# **-95** Transportation Alternatives Study





CHARLIE CRIST GOVERNOR 605 Suwannee Street Tallahassee, FL 32399-0450 STEPHANIE C. KOPELOUSOS SECRETARY

#### June 25, 2010

The Honorable Charlie Crist Governor Office of Governor Charlie Crist State of Florida The Capitol 400 S. Monroe St. Tallahassee, FL 32399-0001

The Honorable Jeff Atwater President Florida Senate 312 Senate Office Building 404 South Monroe Street Tallahassee, FL 32399-1100

The Honorable Larry Cretul Speaker Florida House of Representatives 420 The Capitol 402 South Monroe Street Tallahassee, FL 32399-1300

Dear Governor Crist, President Atwater, and Speaker Cretul:

Pursuant to Section 26, Chapter 2009-85, Laws of Florida, the Florida Department of Transportation respectfully submits this I-95 Transportation Alternatives Study. FDOT prepared this report in consultation with the Department of Law Enforcement, the Department of Environmental Protection, the Division of Emergency Management, the Office of Tourism, Trade, and Economic Development, and affected metropolitan planning organizations and regional planning councils located along the corridor.

The study provides an assessment of transportation, emergency management, homeland security, and economic development along the I-95 corridor and discusses thirteen alternative transportation options available for implementation. Several policy implications for the corridor are also discussed. We commend all our partners for their active participation and ongoing commitment to this effort.

Sincerely,

Stephanie C. Kopelousos Secretary

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## Introduction

#### Legislation:

The Department of Transportation was required, as part of recently passed legislation, to conduct a transportation alternatives study of the Interstate 95 (I-95) corridor by June 30, 2010. HB 1021 was signed by Governor Crist on May 27, 2009 adding Section 26, Chapter 2009-85, Laws of Florida. This section, which went into effect on July 1, 2009, includes the following language:

"The Department of Transportation, in consultation with the Department of Law Enforcement, the Department of Environmental Protection, the Division of Emergency Management of the Department of Community Affairs, the Office of Tourism, Trade, and Economic Development, affected metropolitan planning organizations, and regional planning councils within whose jurisdictional area the I-95 corridor lies, shall complete a study of transportation alternatives for the travel corridor parallel to Interstate 95 which takes into account the transportation, emergency management, homeland security, and economic development needs of the state. The report must include identification of cost-effective measures that may be implemented to alleviate congestion on Interstate 95, facilitate emergency and security responses, and foster economic development. The Department of Transportation shall send the report to the Governor, the President of the Senate, the Speaker of the House of Representatives, and each affected metropolitan planning organization by June 30, 2010."



#### **Study Purpose:**

The purpose of the study is to assess the travel demand and freight movement along the I-95 corridor in the State of Florida against four measures: transportation, emergency management, homeland security, and economic development. Additionally, the study idenifies cost effective strategies to alleviate congestion, facilitate emergency and security response, and foster economic development in the State of Florida.

#### **Study Area:**

The I-95 Corridor is one of the state's most critical transportation facilities, providing for the movement of people and goods along the east coast of Florida. The study corridor under evaluation includes the 12 coastal counties along the east coast of Florida. These 12 counties are home to over 8.3 million residents, constituting approximately 45% of Florida's total population.

#### **Study Corridor:**

The development of the I-95 Corridor has occurred over a 50-year period and continues today. Construction of I-95 began in Miami with completion of a short segment. Development of the corridor continued from both ends and, except for a gap in Martin and St. Lucie Counties, was substantially completed by 1980. The final segment in Martin and St. Lucie Counties was opened in 1987. Even as construction was being accomplished on new segments, major re-construction and widening was occurring on older, more heavily traveled segments.

Interstate 95 connects many of the most populous counties in Florida and is Florida's busiest freeway, with current volumes exceeding 200,000 vehicles per day at many locations in South Florida. I-95 is a critical corridor, moving freight, transit and passenger vehicles into, through and out of the corridor each day. Preserving mobility within the corridor is of prime concern to Florida.

Along with this growing need for preserving mobility, I-95 is overwhelmed with traffic demand. Because portions of I-95 have significantly exceeded anticipated traffic, a combination of strategies is needed. FDOT is targeting I-95's congestion problems by a combination of strategies such as adding lanes, improving access, and other strategies to improve mobility along the corridor. In addition, FDOT and its partners are pursuing key strategies to improve traffic flow on parallel corridors and provide alternatives for motorists on I-95 to choose other routes. These strategies, discussed throughout this report, include making our highways more efficient at moving people and goods with new traffic technology and managing traffic demand through a combination of strategies.

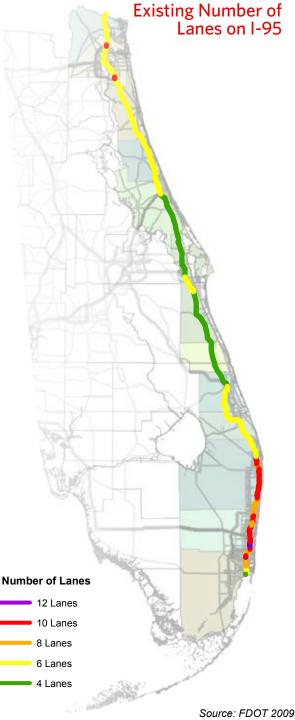


## **Transportation Conditions**

#### **Existing Number of Lanes:**

The number of through lanes along I-95 ranges from 4 to 12 lanes depending upon the location. In most portions of Miami-Dade, Broward, and Palm Beach Counties, I-95 fluctuates between 8 and 12 lanes. As I-95 extends north through less urbanized regions, the lane configuration gradually is reduced from 8 lanes to 4 lanes in St. Lucie and Indian River Counties. Continuing north, I-95 fluctuates between 4 and 6 lanes from Brevard County to the Georgia State line, with the exception of a few locations in Duval County where it increases to 10 lanes. Current plans call for substantial transportation improvements within the existing corridor, with only two remaining segments with four lanes. These segments, in Volusia/Brevard and Brevard/Indian River Counties, are planned for expansion to six lanes to maintain a minimum standard of capacity for I-95 throughout the state. There are currently existing High Occupancy Toll (HOT) lanes in Miami-Dade County with construction eminent to extend the HOT lanes to I-595 in Broward County.





#### **SIS Intermodal Facilities:**

The I-95 corridor serves major airports, intermodal freight-rail terminals, passenger terminals, seaports, and a spaceport. These intermodal facilities are part of the Strategic Intermodal System (SIS) and include six SIS airports, six SIS seaports, six SIS intermodal freight-rail terminals, one spaceport, and twenty-one SIS passenger terminals. I-95 serves and connects key SIS hubs on or adjacent to the corridor. Any improvements to I-95 must consider potential impacts to these facilities.

#### **Traffic Volumes:**

Existing average daily traffic volumes along the I-95 corridor range from a high of more than 300,000 vehicles per day (vpd) in Broward County to a low of less than 30,000 vpd in southern Volusia County and northern Brevard County. The southern portion of the I-95 corridor is generally the most heavily traveled portion of the corridor, with volumes exceeding 200,000 vpd in most parts of Broward and Miami-Dade Counties. The middle section of the I-95 corridor is primarily rural in nature, with the least traveled portions of the corridor, with Annual Average Daily Traffic (AADT) generally less than 50,000 vpd in St. Lucie and Indian River Counties. Traffic volumes increase significantly along I-95 north of Interstate 4, with volumes increasing from 57,500 vpd just south of I-4 to 79,000 vpd north of I-4. In the Jacksonville urban area, AADT increases to a high of 118,500 vpd just south of downtown.

