



Freight Mobility and Trade Plan

April 2020



U.S. Department
of Transportation
**Federal Highway
Administration**

Florida Division

May 22, 2020

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In Reply Refer To:
HDA-FL

Mr. Kevin J. Thibault
Secretary of Transportation
Florida Department of Transportation
605 Suwannee Street
Tallahassee, Florida 32399

Subject: Florida State Freight Plan Revisions

Dear Secretary Thibault:

The Federal Highway Administration (FHWA) Florida Division Office ("Division Office") has reviewed the April 2020 Revision of the Florida Department of Transportation's (FDOT) Freight Mobility Trade Plan ("Plan") which was received by the Division Office on April 22, 2020.

The Division Office finds that the Plan contains all elements required by 49 U.S.C. § 70202. The prerequisite in 23 U.S.C. § 167(i)(4) that the state develops a State Freight Plan in accordance with 49 U.S.C. § 70202 before it may obligate funds apportioned to the State under 23 U.S.C. § 104(b)(5) has been satisfied. The State may continue to obligate such funds for projects that meet all National Highway Freight Program (NHFP) eligibility requirements described in 23 U.S.C. § 167, and all other applicable Federal requirements, as identified in the plan.

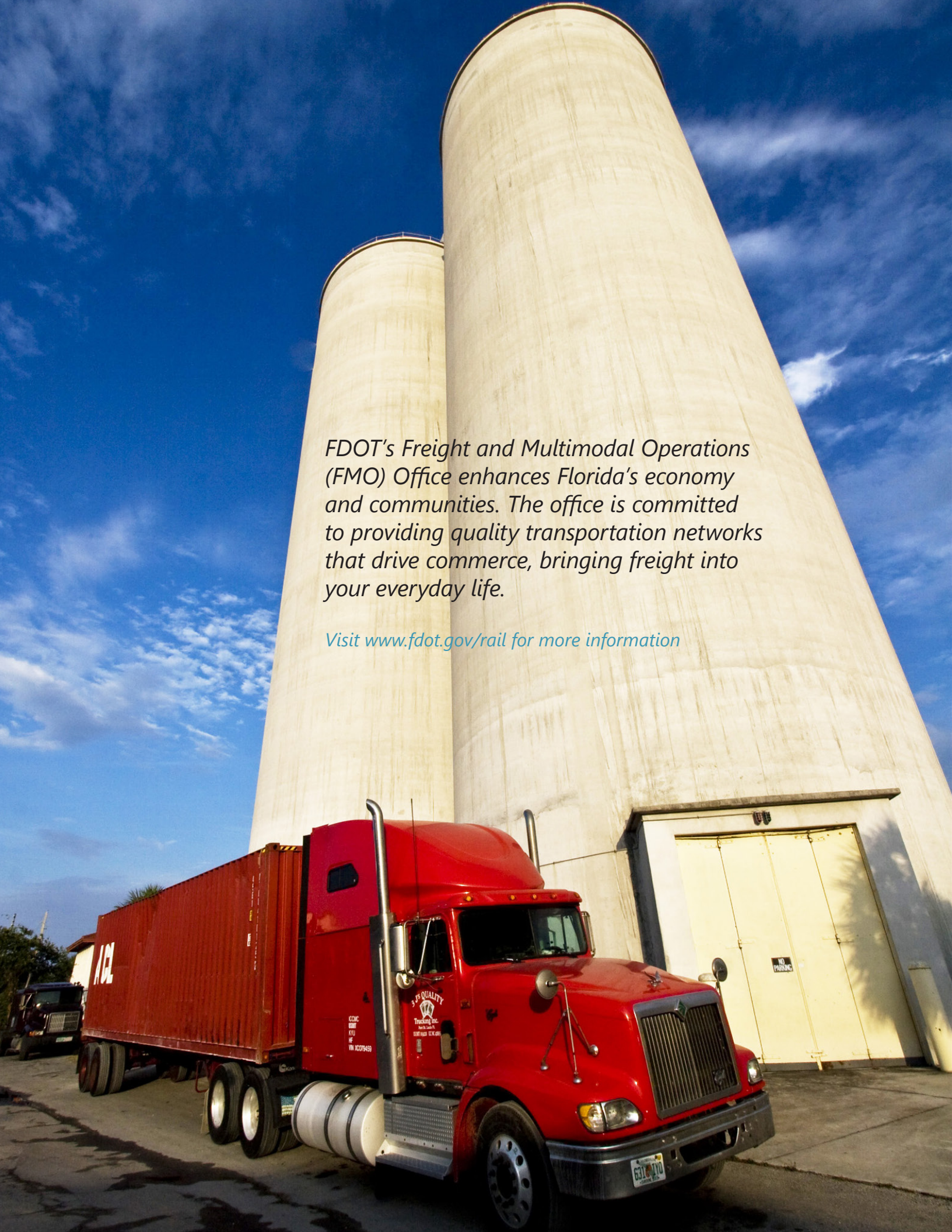
Please be advised that the Division Office's finding that the Plan satisfies the requirements of 49 U.S.C. § 70202 and 23 U.S.C. § 167(i)(4) is not a determination that the projects listed in the freight investment plan component of the Plan required by 49 U.S.C. § 70202(b) meet all other NHFP eligibility requirements set forth in 23 U.S.C. § 167, or any other applicable Federal requirement.

If you have any questions regarding NHFP eligibility requirements, please contact Mr. Greg Hall, FHWA Florida Division District 2 Transportation Engineer at (850) 553-2232.

Sincerely,

Jamie Christian, P.E.
Division Administrator

cc: Caitlin Hughes, FHWA



FDOT's Freight and Multimodal Operations (FMO) Office enhances Florida's economy and communities. The office is committed to providing quality transportation networks that drive commerce, bringing freight into your everyday life.

Visit www.fdot.gov/rail for more information

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Chapter 1

Approach

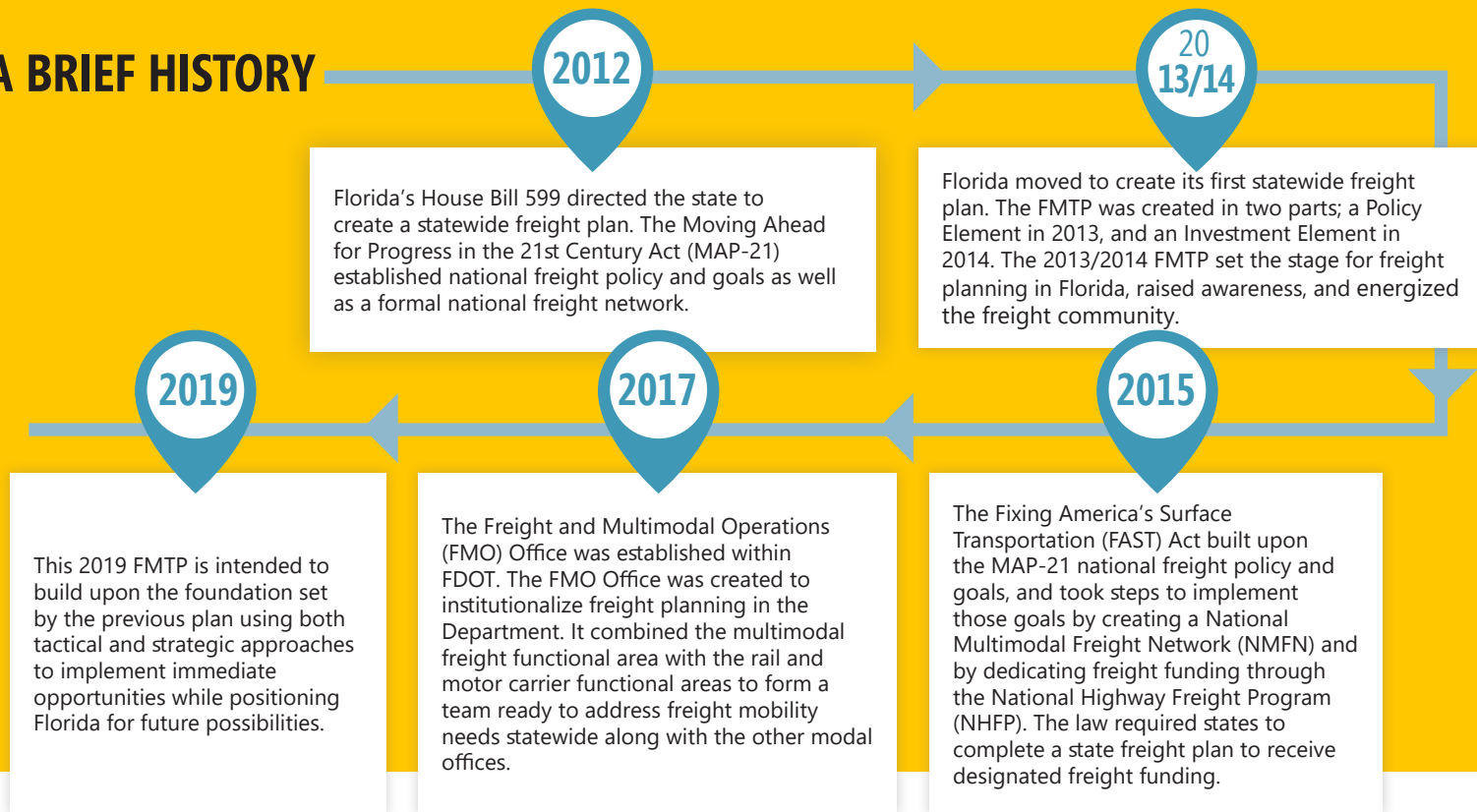
What's Inside

- A Brief History
- FDOT and Partner Agency Plans
- Vision to Implementation
- FMTP Objectives

