The National I-10 Freight Corridor

Corridor Overview & Lessons Learned

Wilbur Smith Associates
I-10 Conception

- Began as a Pooled Fund Study in 2000
  - Coast to coast
  - $2.1M
- Focus on freight movement throughout the corridor
The I-10 Corridor covers

■ 8 states
■ 17 major metropolitan areas

...Serving more than 35 million people

Note: This is an animated slide – the population along the corridor appears after 2.5 seconds

The following states are traversed by Interstate 10:
• California • Louisiana • Arizona • Mississippi • New Mexico • Alabama • Texas • Florida

The following MPOs also lie on or adjacent to the corridor
Basically, this graphic shows port container traffic in the U.S. It shows the U.S. port container volumes in twenty-foot equivalent units (TEUs).

The National I-10 Corridor is the commerce tether to the largest container port facility in the U.S., the ports of Los Angeles and Long Beach. The map above shows our nation’s current and future maritime trade volumes that international commerce. Today, the ports along the I-10 (LA/LB and Houston) handle international commerce volumes roughly equivalent to all other U.S. Ports. In the future, the growth of international maritime trade through just the Ports of LA/LB will surpass the volumes of all other U.S. ports combined.
This slide shows the AAPA rankings of U.S. Ports by tonnage for 2005. Of the top of 15 US ports – 12 lie in states served by the I-10 National Freight Corridor.
National I-10 Freight Study Goals

- Assess the importance of freight moving in the corridor to the economy of the corridor states and the rest of the nation
- Identify current and future traffic operations and safety problems along the corridor that impede freight flows
- Identify and evaluate strategies to facilitate the efficient movement of freight in the corridor

In 2001 the eight states transversed by the I-10, pooled their funds to conduct a freight study of the corridor. The National I-10 Corridor Study examined commerce in the corridor, including:

- The freight related demands on the corridor
- Various freight derived congestion relief strategies
- Economic benefits of freight in the corridor
The corridor was evaluated using a measure of congestion called “Level of Service.”

LOS is given a letter designation ranging from A to F (free flow to heavily congested), with LOS D considered inmost urban areas where congestion is common as the limit of acceptable operation, and LOS D as the beginning of unacceptable operations in rural locations. For example, LOS can be related to the grading scale of a report card: A = excellent; B = good; C = average; D = below average; E = needs improvement; and F = failing. Utilizing procedures identified in the 2000 Highway Capacity Manual and available traffic data from the 2000 HPMS, level of service was determined for the entire length of I-10.
Based on the analysis conducted in 2003, the demand on the I-10 corridor will result in needs that will exceed expenditures by $21.3 over a 25 year period if conventional congestion relieve - capacity expansion strategies are pursued.
The analysis also estimated the economic costs of “doing nothing” and found the impacts over the next 20 plus years would exceed $2 trillion.
The study modeled the impact seven different strategies for relieving congestion. The first scenario was based upon well developed impacts from traditional capacity strategies of adding additional lanes. The other six scenarios focused on freight options, which were then compared to the results of the traditional widening strategies.
This first scenario impacts slide shows the results of individual modal strategies including: 1) Lift truck weight limits to 97,000 lbs, 2) diverting selected highway shipments to rail, and 3) diverting selected highway shipments to short sea shipping along the Gulf Coast. While none of these strategies by themselves offers extensive congestions relief, taken together they do offer viable options for capacity enhancement, with limited public investment compared to traditional highway expansion.
This scenario impacts slide shows the results of selective capacity enhancements through urban by-passes for trucks, and truck-only lanes. Both of these strategies can offer congestion relief in the most congested portions of the corridors and the required investment level falls between traditional capacity expansion and modal diversion strategies.
This slide shows additional details about the estimated benefits from improved operations via technology investments.