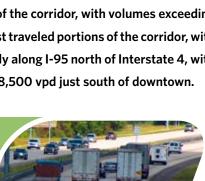
#### **Future Traffic:**

Future year 2035 traffic volumes along I-95 are projected to increase significantly throughout the corridor, with the largest increase projected in St. Lucie County where volumes are projected to increase by more than 219% from 47,300 vpd in 2008 to 151,000 vpd in 2035. Increases in south Florida, where existing volumes already exceed capacity, are lower from a percentage standpoint, but are still significant, with volumes in Palm Beach County at the SW 23rd Avenue overpass increasing by 58% from 163,700 vpd in 2009 to 259,200 vpd in 2035. Significant increases are also projected in the northern portion of I-95, with traffic in Brevard, Volusia, St. Johns, and Duval Counties nearly doubling by 2035.

#### **Trip Patterns:**

Regional trip patterns vary greatly along the I-95 corridor, depending upon the selected location. For example, in Broward, Palm Beach, Brevard and Duval Counties, a large percentage of trips along I-95 are considered local trips, starting and ending within each respective county. In Indian River, Volusia, St. Johns and Flagler Counties, the large majority of trips are inter-regional in nature. This emphasizes the difference in trip characteristics in different areas of the state where I-95 is used more for long distance trips in some areas and used more for local trips in other areas. Trip characteristics have a large impact on the types of alternatives considered for improving mobility along the I-95 corridor.







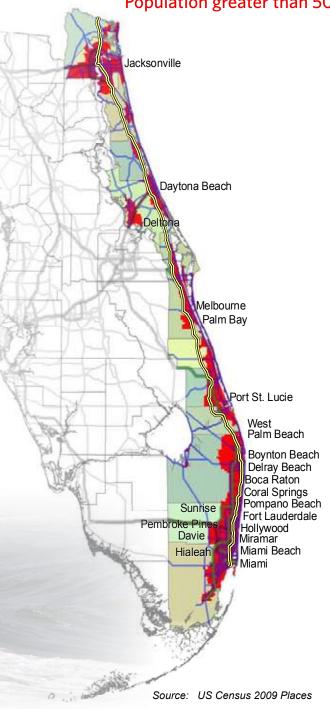
### **Demographics**

# US Census Places 2009 with Population greater than 50,000

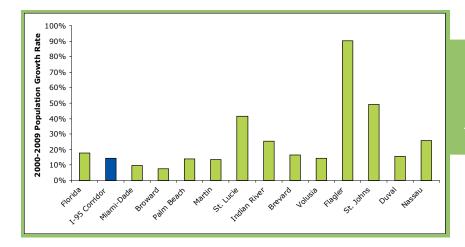


The transportation analysis illustrates the need for alternative transportation options to be available by the 2035 planning horizon to accommodate the growing demand. I-95, even at build-out, will not be operating at acceptable levels and travel demand model results imply parallel facilities may be facing a similar outlook. Alternative transportation routes and modal choices must become readily available to ensure safe and efficient movement of passenger and freight travel.

The idyllic image of Florida's beaches may help explain why for years millions have come to Florida to vacation and then to stay. The 12-county I-95 study area is home to more than 8.3 million people, which is 45% of Florida's total population. The I-95 corridor runs through the three most populated counties in Florida (Miami-Dade, Broward, and Palm Beach), and five of the top ten (Miami-Dade, Broward, Palm Beach, Duval and Brevard), making the efficient movement of people and goods a priority.



Florida as a whole has been at the forefront of a decades-long shift in population from the nation's traditional economic centers in the North and Midwest to the Sunbelt. The recent economic downturn in the state and rest of the country has slowed this rapid growth, but forecasts indicate the growth will return. Portions of the I-95 corridor have seen enormous growth at a rate requiring the consideration of alternative transportation options. I-95 passes through Flagler County, which had the highest growth rate during the 2000 to 2009 time period at 90%, nearly doubling its population in ten years.



# I-95 Corridor Population Growth Rate Comparisons Source: U.S. Census Bureau and FDOT Office of Policy Planning 2009

Florida's population is expected to grow from 18.75 million in 2009 to 25.1 million in 2035, likely displacing New York as the third largest state in the country. During this 26-year period, four of the ten fastest growing counties in the state are expected to be along the I-95 corridor. Flagler is predicted to be the second fastest, with over 108% growth. St. Johns, St. Lucie and Nassau also are predicted to grow very quickly.

While rapid growth plays an important role in shaping the transportation needs of an area, even counties with larger base populations are expected to experience large raw growth. Four counties along the I-95 corridor, Miami-Dade, Palm Beach, Duval and Broward, are forecast to be in the top ten raw growth counties statewide.

Together, the twelve I-95 Corridor counties could add over two million new residents within the span of a generation, growing at a rate of over 26%. The State of Florida is expected to grow at a rate of 34%, or almost 6.4 million by 2035. Over a third of the growth is projected to be along the I-95 corridor. Depending on the travel choices made, any new population may add significantly to the congestion already being experienced in Florida.

#### **Emergency Management** and Response

Chapter 9G-6, Florida Administrative Code, requires each County to develop a Comprehensive Emergency Management Plan (CEMP). The CEMPs of the 12 counties in the I-95 corridor are operations-oriented documents establishing the framework for an effective system to ensure counties and their municipalities will be adequately prepared to deal with the occurrence of emergencies and disasters.

In every CEMP, I-95 serves as a geographic reference; the issues and considerations identified for the I-95 corridor would generally apply to most other roadways in the state as well. From each of the county CEMPS, the following general considerations emerged and apply to all 12 counties in the study area:

- Critical interchanges of other evacuation roadways with I-95 need to be monitored during an evacuation event to ensure and expedite vehicle movement. The movement of vehicles will require extensive traffic control efforts;
- The entire I-95 study area is susceptible to hazardous materials incidents, whether by damage to fixed facilities
  or by accidents resulting from transportation of those materials by railway, through the air, by water or over
  major roadways such as I-95;
- The I-95 corridor experiences heavy use by passenger and commercial traffic. The interstate is undeniably
  vulnerable to transportation system accidents;
- Staging areas are, in many cases, located near or along I-95. These sites are readily accessible to rail, roadway, and airports for the assembly of personnel, supplies, and equipment prior to deployment to the affected area(s);
- If I-95 is damaged or impassable, alternate routes to I-95 should be available and clear. The disruption of the I-95 infrastructure would be a major hindrance to recovery operations, such as distribution of food, water and ice.

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I-95 is part of the critical transportation infrastructure and serves as part of the evacuation network in each county of the study area. The Statewide Regional Evacuation Study Program (SRESP) being implemented through the Division of Emergency Management was created to identify and implement strategies for the facilitation of evacuations. The SRESP provides important information in confirming the importance of I-95 as a north/south evacuation corridor. I-95 plays a key role in the evacuation network for the four regional planning councils (RPCs) and all 12 counties in the study area. Additionally, I-95 directly connects to more than 100 other RPC designated facilities which are part of the SRESP evacuation network.