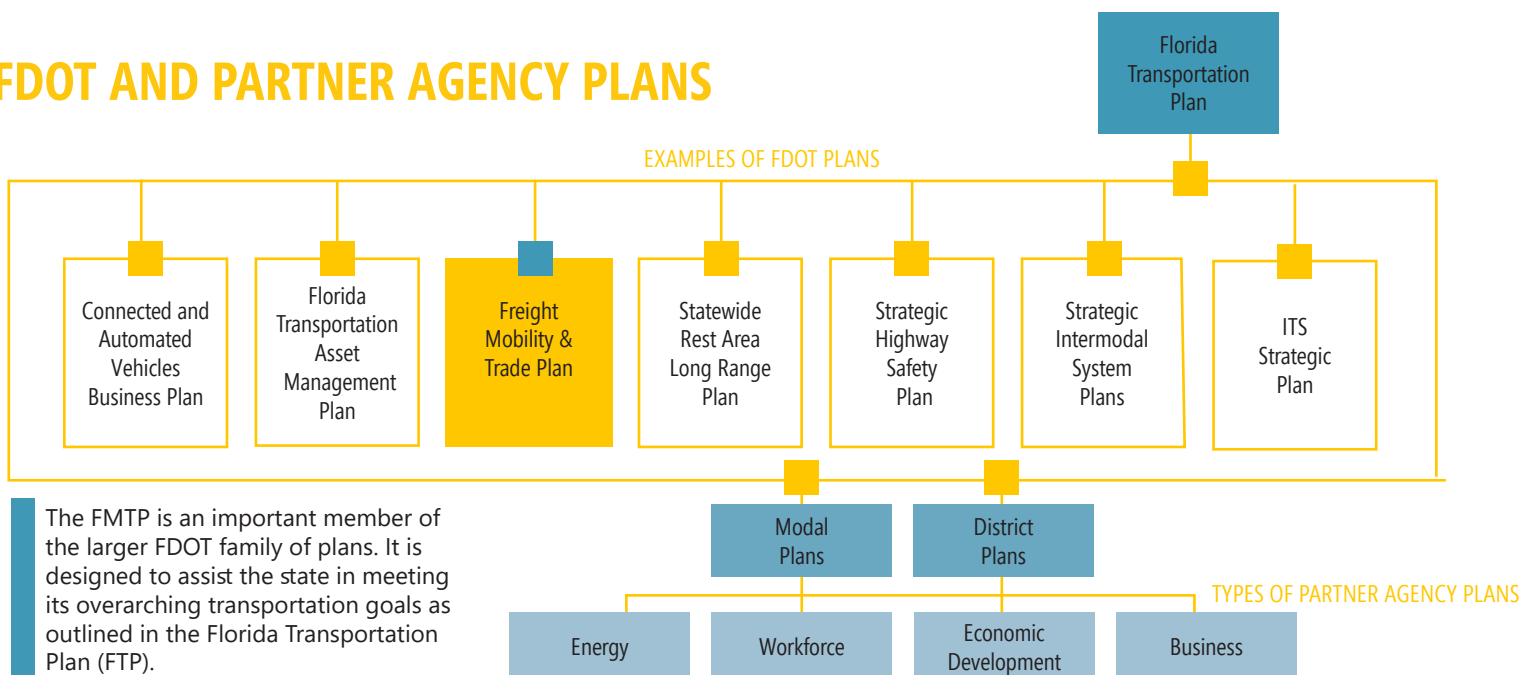


This chapter provides an overview of The Freight Mobility and Trade Plan (FMTP). The FMTP is a comprehensive plan that identifies freight transportation facilities critical to the state's economic growth and guides multimodal freight investments in the state. To receive funding under the National Highway Freight Program (23 U.S.C. 167), the FAST Act requires the development of a state freight plan which must address the state's freight planning activities and investments, both immediate and long-range. More information on this chapter can be found in FMTP Technical Memorandum 1.

A BRIEF HISTORY



FDOT AND PARTNER AGENCY PLANS



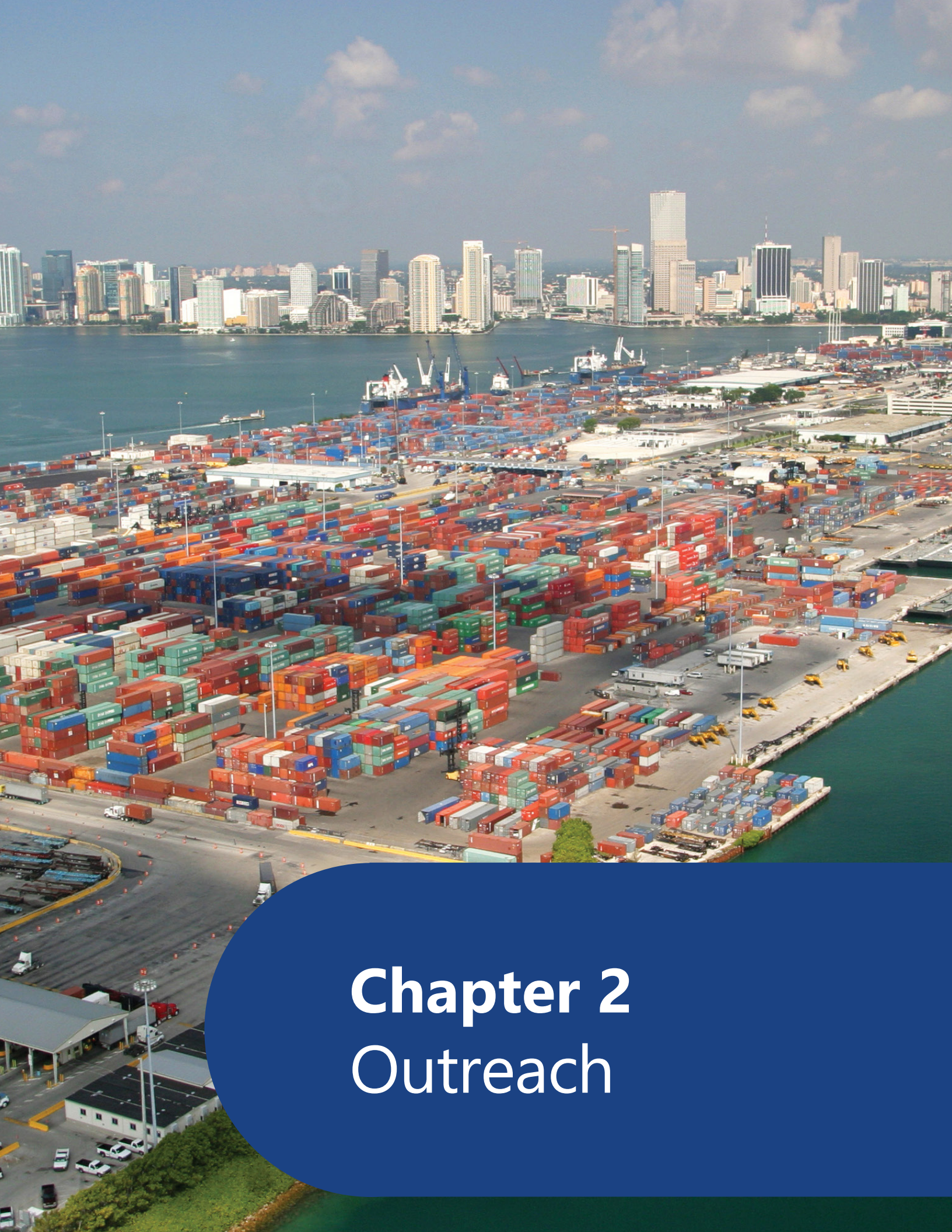
VISION TO IMPLEMENTATION



FMTP OBJECTIVES

The 2019 FMTP uses the goals from the broader Florida Transportation Plan (FTP). The FMTP objectives were developed by examining goals and objectives from the FTP, FDOT Modal Plans, partner agency plans, as well as by incorporating feedback provided by the Florida Freight Advisory Committee (FLFAC). This crosswalk ensured that the FMTP objectives reflect Florida's collective freight vision and set the stage for collaborative implementation of the FMTP recommendations.

