



# The National I-10 Freight Corridor Study

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## Feasibility Study Nears Completion

The National I-10 Freight Corridor Study is nearing completion. The project team is currently evaluating a variety of improvement scenarios that will provide the basis of the recommended strategies for the eight participating states to pursue. Additional information on these scenarios can be found on page 3 of this newsletter.

The purpose of this study is to analyze multimodal transportation needs and develop a plan for improving traffic flow along the Interstate 10 (I-10) Corridor. This project has been a joint effort by eight state Departments of Transportation (DOTs) including California, Arizona, New Mexico, Texas, Louisiana, Mississippi, Alabama, and Florida.

The study began in October 2001. Study tasks included identification of existing conditions, analysis of freight movement, identification of environmental and safety issues, analysis of international and domestic freight data, and baseline review of current and planned Intelligent Transportation System (ITS) applications.

A Technical Advisory Committee and a Steering Committee, consisting of state DOT and federal transportation officials, were formed to direct the project team. In addition, meetings were held with elected and appointed officials, the public, and related businesses and industries in an effort to help identify existing conditions and needed improvements.

A discussion on the industry's perspective is located on the back page of this newsletter. Summaries of the meetings with elected and appointed officials and the public are available on the project web site, [www.i10freightstudy.org](http://www.i10freightstudy.org).

This is the last in a series of three newsletters to be distributed during this feasibility study. This newsletter and the two

previous newsletters may be accessed on the project web site in the section on Project News.

The Executive Summary of the completed feasibility study will be available on the project web site in March 2003. Copies will also be available by calling the project hotline, 1-866-4-I-10-FWY (1-866-441-0399), or by writing to: The National I-10 Freight Corridor Study, 11301 Olympic Blvd., #413, West Los Angeles, California 90064.

## Early Visionaries

In the early 1900s, traveling across the southern United States was difficult at best with few paved roads. There was no direct route. In December 1915, a group of visionaries met in Mobile, Alabama and formed a group called the Old Spanish Trail Association. They represented a coalition of states including Florida, Mississippi, Alabama, Texas, Arizona, and others to promote the construction of a southern transcontinental highway. It loosely followed the routes of the Spanish explorers and missionaries. The proposed route passed through cities such as Jacksonville, Tallahassee, Mobile, Biloxi, New Orleans, Beaumont, Houston, San Antonio, El Paso, Las Cruces, Tucson, and southern California.

In 1919, the Spanish Trail Association established headquarters at the Gunter Hotel in San Antonio, Texas. The group publicized the route to tourists and by August 1926 had distributed 83,000 maps and travel service booklets. The national highway was completed in 1929 and ran from St. Augustine, Florida to southern California.

*The National I-10 Freight Corridor Study project team wishes to thank the following people for their contributions to and research*

*El estudio del Corredor Nacional de la autopista Interestatal es casi completo. El estudio comenzó en octubre 2001. Varios guiones para mejor se desarrollan. Estos guiones proporcionarán la base de las estrategias recomendadas para los ocho estados que participan para seguir. El Resumen Ejecutivo del estudio completado de la viabilidad estará disponible en el sitio en el Internet de proyecto en marzo 2003.*

*Para mas informacion en este proyecto, escribe por favor a: El Estudio del Corredor Nacional de la Autopista Interestatal, 11301 Olympic Blvd., #413, West Los Angeles, CA 90064 o llame sin costo al (866) 441-0399. También usted puede visitar el sitio en el Internet en [www.i10freightstudy.org](http://www.i10freightstudy.org).*

# Baseline Conditions

The project team is currently evaluating a variety of multimodal freight-oriented scenarios to determine recommended strategies for the I-10 states to pursue. Before scenarios could be developed, baseline conditions were established and evaluated.

Baseline conditions are used to measure the additional costs and benefits of each of the scenarios. In this analysis, existing conditions are measured then forecasted for milestone years 2008, 2013, and 2025 with no future improvements to the corridor. Operating speeds, travel times, and vehicle miles traveled (VMT) are evaluated. In addition, total VMT, the need for additional roadway capacity, and examination of pavement conditions are assessed.