# **Homeland Security**

On I-95, many different law enforcement agencies monitor and control passenger and commercial traffic, investigate accidents, and provide general security enforcement. On a daily basis, these agencies help regulate the safety of the I-95 corridor and have major responsibilities with regard to homeland security. The roles and responsibilities of various law enforcement agencies along the I-95 corridor include the following:

- The Florida Department of Law Enforcement (FDLE) is a key player with regard to its commitment to domestic security in Florida. FDLE operates the Florida Fusion Center (FFC), which has a significant role in passing intelligence to state and local partners. The FFC, located in Tallahassee, serves as Florida's primary fusion center for the gathering, processing, analysis, and dissemination of criminal intelligence, terrorism, and homeland security information. If a suspicious activity or potential public safety threat along I-95 is reported to the local law enforcement agency, this information can then be communicated through regional fusion centers or directly from the FFC.
- The Florida Department of Transportation employs sworn law enforcement officers and regulatory weight inspectors in the Office of Motor Carrier Compliance (OMCC). The
  OMCC provides commercial vehicle safety and weight enforcement functions. OMCC law enforcement officers are in force along the entire I-95 corridor and perform traffic
  enforcement with an emphasis on violations by commercial motor vehicles (CMVs) and passenger vehicles interacting with large trucks.
- The Department of Highway Safety and Motor Vehicles is the parent agency for the Florida Highway Patrol (FHP). FHP is responsible for patrolling the entire length of I-95, and covers the territory with four troops. FHP promotes safety on I-95 and all Florida highways through enforcement as well as educational efforts. FHP publishes road closure information and also provides it to the Division of Emergency Management (DEM). One of the main goals of FHP is to attempt to reduce criminal activities occurring on Florida's highways through detection, prevention, and enforcement of criminal laws relating to highway violence, transportation of illegal drugs/contraband, auto theft, driver license fraud, and emissions fraud.
- The county sheriff's offices are the chief law enforcement entities in each county of the I-95 study area. Both the sheriff's offices and police departments in the corridor have the responsibility to take action in homeland security events within their communities and their jurisdictions. These agencies are the primary first responders when a disaster strikes.





## **Economic Development**

I-95 is a key contributor to economic development in the 12 county study area. Major businesses rely on I-95 for the movement of goods and people. The interstate also has the capability to funnel trips to developments and businesses along parallel and intersecting corridors.

I-95 is a major asset for enhancing Florida's economic competitiveness and diversification at local, regional and global levels. The I-95 corridor is home to multinational corporations and is part of a network connecting international markets to the United States and vice versa. I-95 offers unparalleled access to economic opportunities in the counties along the corridor where many corporate parks, light manufacturers, distribution centers, and research and development operations are either located or desire to locate.

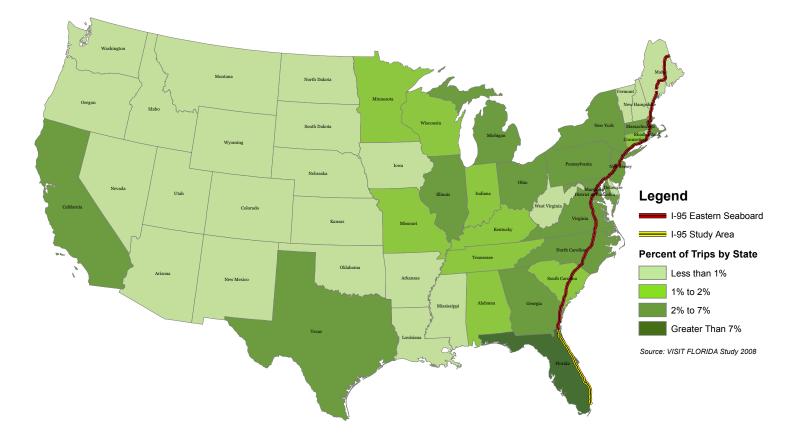
As reflected in Fortune magazine, many major businesses chose to locate in the 12-county I-95 corridor study area. Fortune magazine has been a trusted source for business news and analyses for decades, including the distribution of major businesses in Florida. Among the well-known researched and ranked lists is the Fortune 1000, an annual list compiled and published by Fortune magazine ranking the top American public corporations as measured by their gross revenue. There are 32 Fortune 1000 companies headquartered in Florida, and half of those companies are located along the I-95 corridor. Proximity to I-95 is an important aspect in location choice, which is linked to the ability to move goods and people.



Tourism plays a fundamental role in Florida's economy, with the sun, sand and a variety of other attractions bringing millions of visitors to Florida each year. In a state with such a strong tourism industry understanding visitor travel trends is an important part of using and predicting future travel demands. Visitor travel patterns are often different from resident or freight travel in both temporal and geographic distribution.

Understanding the significance of visitor travel is relevant to I-95 as it is an integral part of the statewide transportation system, and Florida tourism is heavily dependent on a strong transportation system. Visitors to any new place want convenient, safe and efficient travel both into and out of their destination. Failure to meet the transportation needs of visitors could diminish Florida's attractiveness and jeopardize economic momentum.

Visitors come to Florida from the eastern portions of the United States, California and Texas. I-95 is a likely choice for visitors along the east coast traveling by auto. In addition, with just over half of Florida's visitors arriving by air in 2008, a large number of visitors utilize other modes of transportation and use the I-95 corridor at some point in their travels. Within the I-95 study area Miami-Dade, Ft. Lauderdale, West Palm Beach, Daytona Beach area, Jacksonville, and the Space Coast also attract significant levels of visitors. Special tourism considerations for Volusia County include the Daytona 500, with an estimated 250,000 race-day attendance in 2008, and Bike Week, with an estimated attendance of 500,000 in March.



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## **Alternative Options**

#### **ALTERNATIVE TRANSPORTATION OPTIONS**

Since I-95 is overwhelmed with traffic demand in many locations, and growth continues to occur along the corridor, FDOT and its partners have examined possible strategies to protect one of Florida's most critical corridors. The goal of analyzing these strategies is to develop a multi-faceted approach to make Florida's transportation system within the I-95 corridor more efficient at moving people and goods. These strategies or alternative options not only address potential improvements to I-95, but also include options to improve parallel highways corridors and implement multimodal approaches.

Numerous transportation alternatives are available for development in the I-95 corridor and some alternatives are more applicable than others in certain areas. Alternatives were grouped into one of 13 categories based on characteristics. The 13 categories and their component alternatives are shown in the table and discussed in detail in the following pages.



Alternative Transportation Category	Alternatives Included in the Category
Add Capacity to Parallel Corridors	Add lanes on arterials, improve local intersections
New Location Corridors	New location arterials, new grade-separated crossings for local connectivity
Transportation Systems Management and Operations (TSM&O)	Virtual Freight Network, Intelligent Transportation Systems (ITS)
Tourist Oriented Directional Sign (TODS) Program	TODS, Orlando's "Follow the Sun"
Special Use Lanes	HOV Lanes, Truck Only Lanes, Managed Lanes, Express Lanes, Dedicated Bus Lanes
Integrated Logistics Center (ILCs)	Cluster of freight terminals or a freight village
Inland Ports	Inland Port
Short Sea Shipping (Marine Highways)	Short Sea Shipping
Parallel Freight Rail Corridors	Florida East Coast Railroad, CSX
Passenger Rail Services	High Speed Rail, Commuter Rail, Light Rail, Amtrak
Intra-Regional Transit Services	Cross county bus services, express bus services, Bus Rapid Transit
Transportation Demand Management Programs	Carpool, vanpool, ridesharing, park and ride, telecommuting
Add Capacity to I-95	Add full lanes, add interchanges, add auxiliary lanes

# Add Capacity to Parallel Corridors

FDOT and its partners are pursuing key strategies to improve traffic flow on parallel corridors and provide alternatives for motorists on I-95 to choose. Adding capacity to parallel corridors is a strategy to manage congestion, increase efficiency, and continue to spur economic development. Parallel corridor improvements also include intersection related improvements, such as turn bays and roundabouts. Parallel corridors may include the Florida Turnpike, US 1, or I-75 on a statewide level or local arterials or state highways providing regional trips.

In some places along I-95, the traffic demand exceeds the capacity of the interstate. Adding capacity to parallel corridors has the potential to absorb some of the existing I-95 traffic demand, essentially extending the viability of I-95 while boosting activity in parallel corridors. This concept may not necessarily be applicable in all situations, though. In South Florida, where traffic volumes exceed 200,000 vehicles per day in many locations, I-95 is overwhelmed with traffic demand. Congestion is not only present on I-95, but also on adjacent corridors. In these areas, other alternative transportation options may be more effective choices for safe and efficient movement of people and goods.

## **Benefits**

- Reduced congestion;
- Reduced travel times;
- Diversion of local trips from I-95;
- Improved emergency response;
- Improved freight flow;
- Increased connectivity;
- Lowered production and distribution costs;
- Increased productivity; and,
- Potential job creation.