FTP GOALS		FMTP OBJECTIVES
Safety and security for residents, visitors and businesses	1	Leverage multisource data and technology to improve freight system safety and security
Agile, resilient, and quality transportation infrastructure	2	Create a more resilient multimodal freight system
	3	Ensure the Florida freight system is in a state of good repair
Connected, efficient, and reliable mobility for people and freight	4	Drive innovation to reduce congestion, bottlenecks and improve travel time reliability
Transportation choices that improve accessibility and equity	5	Remove institutional, policy and funding bottlenecks to improve operational efficiencies and reduce costs in supply chains
	6	Improve last mile connectivity for all freight modes
Transportation solutions that strengthen Florida's economy	7	Continue to forge partnerships between the public and private sectors to improve trade and logistics
	8	Capitalize on emerging freight trends to promote economic development
Transportation systems that enhance Florida's communities	9	Increase freight-related regional and local transportation planning and land use coordination
Transportation solutions that protect Florida's environment	10	Promote and support the shift to alternatively fueled freight vehicles



Chapter 2

Outreach

What's Inside

- Project Advisory Committee Meetings
- Florida Freight Advisory Committee Meetings
- Regional Freight Forums



This chapter presents the outreach process used to identify key freight issues and opportunities. An inclusive engagement process was utilized involving everyone in the freight community - from private sector stakeholders in the shipping and manufacturing industries to business executives and public sector leaders to the general public. More information on outreach can be found in Technical Memorandum 1.

PROJECT ADVISORY COMMITTEE MEETINGS

The Project Advisory Committee (PAC) is an internal body consisting of representatives from FDOT offices that relate to freight. Five PAC meetings were held during the development of this plan. The PAC provided guidance on the development of the plan and helped validate the results along the way. Below are the FDOT offices represented on the PAC.

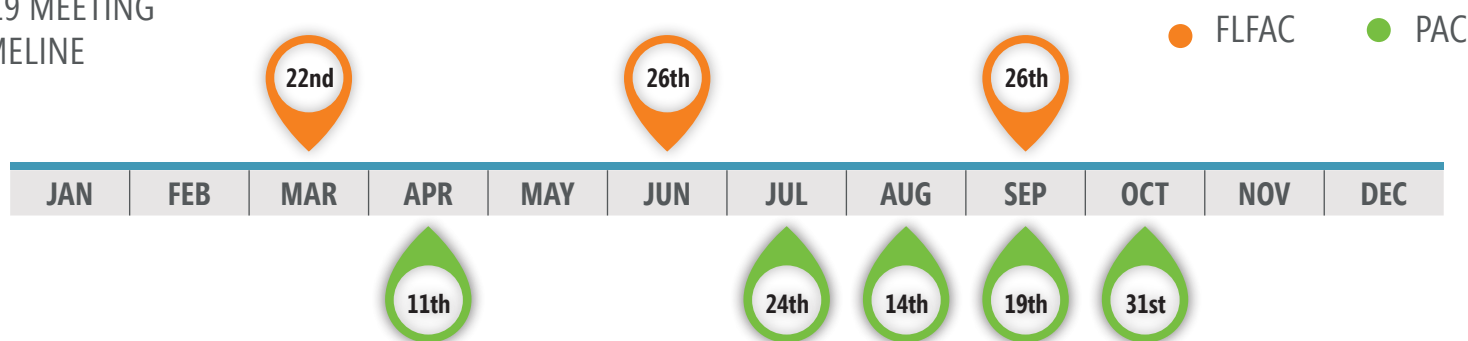
- Freight & Multimodal Operations
- Aviation & Spaceports
- Seaports
- Transit
- System Implementation
- Policy Planning
- Forecasting & Trends
- Transportation Data & Analytics
- Motor Carrier Size and Weight
- Maintenance
- Roadway Design
- Transportation System Management & Operation
- Commercial Vehicle Operations
- Florida Metropolitan Planning Organization Advisory Council
- District Offices / District Freight Coordinators

FLORIDA FREIGHT ADVISORY COMMITTEE MEETINGS

The Florida Freight Advisory Committee (FLFAC) consists of representatives from a cross-section of public and private sector freight stakeholders. The committee is designed to advise FDOT on freight-related priorities, issues, projects, and funding needs, with a particular look into sharing of information between the public/private sectors. Three FLFAC meetings were held with the FMTP update as the focus and the meetings were open to the public as usual. The purpose of these meetings was to ensure that the objectives and issues identified in the plan effectively address Florida's freight needs. Below are organizations represented on the current FLFAC.

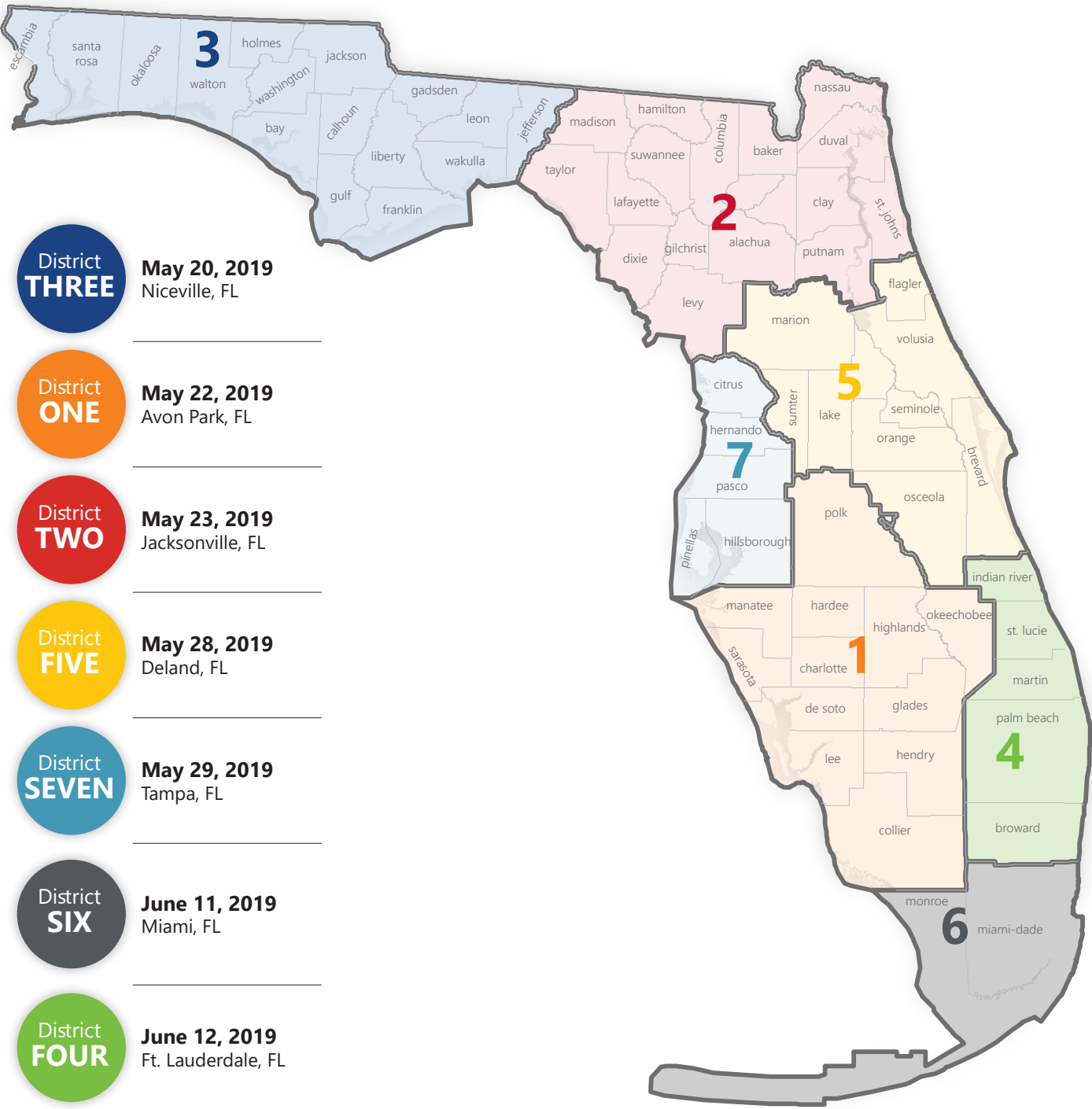


2019 MEETING TIMELINE



REGIONAL FREIGHT FORUMS

In addition to the FLFAC and PAC meetings, regional freight forums were held in each FDOT District and were open to the public. The forums were designed to give the public and stakeholders a venue to share knowledge, explore freight issues and offer potential solutions.