The I-10 corridor spans eight states and is 2,650 miles long. Most rural sections have four lanes while urban sections have six to eight lanes. Truck volumes along urban sections range from 6,450 trucks per day (tpd) to 17,700 tpd and from 5,400 tpd to 10,800 tpd on rural sections. Trucks account for a smaller percentage of overall traffic in urban areas as compared to rural areas, but truck traffic is increasing in all areas. In urban areas, truck traffic is predominately local traffic delivering goods between business points along with the system-oriented through traffic.

Over the next 25 years, both truck and car speeds are projected to decline considerably. This is due to the expected increase in traffic that will lead to increased travel delay. The average hours of delay for truck travel during peak hours is expected to grow by 152%. If a truck drove from one end of I-10 to

the other today, it would take just over 45 hours with modest delays. During hours of peak travel, the same trip would take 61 hours. By 2025, the trip could take 55 hours under average conditions or 93 hours under peak travel conditions. This hypothetical trip is symptomatic of the delays encountered by all freight operators using the corridor.

Most truck miles traveled occur in rural areas while the majority of car miles traveled occur in urban areas. By 2025, daily truck travel is expected to increase 117%. Car travel is projected to increase 63%.

The I-10 Corridor has more than 12,000 lane miles, 65% of which are in rural areas. In 2000, there were 306 lane miles that did not provide sufficient capacity. By 2025, that number is expected to quadruple. To match projected travel demand, more than 5,000 lane miles would need to be constructed. Estimated cost for this additional capacity is more than \$21 billion.

Over 650 lane miles have some pavement deficiency. Today, the average pavement life is just under six years. Pavement life is expected to decline in future years, to an average of 4.3 years in 2025 while the cost of maintaining the roadway infrastructure will continue to increase.

In addition to the roadway, other transportation modes are increasingly congested. Certain segments of the railroads that serve I-10 are near or already exceeding capacity and ports have landside congestion and cargo-handling and vessel issues. These issues are addressed in the various scenarios discussed on page 3.

## I-10 Corridor Level of Service (2000 and 2025)



# Developing Scenarios

Each scenario has been analyzed to determine ways to improve transportation efficiency, safety and productivity along the corridor. Measures such as delay reduction, reduction in accident costs, improved vehicle operating cost, time savings, and emission reductions have been determined for each scenario. The scenarios are being evaluated to determine which strategies will best increase capacity, improve safety and efficiency, and reduce emissions. Since it is likely that no single scenario will adequately accommodate future traffic growth, the study will recommend a combination of the most feasible scenarios to provide the state DOTs the best options and flexibility to implement recommended changes over time. The scenarios that have been developed are described below:

Scenario	Description
Widen I-10 to Meet Future Demand	Adding enough lanes to each segment so they operate at an acceptable Level of Service (LOS) is being evaluated first, without regard to financial, environmental or other constraints. Once the additional roadway capacity needs are calculated, costs are determined. Although some roadway segments may never be widened, this scenario demonstrates the need for other alternatives to improve operations.
Intelligent Transportation Systems (ITS)	Using ITS to manage traffic flow and provide information to drivers can also improve LOS. Services have been identified based on operational needs and issues, and analyzed for expansion in 2008, 2013, and 2025. Potential ITS strategies include traffic management, traveler information, incident management, and commercial vehicle operations systems. In addition, initiatives needed to support the ITS strategies have been identified.
Separate Truck Traffic from Automobiles	The concept of separating truck traffic from auto traffic on highly traveled corridors is an emerging approach for improving corridor operations and safety. In this scenario, passenger vehicles and freight travel in separate lanes along I-10. This could be accomplished in different ways, including trucks operating in certain existing travel lanes, constructing additional travel lanes physically separated from existing lanes, or directing truck traffic to one highway and passenger vehicles to another.
Multimodal Rail Corridor	In this scenario, an analysis of the freight traveling along the I-10 Corridor has been conducted to determine what percentage of future cargo is truck/rail competitive, that is, could be transported by truck or rail. Whether a sufficient share of the truck/rail competitive trips have characteristics suitable for intermodal service (trip length, time definite, etc.) is being evaluated. The analysis determines whether this multimodal strategy will sufficiently increase capacity, boost safety and efficiency, and reduce emissions along I-10.
Multimodal Waterway Corridor	The multimodal waterway scenario is very similar in nature to the multimodal rail scenario and evaluates the amount of freight that could be moved by barge rather than by truck for some portion of its trip. This option is being explored for the Gulf Coast section of I-10 and involves the establishment of regular barge service operating along the Gulf to transport this freight.
Urban Truck By-Pass	One of the more common strategies defined during the outreach process was the use of truck-only by-pass routes around major urban areas. By-pass routes around urban areas could reduce congestion, improve safety, and reduce emissions in urban areas if there is sufficient through truck traffic to justify the cost. This analysis does not evaluate conventional urban by-passes for all vehicles, since this approach is already in use. The idea of a truck-only by-pass is a relatively new and untested option.
Truck Productivity	The use of policies allowing increased truck size and weights has been evaluated at the federal, state and local level. The policies vary from state to state, and some states have routes that allow trucks to exceed federal size and weight restrictions. There is currently a federal ban on allowing size and weight exemptions for any additional Interstate routes. Nonetheless, this issue continues to be evaluated as a possible means for improving freight productivity and traffic safety, while reducing facility maintenance costs. Although a substantial amount of research exists regarding these issues, this scenario considers the impact of this approach on the competitiveness of other modes.
Others	This study also evaluates other strategies, such as freight villages and changing hours of operation. Freight villages are multimodal freight transportation facilities located on the outskirts of urban areas. They are used to help reduce inner-city congestion and overall corridor congestion. Truck operating schedules, particularly in large urban areas, typically conform to normal business hours of intermodal facilities or end consumers. This often forces trucks to travel during peak traffic periods. If operating hours could be modified for receivers, it may be possible that a sufficient number of trucks could travel during off-peak hours, which would improve overall traffic flow.