- Land use impacts;
- Potential impacts to the human, natural, and physical environment; and,
- High right of way costs.

# **New Location Corridors**

This alternative involves building one or more entirely new roadway facilities to help reduce traffic congestion on I-95, facilitate emergency and security responses, and foster economic development. Also included in this alternative is developing new grade-separated crossings of I-95 to improve local circulation and connectivity options. Several examples of this alternative are in various stages of long range planning and development and include the following:

- First Coast Outer Beltway, St. Johns, Clay, and Duval Counties;
- St. Johns Heritage Parkway, Brevard County;
- Williamson Boulevard and LPGA Boulevard Extensions, Volusia County; and,
- Western Parkway Concept Plan, Martin, St. Lucie, and Indian River Counties.



## **Benefits**

- Overall reduction in congestion and vehicle hours traveled (VHT);
- Possible vehicle operation costs savings with better connectivity;
- Improves emergency management by providing alternate route to I-95;
- Additional revenue could be generated if location is developed as a toll facility;
- Provides safety benefits through reduced congestion and reduction of incidents; and,
- Potential economic benefits due to business and residential development along new corridor location.

- Large capital and maintenance costs associated with new corridor development;
- High right of way costs;
- Limited funds availability in transportation budgets
- In urban areas with limited location options, major impacts to existing land uses;
- Potential impacts to the human, natural, and physical environment;
- Can contribute to urban sprawl; and,
- Congestion reduction on I-95 will most likely be only temporary since, historically, demand for highway facilities increases over time.

#### **Transportation Systems Management and Operation (TSM&O)**

This alternative involves development of Transportation Systems Management and Operations (TSM&O) strategies to improve mobility and freight/goods movement. TSM&O is a performance driven approach for solving congestion and traffic problems in which Intelligent Transportation Systems (ITS), information and communications technology for infrastructure and vehicle systems, are used to locate incidents, inform travelers, and correct the causes of congestion in real-time.

ITS strategies have been in use by FDOT for many years, and have become an integral part of the transportation system. More recently, ITS strategies have been combined with other techniques to further improve operations. For example, TSM&O strategies are currently in development in the areas around the I-95 corridor. Examples of TSM&O strategies include:

- traffic detection and surveillance;
- work zone management;
- electronic toll collection;
- traffic incident management;
- road weather monitoring and information;
- emergency management; and,
- traveler information services.

In addition, a Virtual Freight Network (VFN) concept is being developed in Southeast Florida and is proposed for implementation along I-95. A VFN is defined as an integrated network of public/private-sector information systems and technologies linked through technology standards and data sharing protocols in order to improve freight mobility. A VFN is designed to improve freight mobility, safety, network performance, improve security of freight shipments, and environmental stewardship.

## Benefits

- Offers lower cost techniques with results in the short-term;
- Encourages coordination of transportation improvements;
- Reduces delays and travel times with responsive systems;
- Coordinating traffic signals decreases fuel consumption and vehicle emissions;
- Improves on-time performance with transit signal priority treatments;
- Managing traffic incidents improves traveler safety and detecting incidents quickly restores lost capacity;
- Provides options for enhanced freight and goods movement through targeted ITS initiatives; and,
- Actively managing transportation system optimizes infrastructure investments.

- Limited funds availability in transportation budgets; and,
- Possible difficulties with public/private sector information sharing.



#### Tourist Oriented Directional Sign Program

By definition, tourist oriented directional signs are "way finding" signs of standard size and design, usually white on blue. The intent is to safely direct tourists to local destinations whose major portion (51%) of income is derived from patrons traveling 20 miles or more. Through the Tourist Oriented Directional Signing (TODS) Program, FDOT allows qualified county and municipal governments to install guide signs on the state highway system to identify local facilities, parks, libraries, tourist attractions, etc. This particular program is currently designed for rural areas, but can be implemented in urban areas as well. An example of TODS is Orlando's "Follow the Sun" project, which placed 400 new road signs bearing a tourist-friendly sunburst logo to aid non English-speaking visitors in finding their way.

# Benefits

- Promotes local culture and sustainable tourism as often no franchise or national chains are included;
- Allows each local government the flexibility to create criteria for designations to suit the area;
- Creates validity when fabricated and installed according to FDOT standards and specifications; and,
- Addresses tourist-related safety with a problem-related solution, particularly in urban areas.

- Does not directly benefit emergency management or mobility;
- Could create problems due to limits on the number of destinations included in each location; and,
- Usually requires local governments to construct, maintain, and operate sign program. Some areas may not have adequate resources, particularly in rural areas.



## **Special Use Lanes**

Special use lanes, for the purposes of this study, generally involve the development of dedicated lanes along the interstate highway reserved for a specific use. The goal of special uses lanes is to aid in alleviating congestion, improving safety conditions, and enhancing mobility in a more cost-efficient manner while still maintaining the integrity of the I-95 corridor. Special use lanes include the following:

- MANAGED LANES are typically comprised of one or more types of special use lanes, such as high occupancy vehicle (HOV) lanes, toll lanes, express lanes, and truck lanes. Managed lanes have already been implemented along I-95 in Miami-Dade County (95 Express) and construction is funded for Phase 2 in southern Broward County. More of these facilities are being considered for implementation and are in the planning phase for I-95 in Broward County and Palm Beach County.
- REVERSIBLE LANES are lanes in which traffic may travel in either direction depending on traffic conditions and time of day. Typically, they are meant to improve traffic flow in the peak direction of traffic during both the morning and afternoon rush hours. This is accomplished by daily phasing in of traffic to the reversible lane using overhead message boards, special signing and traffic control safety devices (signal lights, gates, vehicle restraints, etc.) on a regularly scheduled daily time interval.
- HIGH OCCUPANCY VEHICLE (HOV), DEDICATED BUS LANES, AND HIGH OCCUPANCY TOLL (HOT) LANES are each specific types of special use lanes. HOV lanes or carpooling lanes are reserved for vehicles with a driver and one or more passengers. HOV lanes may either be designated simply by diamond markings or separated by a physical barrier. HOT lanes give single occupancy motorists access to HOV lanes by paying a toll; however, "toll lanes" can be in combination with most of the other special use lanes. Typically, the tolls are variable depending ontime of day and traffic conditions.

Dedicated bus lanes are provided for the exclusive use of bus and transit vehicles to improve reliability and travel times of buses. The South Miami-Dade Busway is a convenient way to get to Metrorail and was the first of its kind in Florida. A state-of-the-art alternative to traffic congestion, the Busway runs parallel to (and separate from) US 1. Express buses travel the exclusive lanes, swiftly shuttling passengers to Metrorail. • TRUCK ONLY LANES are special use lanes separating trucks from passenger traffic. This strategy is designed to reduce congestion, increase the longevity of pavement, and expand the economic benefits of streamlined freight mobility. Two common methods of separating trucks from general traffic are lane striping and concrete barriers. Truck lanes may be tolled and are typically more expensive to construct, as the pavement must be designed to accommodate heavier weights and larger vehicles.

## **Benefits**

- Reduce congestion and create more travel options, such as use of transit;
  - Pricing strategies manage demand and generate revenue;
  - Some lane types may be constructed within existing right-of way; and,
  - Truck-only lanes increase safety by reducing passenger vehicle and heavy truck conflicts.

- For all special use lanes, limited funds availability in transportation budgets;
- Truck only lanes may discourage growth of the rail-highway intermodal system; and,
- Potential impacts to the human, natural, and physical environment.