REGIONAL FREIGHT FORUM FEEDBACK

The regional freight forums collected input on the issues facing Florida and potential solutions. This collaborative process provided venues and opportunities for interaction with those who utilize, provide, and plan for the freight transportation system. Incorporating an industry participation approach allowed the state to better understand the needs of freight stakeholders and proactively streamline freight investments.

At each forum, a live polling session captured the District's collective thoughts on what they considered the most important goals and objectives, and how they rated their freight system. The answers to the question **"On scale of 1 to 10 (10 being the best possible), how well is the regional freight transportation system operating today?"** are below:



During the forums, participants were engaged in breakout sessions to examine key regional issues related to freight. Participants were asked:

- What are the most critical freight challenges/issues you encounter?
- What are the most important needs in your region?
- What opportunities do you see with freight?
- What new and developing technologies should Florida support to enhance freight mobility?
- How can we leverage collaboration to improve freight mobility?



TOPIC COUNTS

<i>The answers gathered from these questions helped to identify the most pressing freight issues and opportunities in the state. After the forums, the responses were placed into categories and weighted by how many Districts discussed the topics. For example, all seven Districts brought up bottlenecks/congestion in the forums; therefore, that topic is shown in the "6 or 7 mentions" box.</i>	6or7 mentions	4or5 mentions	2or3 mentions
	<ul style="list-style-type: none"> • Automation • Bottlenecks/Congestion • Collaboration/Coordination • Land Use • Regulations • Truck Only Lanes • Truck Parking • Labor Force • First Mile/Last Mile Connectivity • Public/Private Partnerships 	<ul style="list-style-type: none"> • Education/Awareness • Data Sharing • Empty Backhaul • Inland Ports • Funding • Economic Competitiveness 	<ul style="list-style-type: none"> • Alternative Fuel • Rural/Urban Context • E-Commerce • Law Enforcement • Limited Access/Signalization • Grade Separation • Blockchain • Marketing/Outreach • Intermodal Connectivity



Chapter 3

Assets and Conditions

What's Inside

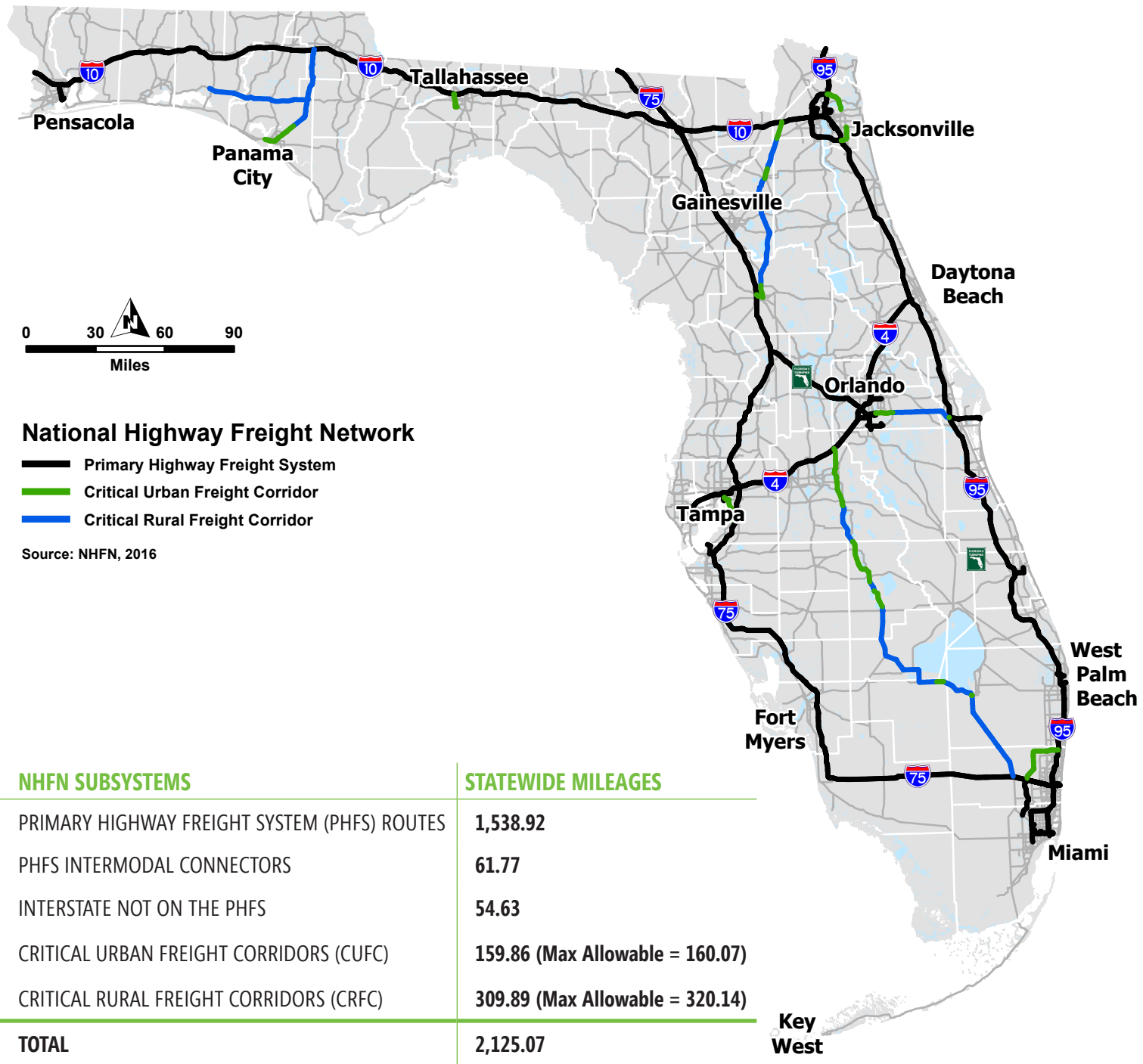
- National Highway Freight Network
- Strategic Intermodal System
- Multimodal Freight Facilities
- Freight Intensive Areas
- Performance & Conditions



Florida's freight systems and assets are essential to the efficient movement of goods and commodities across all modes within the state. Florida's transportation system serves a diverse range of needs when it comes to freight by providing for the movement of goods across local, regional, interstate, and international integrated multimodal networks. Technical Memorandum 2 includes more detailed discussions on freight transportation assets, related industries, and commodity flows.

