,218	0.281	0.249
Ysleta-Zaragoza	1,374	19,218	0.335	0.262
Camino Real	1,650	5,285	0.178	0.154
Colombia Solidarity	1,768	13,278	0.260	0.293
World Trade Bridge	1,220	12,955	0.180	0.162
Pharr-Reynosa	472	14,878	0.165	0.197
Free Trade	2,985	2,515	0.249	0.191
Veterans International	2,536	12,283	0.331	0.231

SOURCE: Texas Department of Public Safety

About This Project

DOT invests in the future of transportation through its University Transportation Centers Program, which awards grants to universities across the United States to advance the state-of-the-art in transportation research and to develop the next generation of transportation professionals. The research described in this report was conducted independently under a grant to the Southwest Regional University Transportation Center (SWUTC), a consortium headquartered in the Texas A&M University System, where Dock Burke (d-burke@tamu.edu) is the director. It does not reflect work directed by the Research and Innovative Technology Administration, Federal Motor Carrier Safety Administration or the U.S. Department of Transportation.

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Additional information on this project can be found at: <http://swutc.tamu.edu/publications/technicalreports/473700-00071-1.pdf>
For additional information on the DOT UTC Program, see utc.dot.gov.