## Integrated Logistics Centers (ILCs)

For the purposes of this study, an Integrated Logistic Center (ILC) is any facility with multiple modal access (including rail and highway) around which clusters of related businesses, such as warehousing and distribution centers, arise. They are also known as urban shared use facilities, freight terminals, ports, and freight villages. An ILC can be further defined as an area within which all activities relating to transport, logistics and the distribution of goods, both for national and international transit, are carried out by various operators. ILCs are characterized by modal shifts in the transport of freight, the location of active distribution centers and industrial activities adjacent to modal shift facilities, unified management of the facility, and sometimes includes support activities such as office space, restaurants, and hotels. The establishment of ILCs at key locations provides an alternative to increasing highway capacity along I-95 through a modal shift to rail.

#### ILCs typically have the following characteristics:

- Modal Shift goods are moved between two or more forms of freight transportation such as rail to truck, barge to rail and/or truck, and air to truck to rail;
- Active Management no passive activity or container storage located on-site; active distribution centers and industrial activities located adjacent to modal shift facilities;
- Ancillary Activities site offers support activities such as truck stops/rest areas, office space, retail and commercial outlets, hotels, etc.;
- Unified Management ILCs are under management of single entity;
- Location located in or near metropolitan areas; and,
- Typically Compact ILC sites can be several thousand acres in size, but a site of this size is highly unlikely in an urban area; urban sites typically comprise 125 or more contiguous acres.



# **Benefits**

- Removes long distance trucks from I-95 with a mode shift to rail;
- Minimizes the interaction between truck and passenger traffic in dense urban areas;
- Consolidates smaller truck loads into fewer loads and assists in alleviating energy consumption and reduced emissions; and,
- Encourages economic development by reducing the cost of trucking from excessive fuel usage and extended staff time.
   ILCs attract ancillary, support business activities benefitting the host communities through increased revenues and job creation.

- Requires a large development area;
- Potential land use conflicts due to industrial operations housed within an urban area;
- Potential impacts to the human, natural, and physical environment; and,
- May require large amount of land acquisition.

### **Inland Ports**

Historically, an inland port was described as a port facility on a river or lake connected via other waterways to major shipping channels. A more recent definition is an inland facility affiliated with a seaport which serves as an extension of the services typically provided at a seaside terminal. For the purposes of this study, an inland port is directly linked with the functions of a single seaport. More specifically, an inland port can be described as a specialized intermodal facility dealing mostly in standardized shipping containers. Once unloaded from a ship, the moving of containers between modes (truck to rail, rail to truck, etc.) can be accommodated off the port site at an inland port acting as transfer centers for shipping containers between modes.

Inland ports are typically regional centers located nearby one or more large markets with direct transportation access to them. They assist international trade by being connected to international gateways, international logistics services, and customs and are typically located at the crossroads of an efficient, multi-modal transportation infrastructure. Inland ports also provide higher paying jobs and require a certain skill-level in the workforce.



# **Benefits**

- Encourages economic development by creating new market opportunities and enhancing overall efficiency to;
- Alleviates congestion with improved intermodal connectivity, dispersal of truck traffic, and diverting truck trips to rail;
- Diverting truck trips to rail provides emissions reductions and fuel efficiencies in the movement of containers; and,
- Supplementary operations at an inland port, such as air cargo, could also help to reduce growth pressures on major commercial airports.

- Capital costs required to acquire land and construct such a facility are high;
- Additional costs include improvements to the local and regional roadways to accommodate heavier trucks; and,
- Potential impacts to the human, natural, and physical environment.

# Short Sea Shipping (Marine Highway)

Short Sea Shipping is defined as the movement of goods and people by water over relatively short distances on routes not crossing an ocean. It can occur within lakes and river systems and along coast lines. It consists of mainly domestic shipping but can also include cross-border traffic, for instance between Canada, US, and/or Mexico. The vessels used for short sea shipping include small cargo ships, fast ferries and barges. They carry containers, truck trailers, and freight related bulk cargo. Short sea shipping offers an alternative to truck and rail transport in the I-95 corridor.

More recently called Marine Highways, short sea shipping operations moved about 6% of the nation's freight tonnage in 2000. Within Florida, short sea shipping is relatively new and is operation at only three of Florida's seaports:

- Barge service for containers and general/break bulk between Port Manatee and Brownsville, TX. SeaBridge Freight offers a four-day scheduled blue water service with a 600 twenty-foot equivalent unit (TEU) barge (approximately 300 truckloads);
- Container and Roll On-Roll Off (RO-RO) services between Jacksonville and both Puerto Rico and the Dominican Republic; and,
- Container and RO-RO services between Port Everglades and Puerto Rico.

## **Benefits**

- Helps to eliminate congestion on busy coastal highways and postpones costly roadway expansions;
- Reduces highway safety issues due to truck crashes;
- Improves port productivity;
- Creates new jobs by re-establishing the US as a competitive ship builder; and,
- Allows hazardous materials to be transported without moving through major population centers.

- Handling costs make the service less competitive with other modes;
- Costs of port modifications in order to handle short sea shipping vessels;
- Perception of short sea shipping as unreliable;
- Public environmental concerns over Florida's sensitive coastline; and,
- Bridges may be an impediment if clearance is too low.



## **Parallel Freight Rail Corridors**

The freight rail system is an important part of the nation's freight transportation system and is critical to the economy. Most high-volume bulk commodities such as grain and chemicals travel by rail and many manufactured goods are transported by train during part of their journeys. Several existing railroads serve the I-95 corridor study area including the Florida East Coast (FEC) railroad, CSX, and Norfolk Southern (NS). CSX provides parallel service to I-95 serving Jacksonville and South Florida from West Palm Beach, while NS serves the Jacksonville area and provides connections to the southeastern US. The FEC railroad is a regional railroad running parallel to the I-95 interstate corridor from Jacksonville to Miami along the east coast of Florida.

Several recent investments by FDOT in Florida's rail network were funded using SIS funds. For example, FEC improvements such as construction of a rail bridge over the Miami Canal, located in west-central Miami-Dade County, will allow for trains to bypass the Hialeah Yard. Double-tracking on the lead rail line in Medley, in western Miami-Dade County, will also allow for trains to bypass the Hialeah Yard and reduce traffic delays at rail crossings. In addition, the Lacy Siding to Simpson Yard Norfolk Southern Railroad project provides an improved passing opportunity for trains at a critical bottleneck in the Norfolk Southern/Florida East Coast system. The addition of this 2.7 mile long siding will allow an additional train in each direction between Miami and points north daily and the estimated shift in freight to rail may eliminate 73,000 trucks per year from Florida's highways.

Because of its geographical location, South Florida is difficult to service by truck. The region consumes entire trainloads of products each day but produces little of its needs locally. Most truckloads are transported empty on the return trip. Parallel freight rail corridors offer a cheap alternative to move freight between Jacksonville and Miami instead of using I-95.

## Benefits

- Reduces in highway maintenance costs due to lower truck vehicle miles traveled;
- Helps lower highway vehicle congestion and delays;
- Cheaper and more cost-effective than trucking or aviation for transporting goods over long distances; and,
- Generates less air pollution per ton-mile than trucking.

- Slower speeds and congestion at rail crossings;
- Expansion efforts on the physical capacity of the railroads can be costly to implement and maintain; and,
- Potential impacts to the human, natural, and physical environment.



#### **Passenger Rail Service**

Passenger rail service presents a mobility option to serve Florida's East Coast along the I-95 corridor. Travel within specific urban areas along the I-95 corridor is highly congested in peak travel periods due to single driver automobile use. With the recent allocation of high speed rail funding in the state, the costs and right-of-way issues associated with developing new infrastructure, and relatively linear growth patterns along I-95, passenger rail service offers a viable mobility option for the state's future transportation network. Passenger rail systems relevant to I-95 to be considered for this alternative mobility option include high speed rail, Amtrak (Florida East Coast Service), and commuter services including the South Florida Tri-Rail System and Jacksonville's proposed commuter rail corridors.