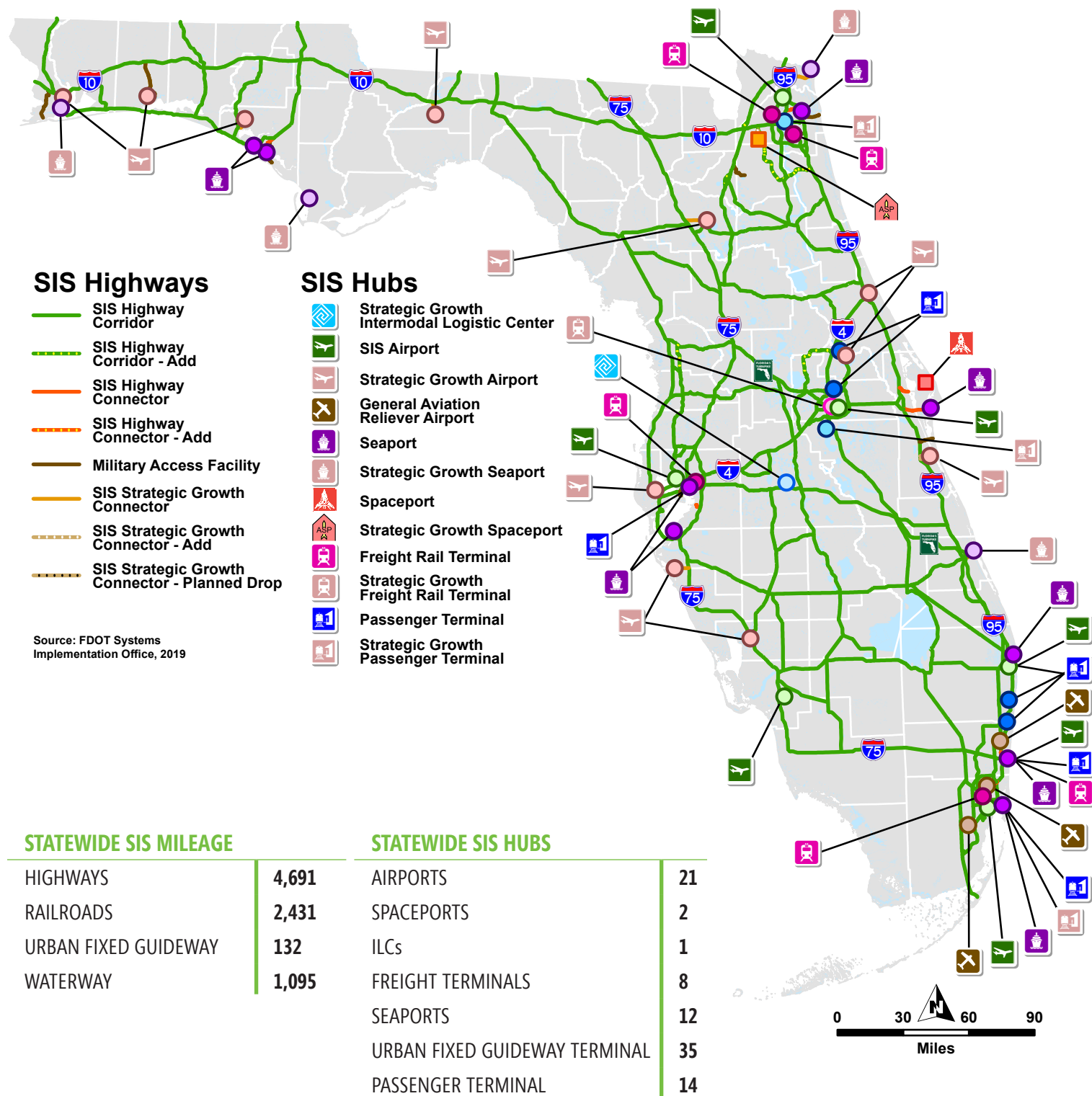
NATIONAL HIGHWAY FREIGHT NETWORK

The National Highway Freight Network (NHFN), established by the FAST Act, helps strategically direct resources toward improved system performance for efficient movement of freight on highways. It is comprised of a subsystem of roadways that are listed in the table below. More information on the NHFN can be found online at <https://ops.fhwa.dot.gov/freight/infrastructure/nfn/index.htm>.



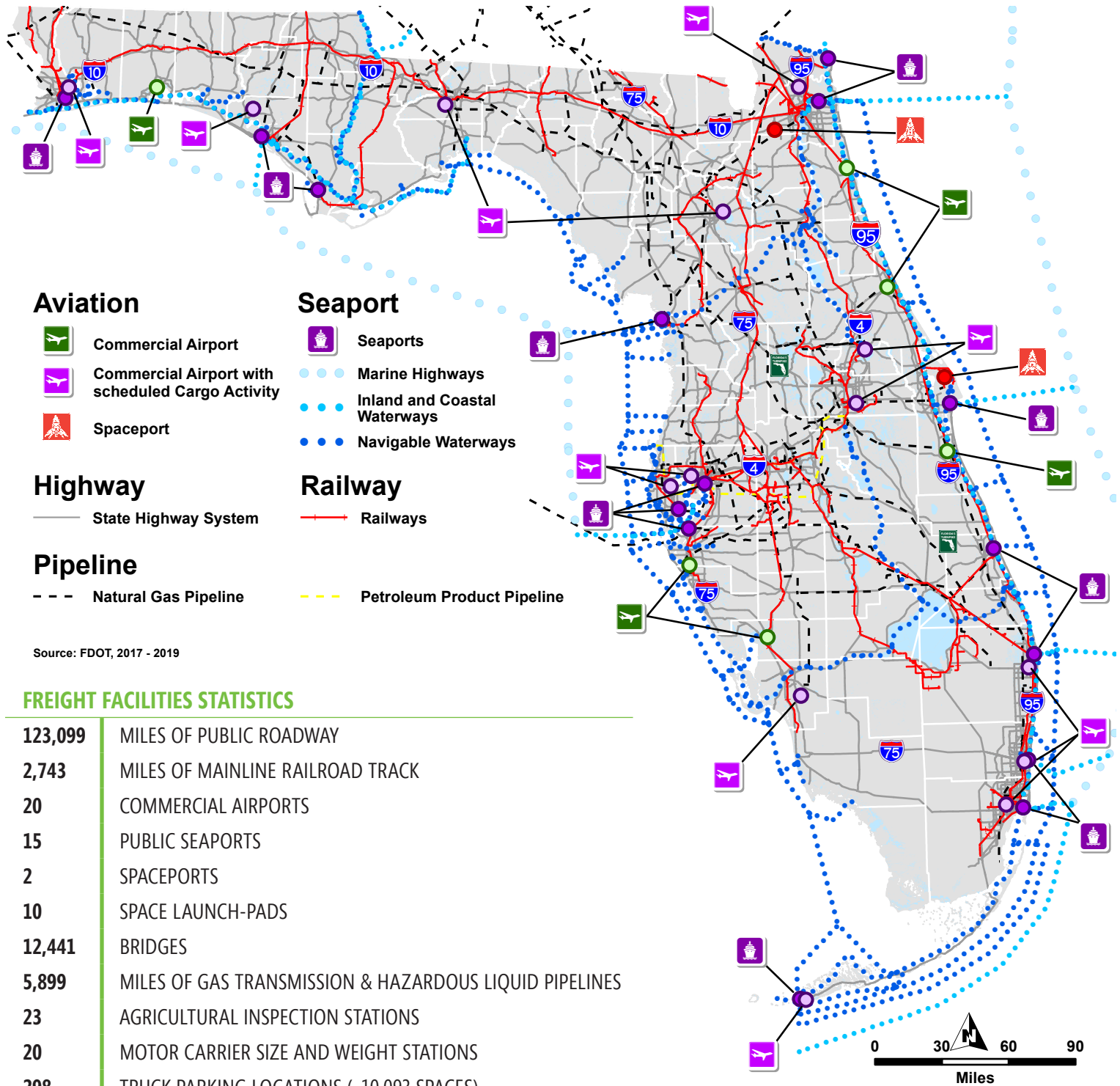
STRATEGIC INTERMODAL SYSTEM

The Strategic Intermodal System (SIS) is Florida's high priority network of transportation facilities important to the state's economy and mobility. The Governor and Legislature established the SIS in 2003 to focus the state's limited transportation resources on the facilities most significant for interregional, interstate, and international travel. The SIS is the state's highest priority for transportation capacity investments, and a primary focus for implementing the Florida Transportation Plan (FTP). More information on SIS is available online at www.fdot.gov/planning/sis/.