Based upon these results the eight states in the I-10 Coalition decided to pursue a modest ITS integration strategy beginning in 2004.
Phase II – ITS Architecture

- In Fall 2004, TAC met to discuss ITS option
  - Not because ITS alone was viewed as the best option
  - Because ITS offered the best way to move ahead quickly AS A CORRIDOR
Met with other Corridors

- I-95
- Gary-Chicago-Milwaukee
- Canamex
- Northwest Passage
- High Plains Coalition

Result – Move forward with ITS Option
Corridor ITS Integration Themes

- Enhance overall mobility
- Ease freight congestion
- Increase transportation security

In 2004, the I-10 Coalition asked Wilbur Smith Associates to undertake the development of an ITS Concept of Operations for the Corridor using funds left over from the initial study. The purpose of the concept of operations is to:

- Identify the key stakeholders and develop communication protocols
- Define at a high-level, the desired improvements across various operating systems
- Develop the foundation for lower-level system improvement descriptions
- Define the major user classes and their activities
In developing the Concept of Operations, the members of the eight state Technical Advisory Committee and the project team became abundantly aware of the many operating impacts the corridor has experienced at the hands of mother nature. From hurricanes and fog in the east.....
Operational and Safety Issues

The aftermath of a dust storm on I-10 in Arizona

An earthquake in 1994, registering 6.8 on the Richter Scale destroyed several key interchanges on I-10 in Southern California

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In 2006, in order to continue some effort at corridor-wide congestion relief, the eight states came together again to form an additional pool of funding to continue their worked toward corridor-wide integration of technology.
Current I-10 Corridor Efforts

- Finish Corridor ITS Architecture
- Agree on a program
- Establish roles, responsibilities and timelines for future planning and deployment of ITS technologies.
- Seek funding to implement this program

Wilbur Smith Associates is currently working to develop a corridor-wide technology architecture and define the information needs of motor carriers, shippers and terminal operators in the corridor.

As part of this work, WSA also assembled an application on behalf of the corridor, for the USDOT Corridors of the Future Program.
USDOT Corridors of the Future (COF) Program

- Competitive program to accelerate the development of trade and travel corridors.
- The goal is to identify projects that have the greatest potential to relieve traffic based on current and projected growth patterns and target them for long-term investment.
- COF is encouraging public and private partnerships and accelerated program delivery.
USDOT Corridors of the Future (COF) Program

- Federal Register September of 2006 solicits phase one submittals (phase II contract signed October 2006)
- 38 COF proposals submitted
- 14 Applications in 8 corridors short-listed
- 6 corridors selected
I-10 Corridor of the Future Focus

- The I-10 corridor emphasizes technologies and enhancement strategies through-out the corridor
- Mixed with capacity improvements
  - Several member jurisdictions are examining truck-only or urban by-pass strategies that are very suitable for public-private partnership solutions
A Comprehensive I-10 Congestion Management Plan

Traditional Highway Strategies
- Add More Lanes
  - Where feasible
- CVO/ITS
- Corridor-wide

Public/Private Partnerships
- Truck Only Lanes
  - Where makes sense
- Urban by-passes
- Congested Urban

Freight Specific Strategies
- Rail Intermodal
  - Corridor-wide
- Short-sea Shipping
- Gulf States
- Truck Productivity
  - Corridor-wide

What we and the I-10 member states have learned to this point in our 4 year journey toward identifying congestion solutions for this immensely important Interstate Corridors, is that:

- Long term - traditional solutions are not financially viable
- Freight specific strategies can play an important role in long-term congestion mitigation
- The best approach will use a variety of strategies and solutions
- New funding approaches will be necessary to achieve the long term goals of the corridor
Lessons from I-10

- I-10 is a vital economic link
  - The Interstate Highway System’s capacity for inter-regional goods movement and travel is vital to the nation’s economic health
  - Analysis of mobility demands and ways to meet those demands, clearly indicate a need for increasing maintenance and enhancement funding to expand goods movement capacity across the I-10 corridor
Lessons from I-10

- Operations is a critical piece of the puzzle in improving freight movement
  - Weather has a big impact over much of I-10
  - Urban problems are also corridor problems

- Corridor approach is best
  - No state is limited in its ability to pursue state specific projects
  - All states benefit from corridor activities
Lessons from I-10

- 8 states represent a wide variety of interests
- Border and Gulf states committees
  - Generally common interests
  - Workload sometimes overwhelming
- The force that binds...
Lessons from I-10

- The biggest lesson learned…
  - What will happen with the Corridors of the Future???
Thank You!

Jeff Hochmuth
Wilbur Smith Associates
630-434-8111 x113
jhochmuth@wilbursmith.com

Mike Akridge
Florida DOT
850-410-5607
michael.akridge@dot.state.fl.us

www.i10freightstudy.org