<u>High speed rail</u> - FDOT, through the newly formed Florida Rail Enterprise, will be implementing the first true High Speed Rail (HSR) system in the United States capable of speeds greater than 150 miles per hour. Phase 1 of the HSR project extends from Tampa to Orlando and Phase 2 extends from Orlando to Miami.

Amtrak –As part of its national system, Amtrak currently provides service between Jacksonville, Orlando and South Florida using the CSX rail line through the center of the state. The purpose of the Amtrak FEC project is to re-establish intercity passenger rail service to Florida's east coast communities. The project consists of improvements to the FEC railway to allow rail service operation for speeds up to 90 mph, building and redevelopment of passenger rail stations, constructing a connection between FEC and the South Florida Rail Corridor(SFRC), and completion of additional improvements to the Miami Intermodal Center (MIC) to accommodate Amtrak service. Eight new cities are included in the service plan, as well as Jacksonville and 5 other cities in Southeast Florida, including Miami, which are currently served by Amtrak.

<u>Commuter rail services</u> - The Tri-Rail commuter rail system serves south Florida including Palm Beach, Broward and Dade Counties, and parallels I-95 throughout its length from the Miami International Airport to Mangonia Park in West Palm Beach. In addition the Jacksonville Transportation Authority (JTA) has proposed development of a commuter rail system, including two segments paralleling I-95 and extending from St. Augustine on the South to Yulee on the north.

## **Benefits**

- Reduces fossil fuel use and greenhouse gases (GHGs);
- Job creation and economic development around station locations; and,
- Better connectivity between northern and southern sections of Florida.

- Limited funds available in transportation budgets;
- Initial construction costs typically not recovered with passenger fares; and,
- Potential impacts to the human, natural, and physical environment resulting from new facilities.



# Intra-Regional Transit Services

Ten of the twelve counties in the I-95 corridor study area operate some form of fixed route bus transit service. The primary purpose of these urban transit systems is to provide intra-county or intra-regional travel, and their impact on travel mobility within the I-95 corridor is focused on local trips. These regional transit systems can benefit local or commuter travel within the I-95 corridor particularly during peak travel demand periods. These county or regional transit systems include the following:

- Miami-Dade County Miami-Dade Transit;
- Broward County –Broward County Transit;
- Palm Beach County Palm Tran;
- Martin County- Martin County Transit;
- St. Lucie County St. Lucie County Transit;
- Indian River GoLine;
- Brevard County Space Coast Area Transit (SCAT);
- Volusia County Votran;
- St. Johns County Sunshine Bus Company; and,
- Duval County Jacksonville Transportation Authority (JTA).



# **Benefits**

- Remove local trips from the I-95 corridor;
- Reduces fossil fuel use and greenhouse gases (GHGs); and,
- Job creation and economic development around station locations.

- Limited funds availability in transportation budgets;
- Initial construction costs typically not recovered with passenger fares; and,
- Potential impacts to the human, natural, and physical environment resulting from new facilities.

#### **Transportation Demand Management Programs**

Single occupant vehicle commuters are one of the greatest causes of peak highway congestion in urban areas. A coordinated effort to provide Transportation Demand Management (TDM) alternatives for these commuters, using existing or low cost resources, can be beneficial to the development of public transit statewide and also can assist in efforts to relieve traffic congestion, improve air quality and assure energy conservation. TDM programs encourage public/private partnership to provide brokerage services to employers and individuals for:

- Carpools;
- Vanpools;
- Express bus service;
- Emergency Ride Home Services;
- Group taxi services;
- Implementation of shuttle services;
- Preferential parking for ride-sharers;
- Telecommuting; and,
- Bicycling/walking programs.

Currently the following commuter services are known to operate within the 12 county I-95 corridor:

- South Florida Commuter Services providing commuter assistance in Miami-Dade, Broward, Palm Beach, Martin and St. Lucie counties;
- Space Coast Area Transit (SCAT) providing transit, vanpools and commuter services in Brevard County;
- Volusia County Public Transportation (VOTRAN) providing transit, vanpools and commuter assistance in Volusia County; and,
- Jacksonville Area Commuter Assistance Program sponsored by the North Florida Transportation Planning Organization in Duval, Clay, Nassau and St. Johns counties.

### **Benefits**

- Expanding the labor market by making transportation to and from your work location easier for all employees;
- Recruit and retain skilled employees commute options and flexible schedules reduce turnover;
- Reduced overhead costs, along with tax savings benefits for the company and its employees;
- Reduced need for parking;
- Helps reduce air pollution and fuel consumption; and,
- Improves mobility and enhances economic vitality of the region.

- Lack of interest from employers and commuters; and,
- Requires voluntary participation from employers and commuters.



# Add Capacity to I-95

To meet increasing transportation needs for I-95, FDOT is staying focused on key strategies to improve traffic flow on I-95. These strategies include adding new roadway capacity where it provides the most benefit, including additional through lanes or operational improvements such as new auxiliary lanes. Adding capacity to I-95 also includes the addition of new or modified interchanges. Interchanges are the access points for limited-access highways and are typically used along expressways or freeways, though they may occasionally be used at junctions between two surface streets. New interchanges provide additional access to I-95 and typically increase demand along the interstate. Interstates are limited access freeways designed for long distance, interstate travel, so particular attention is paid to requests for new interchanges. All interchange modifications, including new interchanges, must be approved at the federal level.

Many urbanized segments of I-95 within Miami-Dade and Broward Counties have been built out to maximum capacity due to surrounding land use constraints. FDOT is continually developing unique designs, which enable capacity expansion within the right of way. For example, by slightly reducing lane widths at many locations, an additional lane can be added with no need for further right of way acquisition.

# Benefits

- Reduced congestion, travel times and improved freight flow;
- Decreased interference between through traffic and short local trips;
- Increased connectivity;
- Improved emergency response; and,
- Lowered production and distribution costs.

- Potential high implementation costs, especially in congested urban areas, where right-of-way will likely be required;
- Displacement of community by acquisition of additional right of-way; and,
- Potential impacts to the human, natural, and physical environment.



# **Comparative Summary**

All of the alternatives considered for implementation provide a positive impact in terms of mobility, emergency management, homeland security, and economic development. In order to provide a general summary of the alternative options, information for each alternative was generalized to a rating scale based on its impact to the main goals of the study. The degree of impact is indicated by the number of symbols and was evaluated based on the impact to the 12-county I-95 corridor. The degree of impact for each alternative was determined as follows:

MOBILITY - All alternatives improve mobility in some form, either for passenger movements, freight movements, or a combination of the two. Three symbols indicate these alternatives have the largest positive impact to mobility, in terms of improved traffic flow, reduced congestion, and modal choices. Two symbols indicates some reductions in congestion and increased modal choices, but not as large an impact as three symbols. One symbol indicates those alternatives with the smallest impact on improving mobility along the I-95 corridor;

EMERGENCY RESPONSE - Three symbols indicates a positive impact to emergency response by providing additional capacity for evacuation efforts or improving communication for response efforts. Two symbols indicate some positive and some negative effects of the alternative, with little overall change to emergency response. One symbol indicates the alternative will have a negligible effect on emergency response;

HOMELAND SECURITY - Three symbols indicate the alternative provides benefits to homeland security preparedness, such as increased communication or ability to respond to incidents. Two symbols indicates the alternative has some positive and some negative effects, while one symbol indicates the alternative will have a negligible impact on homeland security;

ECONOMIC DEVELOPMENT - All alternatives improve economic development to some degree, typically in terms of improving efficiencies of goods movement, job creation, spurring new businesses or commercial developments, or a combination of factors. Three symbols indicate these alternatives have the largest positive impact to economic development within the I-95 study area, while two symbols indicate some increase in economic development activities, but not as large an impact as three symbols. One symbol indicates those alternatives with the smallest impact on economic development along the I-95 corridor;

AFFORDABILITY - Three symbols indicate the alternative is highly affordable compared to other alternatives and generally costs significantly less than other alternatives. Two symbols indicate the alternative has a medium cost level, while one symbol indicates the alternative has significant cost issues and is likely expensive; and,

EASE OF IMPLEMENTATION – Three symbols indicate the alternative is easy to implement, with little or no right-of-way required, minimal environmental mitigation efforts, and can be completed within a few years time. Two symbols indicate the alternative takes longer to implement and may require some right-of-way, mitigation efforts, or longer to design and construct. One symbol indicates the alternative will take much longer to implement and will require coordinated efforts of various agencies and groups over a multiple year period.