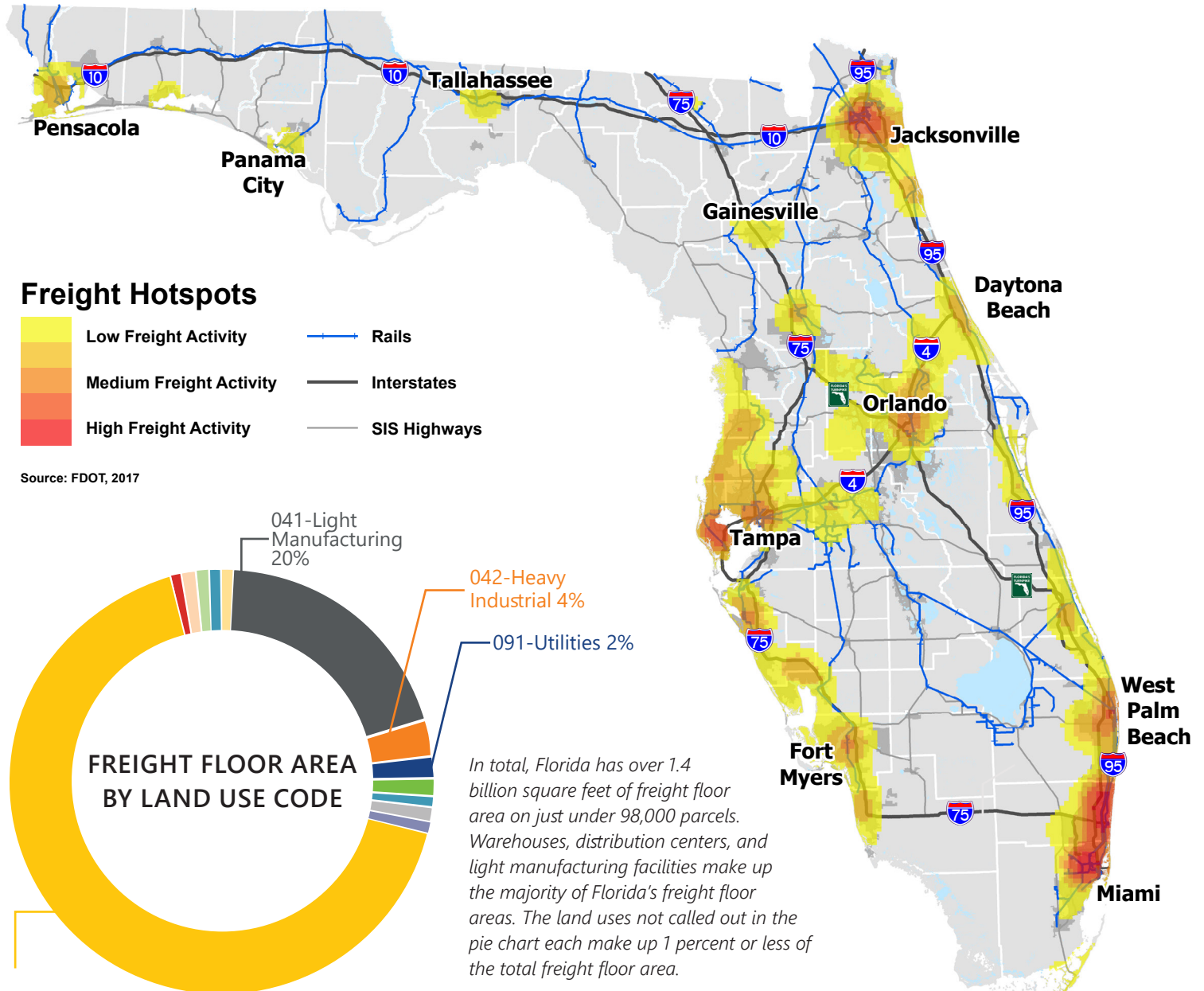
MULTIMODAL FREIGHT FACILITIES

Florida's multimodal freight and logistics infrastructure supports over 21 million residents and 126 million annual visitors while providing connectivity between freight modes and transportation choices that support the state's economy. From road to rail, to airports, seaports, and spaceports, Florida moves people, products and ideas to and from the rest of the world – fast. This map includes a combination of freight facilities in the state (not the National Multimodal Freight Network) to help take stock of Florida's freight assets. Additional assets and facilities are listed below the map.

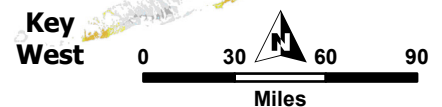


FREIGHT INTENSIVE AREAS

A Freight Intensive Area is a cluster or group of freight facilities that generates, distributes or attracts large amounts of freight activities and has a significant impact on Florida's transportation system and economy. An analysis conducted by the FDOT Systems Implementation Office in coordination with the FDOT Transportation Data and Analytics Office used Florida Department of Revenue (DOR) parcel data and Florida Department of Economic Opportunity (DEO) establishment employment data to locate freight activity areas. The freight hotspots and floor area statistics are shown below.

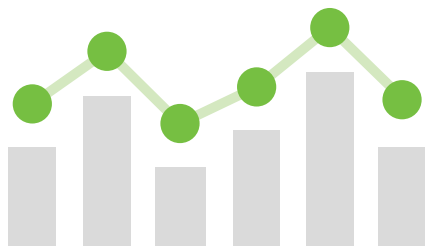


046-Other Food Processing	096-Sewage, Solid Waste
045-Canneries, Bottlers, etc.	092-Mining
044-Food Packing Plants	091-Utilities
043-Lumber/Sawmill	068-Dairies, Feed Lots
042-Heavy Industrial	049-Open Storage
041-Light Manufacturing	048-Warehouse, DC, etc.
029-Wholesale	047-Mineral Processing, Gravel, etc.



PERFORMANCE AND CONDITIONS

Performance measures are indicators of progress toward attaining a goal, objective or target (a desired level of future performance). A set of freight performance measures was developed consistent with the FDOT performance measures program, which informed the FMTP project prioritization process. A live dashboard was created to monitor freight system performance on a continual basis.



SYSTEM PERFORMANCE MEASURES

- Truck Miles Traveled
- Combination Truck Miles Traveled
- Combination Truck Ton Miles
- Combination Truck Planning Time Index*
- Combination Truck Hours of Delay*
- Truck Travel Time Reliability*
- Percent of Travel Meeting LOS
- Highway Pavement Conditions
- Bridge Conditions
- Highway Safety
- Truck Empty Backhaul
- Truck Parking Utilization
- Rail Tonnage
- Rail Crashes
- Seaport Tonnage
- Aviation Tonnage
- Aviation Departure Reliability

* Federal Measure

[Link to Dashboard](#)



The live dashboard is for internal FDOT use at this time.

MEASURES/CRITERIA USED IN PROJECT PRIORITIZATION

QUANTITATIVE	QUALITATIVE
(Truck Injuries/Truck VMT) *1000	Does this project implement safety or security enhancements?
(Truck Fatalities/Truck VMT) *1000	
Crime Index	Does this project improve the state's data gathering efforts?
Roadways within 100 Year Flood Zones	
Presence of Structurally Deficient Bridges	Does this project address the environmental or economic resiliency of the freight system?
Presence of Poor Pavement Condition Segments	
Roadways with Top Bottlenecks	Does this project optimize the functionality and efficiency of existing roadways?
Truck AADT	
Vicinity to Hubs	Does this project preserve the existing State Highway System?
Roadways within Freight Intensive Areas	Does this project address truck parking?
Labor Force Size (Ratio of labor force by county population relative to average statewide ratio)	Does this project address grade separation?
County GRP Level (Relative to the average county GRP level in FL)	Is this a technology driven or TSM&O project?
Transportation and Warehousing Industry Share of Total Employment	Does this project improve multimodal freight connectivity?
County Population Density (Relative to the average county-level population density in FL)	Does this project use public/private partnerships (P3)?
On Designated Alternative Fuels Corridors	Does this project capitalize on emerging freight trends?
Number of Alternative Fueling Stations within 1 Mile of Roadway	Is this project on the MPOAC freight project list?
	Does this project promote the use of LNG/CNG/electric vehicles?

SYSTEM PERFORMANCE STATISTICS

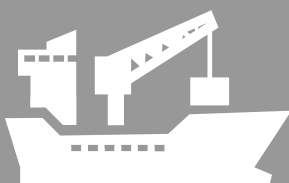
MEASURE	PERFORMANCE	YEAR
Truck Miles Traveled	29.6 million daily truck miles traveled on State Highway System	2017
Combination Truck Miles Traveled	16 million daily combination truck miles traveled	2017
Combination Truck Ton Miles	63 billion ton miles	2017
Combination Truck Planning Time Index*	1.39 planning time index; for a trip that would take 10 minutes in free-flow conditions, the 95th percentile travel time is 14 minutes	2017
Combination Truck Hours of Delay*	19,100 daily hours of delay	2017
Truck Travel Time Reliability*	90.2 percent truck travel time reliability	2017
Percent of Travel Meeting LOS Standard	77.4 percent (on the State Highway System during peak hour)	2017
Highway Pavement Conditions	91.3 percent of the SHS pavements met Department standards	2018
Bridge Conditions	66 percent of the total NHS deck area is in good condition; less than 2 percent is in poor condition	2019
Highway Safety	4,068 traffic crashes involving a truck	2016
Truck Empty Backhaul	>50 percent of trucks coming into the state were full, compared to 38 percent of trucks leaving the state	2015-17
Truck Parking Utilization	during peak periods truck parking demand can exceed 150 percent in some areas	2018



MEASURE	PERFORMANCE	YEAR
Rail Tonnage	44.1 million originated rail tons, 72.3 million rail terminated tons	2017
Rail Crashes	108 highway railroad incidents including 21 fatalities	2017



