

OVERVIEW

The US 290 Traffic Study was legislatively mandated by the 88th session of the Texas Legislature in accordance with Rider 50 of House Bill 1.

“The Department of Transportation shall conduct a study on options for reducing traffic congestion on segments of U.S. 290 that serve as hurricane evacuation routes and include at-grade railroad crossings. In conducting the study, the Department shall consider projected traffic and usage patterns, projected usage during disasters and the potential use of the Texas Rail Relocation and Improvement Fund¹ to address rail crossing issues.”

The study assessed traffic usage patterns along the hurricane evacuation route of US 290 from Beltway 8 (Sam Houston Tollway) in Houston to US 183 in Austin, a distance of about 145 miles. The study began in December 2023 and concluded in November 2024.

US 290 is generally an at-grade 4-lane divided Principal Arterial. However, urban sections of US 290 between Hempstead to Houston are access controlled, have frontage roads and grade separation at interchanges.

STUDY FINDINGS

Historical Traffic Demand: Average Annual Daily Traffic (AADT) values for year 2022 were used to evaluate the traffic demand along US 290. US 290 sections near Houston and Austin experience the highest traffic volumes. AADT peaks are also observed near Giddings and Brenham.

Traffic Projections: Historical volumes and Travel Demand Models were referenced to forecast traffic volumes to Analysis Year 2029 using 2.7% to 3.6% growth rates. The highest historical growth rates of approximately 10% were seen in Brenham. In Analysis Year 2050, travel demand is forecasted to surpass existing capacity in Austin, Manor, Elgin and Houston, causing travel congestion and delay.

Safety Analysis: Most of US 290 had lower crash rates comparing to the statewide average while rural sections exhibited higher than statewide average crash rates. Crash hotspots were identified near Manor, Elgin, Giddings, Brenham, and Houston.

At-Grade Railroad Crossings: In the study corridor, there is only one active at-grade railroad crossing of US 290. This crossing is of a Union Pacific railroad in downtown Giddings. TxDOT’s Austin District is leading the [US 290 Giddings Mobility Study](#). The mobility study, which is anticipated to be completed in 2025, may yield recommendations on how to mitigate traffic congestion along US 290 and the at-grade railroad crossing conflict.

Hurricane Evacuation: This analysis assumed evacuation from a Category 5 storm in the Galveston Bay, 72 hours before landfall. Under a hurricane condition, most of westbound US 290 is expected to accommodate evacuation traffic demand with proper operation of EvacuLane² and Contraflow.³ Congested traffic conditions during hurricane evacuation are likely in Brenham, Giddings, Elgin, Manor and Austin.

POTENTIAL OPTIONS FOR REDUCING TRAFFIC CONGESTION (UNFUNDED)

Short-Term (1 - 4 Years)

- Perform Road Safety Audit on rural sections in the Austin and Bryan Districts with crash rates higher than statewide average
- Provide safety lighting and enhance speed management in rural sections
- Perform a traffic signal timing optimization on the Austin-Manor-Elgin sections
- Extend the Contraflow limit from Field Store Rd. to SH 99
- Continue collaborating with law enforcement to assist traffic controls for the at-grade railroad crossing in downtown Giddings during hurricane evacuations

Mid-Term (5 - 10 Years)

- Complete US 290 and SH 36 interchange improvements and update Contraflow plan after completion
- Provide railroad preemption and End-of-queue Warning System to Giddings at-grade crossing
- Provide adequate Dynamic Message Signs along US 290 evacuation routes
- Expand and diversify Evacuation Routes including SH 249, SH 36, and potentially Westpark Tollway

US 290 Traffic Study Map



¹This Fund is a mechanism available to the Texas Transportation Commission to issue bonds, notes, and other public securities to finance the construction of railroad underpasses and overpasses (Transportation Code Title 6, Subtitle A, Chapter 201, Subchapter “O”).

²An extra wide shoulder that is converted to a travel lane during an emergency.

³Reversing the direction of traffic flow to increase capacity of evacuation traffic.

CONTACT INFORMATION

Steve Linhart, AICP | Project Development Manager | Transportation Planning and Programming Division | Steve.Linhart@txdot.gov