



# Project Summary

Texas Department of Transportation

## 0-4644: Evaluation and Integration of Texas Airports into the Trans-Texas Corridor

### *Background*

The Trans-Texas Corridor (TTC) system has been proposed to provide quick, safe, and reliable movement of people and goods by automobile and rail throughout the state of Texas. The corridor system is expected to relieve congestion on existing roadways, divert hazardous materials away from urban areas, and stimulate economic growth and development. However, in order to ensure that the proposed Trans-Texas Corridor routes will be fully integrated into the state's transportation system, the corridor's proximity to and potential effects on the existing airport network, as well as any future airport growth, must also be considered in the planning process.

### *What the Researchers Did*

The purpose of this project was to identify the potential effects, including both challenges and opportunities, the TTC system could create for the Texas aviation system, and to provide recommendations for airport managers, airport governing boards, TxDOT Aviation Division staff, TxDOT Texas Turnpike Authority Division staff, and TTC developers to help maximize benefits and minimize negative impacts.

The first step in examining these potential effects was to complete a review of the existing Texas aviation system to determine the functions, scope, and location of the air transportation network, and to compare airport locations with the conceptual TTC system. Using GIS mapping, airports located within 25 and 50 miles of a proposed TTC were identified.

In order to identify the key effects on air transportation in Texas that could result from the TTC system, a survey of the state's aviation experts and stakeholders was completed. The survey asked respondents to describe what they foresaw as the key benefits and threats for airports operating near the TTC, and whether or not they would consider location in proximity to the TTC to be favorable. In addition, the survey sought advice regarding aviation interests for TTC planners to consider when planning corridor alignments.

A literature review of existing physical and operational requirements for airports, connectivity and accessibility needs, and air cargo movement was performed to substantiate and support planning recommendations. Physical and operational requirements considered included obstruction clearance, protected air space, runway protection, and airport planning. Requirements for airport connectivity to both truck and rail modes for freight movement, and to automobile and rail for passenger movements, were examined.

The structure of and current trends for the national air cargo industry were examined. In addition, characteristics of existing passenger and freight flows, major air traffic centers, and their connectivity to other transportation modes were identified for the state of Texas.

### *Research Performed by:*

Center for Transportation Research (CTR),  
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C. Michael Walton, CTR

### **Researcher:**

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### **Project Completed:**

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This review also included data analysis of federally reported air and cargo movement to provide quantitative support for the recommendations.

## What They Found

Two-hundred forty-eight airports, including 16 primary commercial, 12 reliever, and 150 general aviation, were found to be within 25 miles of at least one of the proposed corridors. An additional 113 airports, including 9 primary commercial, 8 reliever, and 75 general aviation, were located within 50 miles of a corridor.

The corridors have yet to be chosen; as a result, this identification of affected airports is only preliminary. However, the very high percentage of affected airports identified in this study indicates that regardless of exact alignment, the TTC is likely to significantly impact regions where existing airports are located, emphasizing the importance of including airport interests in the planning process.

Results of the aviation industry survey were used to identify the perceived benefits and opportunities for airports resulting from location near the TTC. While most respondents recognized one or more benefits for airports located near the TTC, 8 percent recognized none. The most frequently recognized benefit anticipated by 61 percent of survey respondents was increased airport usage, including growth in the number of aircraft based at an airport and daily operations, as well as increased hangar use and fuel sales. More specifically, respondents indicated that general aviation airports could realize increases in corporate, commuter, and other business activity in addition to attracting more industry. Also, the state's large freight airports—those that provide a gateway for NAFTA commodities carried across the border by truck—could benefit from improved highway operations and intermodal connectivity.

As a result of the findings, the following planning recommendations were developed to aid TTC planners in integrating airport interests:

- Provide connectivity and accessibility between TTC and airports.
- Plan for aviation-compatible land uses around airports.
- Consider potential impacts on aviation safety and security.
- Consider the needs of the differing types of aviation activity.
- Minimize impacts on the built environment.

## What This Means

- Airport authorities should take a proactive role to ensure that appropriate attention is given to airport interests by other public agencies during planning stages.
- Planners should consider aviation system requirements in TTC planning, particularly through cooperation with the Federal Aviation Administration and TxDOT Aviation Division.
- As definite alignments for TTC segments are defined, future accessibility evaluations should be performed for affected airports.
- Planners should develop strategies consistent with the Texas Aviation System Plan (TASP).

### *For More Information:*

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*Technical reports when published are available at:*

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