MEASURE	PERFORMANCE	YEAR
Seaport Tonnage	4.1 million twenty-foot equivalent units (TEUs)	2018



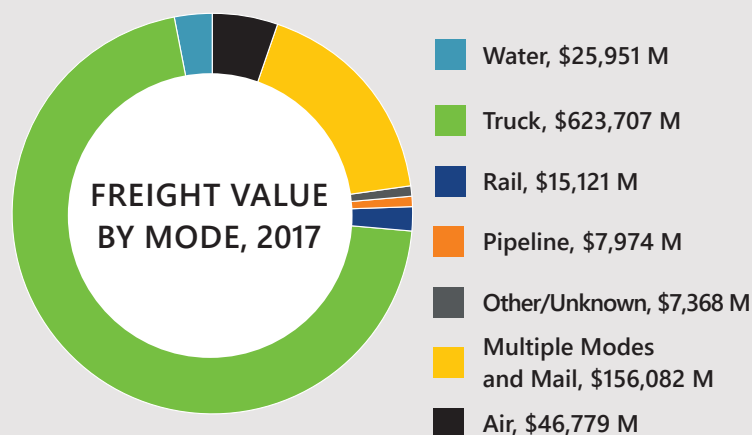
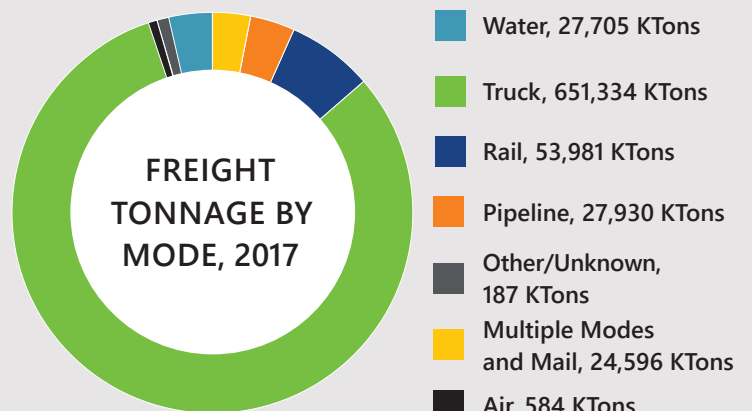
MEASURE	PERFORMANCE	YEAR
Aviation Tonnage	2.5 million tons	2017
Aviation Departure Reliability	81.5% departure reliability	2017



* Federal Measure

2017

COMMODITIES, TONNAGE & VALUES



Source: Freight Analysis Framework 4.5, 2017

1 KTon = 1,000 Tons

In 2017, Florida ranked 11th in the country with 44.1 million originated rail tons and 4th with 72.3 million rail terminated tons.

Source: Association of American Railroads

In Florida, nearly 80% of freight by tonnage is moved by truck.

Source: Freight Analysis Framework 4.5, 2017

Brazil and China are the top export and import partners for Florida ports, respectively.

Source: Florida Ports Council

In 2018, Miami International Airport ranked 4th in the nation for landed cargo weight with 8.4 million lbs.

Source: U.S. Bureau of Transportation Statistics and Federal Aviation Administration

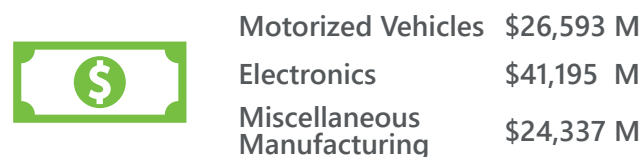
TOP 3

IMPORT

COMMODITIES BY TONNAGE:



COMMODITIES BY VALUE:



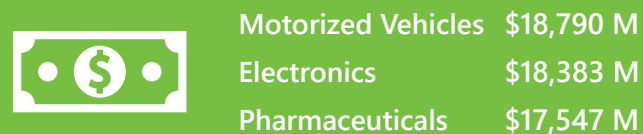
TOP 3

EXPORT

COMMODITIES BY TONNAGE:

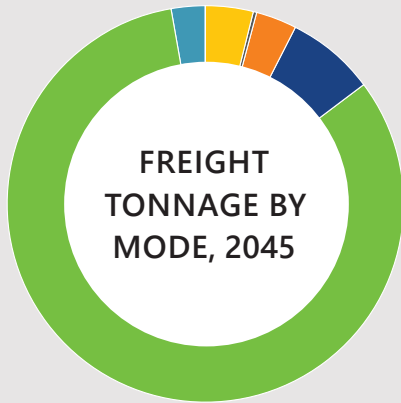


COMMODITIES BY VALUE:

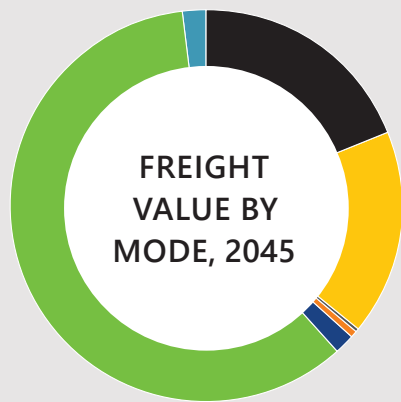


Source: Freight Analysis Framework 4.5, 2017

2045 PROJECTED COMMODITIES, TONNAGE & VALUES



Water, 27,582 Ktons
Truck, 870,136 Ktons
Rail, 77,074 Ktons
Pipeline, 35,609 Ktons
Other/Unknown, 407 Ktons
Multiple Modes and Mail, 40,514 Ktons
Air, 2,376 Ktons



Water, \$38,358 M
Truck, \$1,279,243 M
Rail, \$36,272 M
Pipeline, \$8,694 M
Other/Unknown, \$11,470 M
Multiple Modes and Mail, \$362,096 M
Air, \$405,725 M

Source: Freight Analysis Framework 4.5, 2045

1 KTon = 1,000 Tons



All major routes are forecasted to have a significant growth in truck tonnage movement.



Air has the highest estimated growth rate, primarily driven by forecasted growth in high value goods.

TOP 3 IMPORT

COMMODITIES BY TONNAGE:

Coal N.E.C.	Gravel	Other Foodstuffs
37,372 Ktons	17,635 Ktons	13,957 Ktons

COMMODITIES BY VALUE:

	Electronics	\$132,349 M
	Machinery	\$77,799 M
	Precision Instruments	\$61,868 M

TOP 3 EXPORT

COMMODITIES BY TONNAGE:

Fertilizers	Other Agricultural Products	Other Foodstuffs
11,697 Ktons	11,682 Ktons	11,603 Ktons

COMMODITIES BY VALUE:

	Basic chemicals	\$145,692 M
	Electronics	\$79,435 M
	Pharmaceuticals	\$67,002 M

Source: Freight Analysis Framework 4.5, 2045

A grayscale image of a hand holding a white grid. Overlaid on the grid is a bar chart with four bars of increasing height. The bars are colored yellow and orange. A blue rounded rectangle is at the bottom right, containing the chapter title.

Chapter 4

Trends

What's Inside

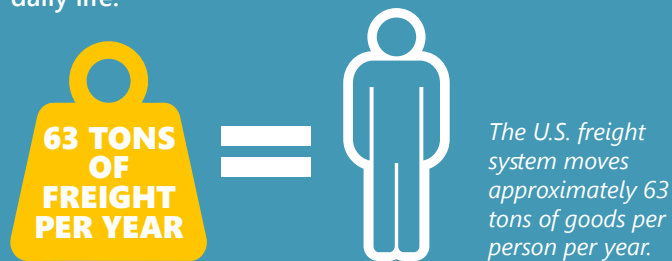
- Population Trends
- Economic Trends
- Modal Trends
- Technology Trends



The evolution of freight transportation is largely shaped by demographics, consumer behavior, the economy, regulations, and technological advances. The dynamic nature of freight mobility and trends affecting freight movement must be considered when developing policies, programs and projects to address freight needs and issues. A deeper dive into trends can be found in Technical Memorandum 4.

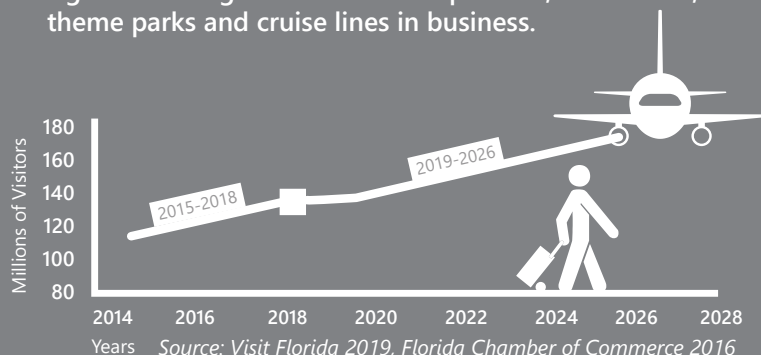
POPULATION TRENDS

Florida currently has a population of 20.8 million, ranking third among the states. According to BEBR's forecasting model, Florida's population is expected to reach 27.4 million by 2040. As Florida's population continues to grow so does the freight required to sustain daily life.