# Industry's Perspective

Industry perspectives are an important part of developing recommendations for improving the I-10 Corridor. Representatives from motor carriers, shippers, waterborne carriers, ports, railroads, and air cargo interests were interviewed to gain their perspective of problems and possible solutions.

Logistics, the way goods are moved through the supply chain from manufacturer to consumer, are changing. Traditionally, control has been in the ownership of the goods with transportation and information systems playing secondary roles. As trade becomes increasingly global, the method of control is shifting. Transportation and information systems have become much more important.

Retail is one of the drivers of this development. Goods are made all around the world. Companies must know what their customers want, where the goods are located, and be able to deliver them quickly in order to stay competitive. This new type of logistics, called fast-cycle or "neuro" logistics, operates a bit like our brains, because the flow of information is crucial to the control of physical processes. No longer are goods sitting in warehouses or being stockpiled. Now, the trucks, ships, and trains become the warehouses, and the goods are delivered "just-in-time."

But if goods have to hit the shelves just when needed, then any transportation delay becomes a real problem. At the same time that fast-cycle distribution has been expanding, traffic congestion has increased across and between urban areas. As a result, separation of commercial traffic seems to appeal to truckers. With dedicated truck lanes, trucks can move through congested urban areas more quickly. One issue that

must be considered, however, is the idea of dedicated toll roads. The reaction of trucking companies and drivers is mixed on the subject of toll roads. Some say tolls would discourage truckers from using dedicated facilities.

Changing the way the system operates, for instance delivering goods during off-peak times, can offer big advantages for capacity and mobility. But, there are thresholds to be reached, below which there is not enough off-peak business volume for everyone to work productively. The delivery system still has to satisfy the ultimate consumer network.

Other possible operational changes include integration and standardization of the public Intelligent Transportation Systems (ITS) with the private systems freight carriers employ. For example, a local trucker can benefit from streetside traffic information, but long distance drivers need sufficient advanced warning to allow them to pick an alternate route.

To help improve the system, truck/network corridors that include integrated ITS could be designed to allow for organized staging points, or "freight villages," outside urban areas. ITS would provide information about the local area, including warnings or problems, and be integrated with the whole system through public and private commitments. Improvements could also include increasing the capacity of waterways and rail, making use of the efficiency of these modes for large traffic volumes and the redundancy they bring to the freight network. In the post-9/11 world, multiple or redundant ways for goods to get to market create a resilient transportation system.

*The final report for this project will be available in the form of an Executive Summary in March 2003. To obtain a copy, visit the project web site, [www.i10freightstudy.org](http://www.i10freightstudy.org), call the project hotline, 1-866-4-I-10-FWY (1-866-441-0399), or write to **The National I-10 Freight Corridor Study, 11301 Olympic Blvd., #413, West Los Angeles, California 90064.***

This newsletter was developed by Olivarri & Associates, Inc. with HNTB Corporation, Wilbur Smith Associates and Consensus Planning Group. 12/02