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## Summary of Impacts by Alternative Option

	Mobility in the I-95 Corridor	Emergency Response	Homeland Security	Economic Development	Affordability	Ease of Implementation
Add Capacity to Parallel Corridors	95/95/95	<i>5</i> 5			فقف	
New Location Corridors		<b>55</b>			ż <b>ż</b> ż	
Transportation System Management and Operation	95 95 95	<b>SSS</b>	000		في ف	<u>AIA AIA</u>
Tourist Oriented Directional Sign Program	<b>O</b>	5			فقا فقا فقا	<u>AIA/AIA</u>
Special Use Lanes	T T T T T T T T T T T T T T T T T T T	<b>SS</b>			فالأفاق	
Integrated Logistics Center (ILC)	95 95	5			ذ الأ	
Inland Port	95/95	5			فقف	
Short Sea Shipping (Marine Highways)	<b>9</b>	5	00		فيعفافك	
Parallel Freight Rail Corridors	95 95 95	<b>SS</b>			ė <b>Ž</b> ė	
Passenger Rail Services	95/95	<b>SS</b>			فكالأ	
Intra-Regional Transit Services	<b>95</b>	5			فوقف فوقف	<u>AIA AIA</u>
Transportation Demand Management Programs	95	5			فكفافكفا	
I-95 Additional Capacity	T T	<b>SSS</b>			<b>i2</b> 2	

*Note:* All of the alternatives considered for implementation provide a positive impact in terms of mobility, emergency management, homeland security, and economic development. *The degree of impact is indicated by the number of symbols and was evaluated based on the impact to the 12-county I-95 corridor.* 

# **Policy Implications**

While the Transportation Alternatives Study identifies numerous alternative transportation options available for improving mobility, emergency and security response, and economic development along the I-95 corridor, it does not recommend specific projects or solutions for implementation. Through the identification of these alternative options, several policy implications emerged for consideration in conjunction with the implementation of alternatives. These policy implications can be summarized in five major policy initiatives, including:

- Land Use Decisions
- Modal Options
- Safety Considerations
- Inter-regional Coordination
- Funding

The Florida Transportation Plan (FTP) is the state's long range transportation plan. The FTP identifies the goals, objectives, and strategies to guide transportation decisions and addresses how Florida's transportation system can meet the mobility needs of our growing population, help make our economy more competitive, help build great communities, and help preserve our natural environment. The policy implications identified in relation to the I-95 corridor are consistent with these goals and objectives and are summarized in the following sections.

In addition, the Enterprise Florida Roadmap to Florida's Future has addressed Growth Leadership Infrastructure as a Strategic Priority in its 2010-2015 Strategic Plan for Economic Development. The Roadmap recognizes Florida must take a proactive, systems-based approach to infrastructure issues, and their solutions. The solutions should be focused on growth leadership rather than growth management to realize prosperous, well-balanced communities.



#### Land Use Decisions

The relationship between land use and transportation is reciprocal – land use creates a demand for transportation facilities and transportation facilities support economic development generating additional demand. As a result, it is important to continue to strengthen the linkages between land use and transportation planning. Land use decisions, such as where to develop new residential neighborhoods or locate new shopping centers, have significant impacts on the I-95 corridor and are typically made by local governments.

The interstate corridor is intended to provide for efficient inter-regional and inter-state movements and not local trip movements. In many urban parts of the corridor, local trips make up a large percentage of the traffic stream on I-95. Local trips are defined in this case as trips originating and ending within the same county. This is caused primarily by local land use decisions not requiring the development of sufficient connectivity options in connecting residential areas to commercial and business areas. The lack of this connectivity causes motorists to use I-95 in the same manner as a local street.

Currently, interstate corridors located on the periphery of urban areas such as I-95 in Indian River County provide access to the area from a regional perspective but are not extensively used for local trips. Future development and expansion of urban service areas by local governments across interstate corridors should be closely reviewed and evaluated. As development occurs and the area immediately adjacent to I-95 becomes urbanized, local land use policies should require connectivity of land uses and minimize impacts to the interstate corridor. The I-75 corridor in SW Florida is an excellent example, where steps to mitigate impacts to the interstate are proposed and reviewed. Improvements such as parallel local roads, access roads between developments and grade separated connections across I-75 with no interchange, have helped with local circulation and preserved the interstate corridor.

Land use decisions also impact emergency management and homeland security efforts, as residential development location and density greatly impact emergency evacuation efforts. While local land use improvements are an important economic development mechanism, their development should also be balanced with emergency management needs. Appropriate local circulation and connectivity within local communities as well as connectivity to numerous regional transportation systems are important components of the effort to balance economic development with emergency management needs.

In addition, local land use decisions should help ensure the transportation system supports community livability and is implemented in an environmentally responsible manner. The FTP encourages conservation of natural resources and sustainable development patterns. The FTP also guides transportation investments at the local level to enhance the livability of Florida's communities, while transportation investments at the statewide or interregional level typically should be oriented towards mobility and economic competitiveness needs and should rest lightly on the built and natural environments.

# Modal Options

The ability to expand the I-95 Corridor is limited in some areas, as build-out of the corridor in these areas is generally complete and adjacent land uses generally prohibit the ability to expand the right of way. While corridor expansion options are appropriate in some areas and investments can clearly be made in relieving physical and operational bottlenecks, it is clear investment in the I-95 corridor should focus on a combination of alternatives to provide greater modal choices, both in terms of passenger and freight movements. FDOT and its agency partners are already working towards developing many of these options throughout the corridor. Examples include promotion of regional transit and commuter service options; investigation of inland port facilities; and, implementation of high speed rail service.

Florida must also improve connectivity among modes of transportation along the I-95 corridor. This improvement would help eliminate bottlenecks and unnecessary delays, reduce travel time, improve reliability, and expand options available for inter-regional travel. These factors attract new and expanding businesses in Florida, resulting in job creation and capital investment in Florida.

Modal options are also important from an emergency management standpoint. Enhanced transportation options will provide additional opportunities for moving people out of harms way during an emergency evacuation or moving supplies into an area during recovery operations. For example, passenger rail options can provide additional capacity to move citizens out of a region, while freight rail track improvements can move supplies back into a region.

The development of new regional and interregional corridors are also important in providing modal options, as development densities are not great enough in non-urbanized portions of the corridor to support some of the modal alternatives. These new or improved corridors can help to address major gaps in connectivity and service, particularly in economically distressed areas of the state.



#### Safety and Security Considerations

Safety and security considerations must be integrated into any alternative considered for implementation in the I-95 corridor. All aspects of transportation planning should address safety and security concerns during the development of alternatives, while at the same time continuing to improve passenger and freight mobility. Passenger safety and security is critical for successful implementation of new transportation alternatives, while the security of the I-95 corridor's freight transportation system is crucial for the continued economic development of the corridor.

It is important for transportation providers to continue helping identify and deter security threats, effectively manage the transportation network during emergency evacuation events, and help minimize incident response times.



#### **Intra-regional Coordination**

While some alternatives will be developed locally or regionally to serve a specific purpose, the alternatives as a group should be integrated together to form a complete, corridor wide transportation system. The integration will require a high level of coordination among all of the planning and implementing agencies. The State of Florida should promote growth leadership through regional visioning initiatives. Regional visioning efforts engage experts and the public in a process to establish transportation and community development goals for a specified point in the future. These efforts are in line with a proactive, systems-based approach to growth leadership.

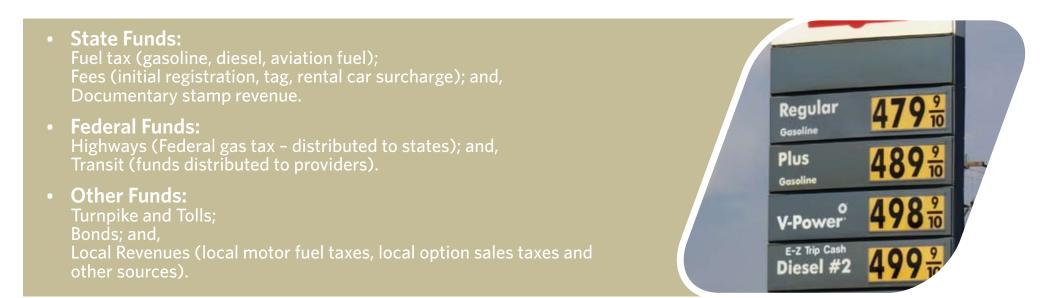
Currently, metropolitan planning organizations (MPOs) serve to coordinate the local transportation network throughout their metropolitan area. In areas outside MPO boundaries, such as Flagler County, FDOT coordinates directly with the County. MPOs act in cooperation with FDOT to coordinate projects and to meet statutory provisions. A mechanism does exist for coordinating all MPOs. However, the development of some of the alternative options for the I-95 corridor, such as passenger rail service, will require coordination at a higher level. Coordination with traditional partners, such as FDOT, Federal Highway Administration (FHWA), the Federal Transit Administration (FTA) or the Federal Railroad Administration (FRA) will continue, and other partners, such as the Division of Emergency Management (DEM) and FDLE, should be included in coordination efforts along the I-95 corridor.

Developing a greater understanding of the connectivity of rural and urban areas is important to meeting rural challenges. Intense urbanization of Florida's coastal areas contribute to conservation pressures in rural Florida. Growth management regulations and preservation initiatives can challenge the success of rural development plans. Internal connectivity among rural areas may provide opportunities for coordinated economic development. Improved personal mobility can enhance economic development by expanding access, improving individual's employment opportunities, and supporting increased commercial activity. It is important to note this is a step in the early planning process. As this effort advances it will progress through the FDOT environmental process for either state or federal actions (i.e., National Environmental Policy Act). The beginning step would be for this project to follow the FDOT's Efficient Transportation Decision Making Process (ETDM) as a means to fulfill environmental regulations and requirements as well as to facilitate coordination and consultation with the various environmental resource and permitting agencies in Florida. Studies and actions taken, such as this study, will be used to inform each subsequent step in the process as the project advances.



# Funding

Revenue for transportation expenditures is generated from multiple sources. While there are many categories of funding sources available, funds generally come from these main sources:



Funding the development of alternatives along the I-95 corridor will be challenging in the present economic climate, as state and local governments struggle with a transportation funding shortfall. Some of the I-95 alternative options generate revenue from user fees. However, the revenue is not usually sufficient to cover more than the operating and maintenance costs. Significant initial investments are typically required for development of the new systems and major modifications to existing systems. Additional funding appropriations may be required to support a consistent and connected system throughout the state as well.

The massive level of need requires Florida must continue to use transportation trust fund dollars to devote to job-creating connectivity projects. Additionally, new means of funding major improvements must be explored. The current federal transportation legislation, Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), has been extended to December 2010. The US Congress is working on a new federal transportation bill, and it will likely impact Florida's federal funding levels. FDOT is actively monitoring this federal legislation and evaluating its impact to Florida's transportation system.

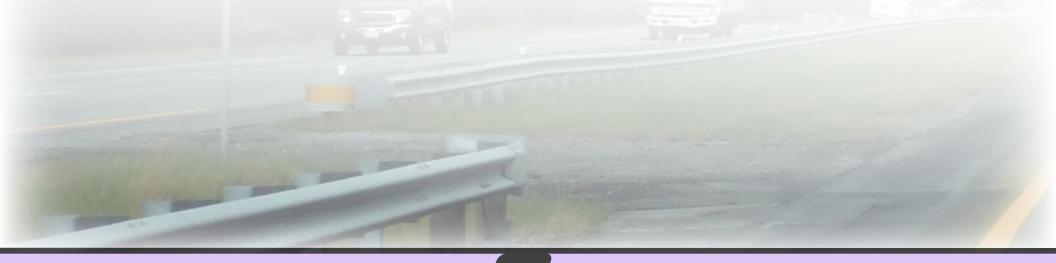
## Summary

Interstate 95 is arguably the most critical transportation corridor for the State of Florida. The 12 counties directly served by I-95 contain over 45% of the State's population. On a daily basis, the 382 miles of I-95 accommodate over 33 million vehicle miles of travel, making it the most heavily utilized highway corridor gateway into Florida. Decisions made regarding transportation alternatives for the corridor have significant impact to the entire State.

In the course of the Study, 13 groups of alternatives were considered and evaluated for their impact on transportation, emergency management, homeland security, and economic development within the I-95 corridor. None of the alternatives can address all of the needs and issues identified for the I-95 corridor on its own. To effectively address these issues, transportation solutions will require a blend of alternatives implemented throughout the corridor.

The emphasis along the I-95 corridor is, and needs to continue to be, facilitating the movement of people and goods along Florida's east coast, while fostering economic development opportunities. The corridor must also address the needs of Florida in terms of emergency evacuation and homeland security. The strategic development of several or all of the alternative options will help to address the mobility, evacuation, and security issues while also encouraging economic development. All alternatives improve economic development to some degree, typically in terms of improving efficiencies of goods movement, job creation, spurring new businesses or commercial developments, or a combination of factors. The alternatives were evaluated with respect to improving economic clevelopment within the 12-county I-95 corridor. Funding the development of alternatives along the I-95 corridor will be challenging in the present economic climate, as state and local governments struggle with a transportation funding shortfall. Some of the I-95 alternative options generate revenue from user fees, but the revenue is usually not sufficient to cover more than the operating and maintenance costs. Significant initial investments are typically required for development of new systems and major modifications to existing systems. Additional funding appropriations may be required to support a consistent and connected system throughout the state as well.

Transportation needs along the I-95 corridor will require Florida to continue to use transportation trust fund dollars towards job-creating transportation projects. Additionally, Florida should continue exploring new means of funding major improvements. While the current federal transportation legislation, SAFETEA-LU, has been extended to December 2010, the US Congress is also working on a new federal transportation bill. Any federal changes in transportation will likely impact Florida's federal funding levels and cause changes in the way Florida funds its transportation system.



## Acknowledgements

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- Florida Highway Patrol (FHP);
- Office of Tourism, Trade, and Economic Development (OTTED);
- Florida Metropolitan Planning Organizations Advisory Council (MPOAC);
- Four Regional Planning Councils (RPCs) along the I-95 Corridor;
  - o Northeast Florida Regional Council;
  - o East Central Florida Regional Planning Council;
  - o Treasure Coast Regional Planning Council;
  - o South Florida Regional Planning Council;
- Nine Metropolitan Planning Organizations (MPOs) along the I-95 Corridor;
  - o North Florida Transportation Planning Organization;
  - o Volusia County Metropolitan Planning Organization;
  - o Space Coast Transportation Planning Organization;
  - o Indian River County Metropolitan Planning Organization;
  - o St. Lucie Transportation Planning Organization;
  - o Martin Metropolitan Planning Organization;
  - o Palm Beach Metropolitan Planning Organization;
  - o Broward Metropolitan Planning Organization;
  - o Miami-Dade Metropolitan Planning Organization; and,
- Flagler County