Source: Beyond Traffic 2045, 2016

Over 2.4 million people visit Florida each day – effectively increasing the state's population by 11 percent. The tourism industry supports 1.3 million jobs and creates significant freight demand to keep hotels, restaurants, theme parks and cruise lines in business.



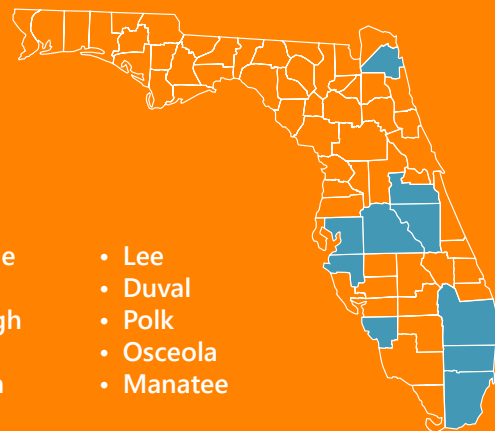
Decades of outward urban expansion have erased the defined boundaries for many of the state's urban areas, as economic ties between the expanding regions have been supported by the development of an intercity roadway network. By 2050, Florida is expected to become one integrated region in which there is little physical or geographic delineation between the metropolitan areas defined as urban centers.



67% OF FLORIDA'S POPULATION GROWTH IS PROJECTED TO BE CONCENTRATED IN **10 COUNTIES**

Source: Bureau of Economic and Business Research (BEBR), 2019

- Miami-Dade
- Orange
- Hillsborough
- Broward
- Palm Beach
- Lee
- Duval
- Polk
- Osceola
- Manatee



Florida's population as a whole is also getting older. Within a few decades, residents aged 60 and older are expected to outnumber residents under the age of 18. In 2030, there will be comparatively fewer people in the working age population (age 25-64), bolstering the demand for labor and wages and likely a greater shift toward online shopping coupled with changes in freight distribution. The trucking industry is already seeing a shortage in drivers and mechanics as workers are retiring.



67% OF ROAD USERS WILL **OUTLIVE THEIR ABILITY TO DRIVE** BY AN AVERAGE OF **7-10 YEARS**

Source: Bureau of Economic and Business Research (BEBR), 2019

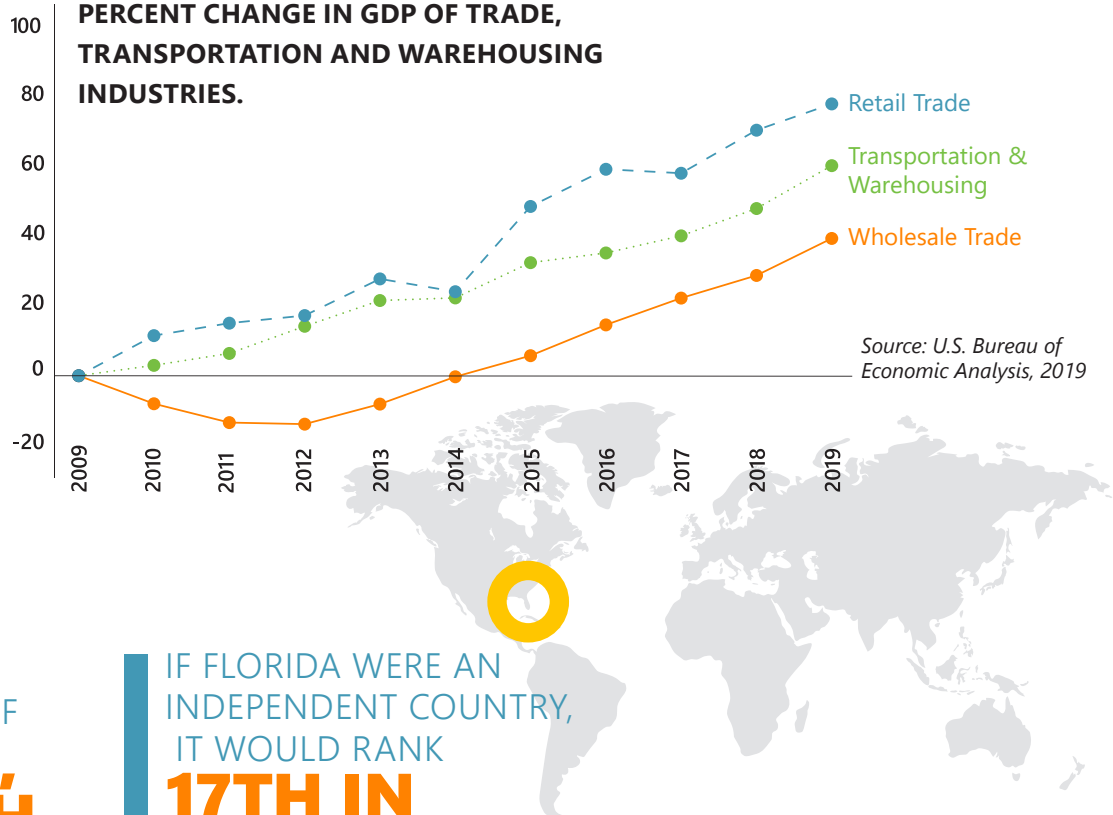
The combination of population growth, demographic changes and urbanization trends will have a transformative effect on Florida's supply chains. Increased congestion, higher numbers of urban deliveries and changing distribution networks are expected to have a significant impact on the state's economy.



ECONOMIC TRENDS

The Florida economy is the 4th largest in the U.S. and 17th largest globally. Freight related industries - construction, manufacturing, trade, and logistics – support every facet of the state's economy. The trade sector has seen a tremendous growth with 40% increase in wholesale trade and 80% in retail trade industries from 2009 to the first quarter of 2019. Transportation and warehousing industries have seen a 60% growth since 2009. Because of tourism and population growth, Florida is largely a consumer state, consuming more than it produces.

PERCENT CHANGE IN GDP OF TRADE, TRANSPORTATION AND WAREHOUSING INDUSTRIES.



FLORIDA HAS A GROSS DOMESTIC PRODUCT OF **\$1 TRILLION, RANKED 4TH** IN THE U.S.

IF FLORIDA WERE AN INDEPENDENT COUNTRY, IT WOULD RANK **17TH IN THE WORLD**

U.S. Bureau of Economic Analysis, 2019

Nationally, e-commerce is responsible for 10% of retail sales. The growth rate for e-commerce spending has ranged from 13% to 16% annually over the past five years, outpacing the 1% to 5% annual growth in traditional retail sales. As e-commerce market share and rapid fulfillment expectations have continued to grow, a shift is taking place from large delivery vehicles to smaller vans and personal vehicles. In some cities, deliveries are even being made by robot. Similarly, large regional distribution centers are being replaced with smaller fulfillment centers spread across a region to facilitate quick deliveries.



Source: U.S. Census Bureau, 2018

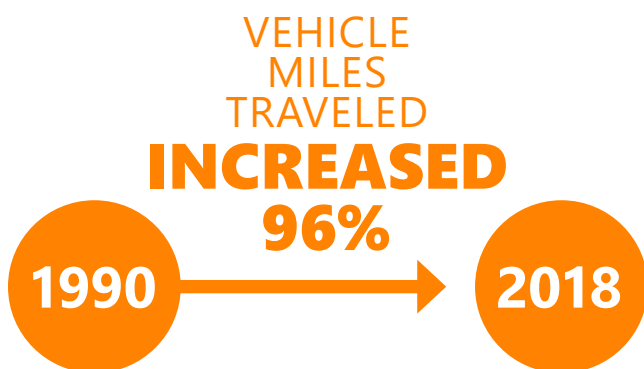
GIG ECONOMY

Amazon recently debuted "Amazon Flex" as a freight mobility service (FMaaS) solution, where just about anyone with a vehicle and a smart phone can pick up parcels at a distribution center, route drop-offs, and make deliveries. Similarly, freight brokerage apps like the on-demand, real-time Uber Freight can match freight truckload shipments with available drivers/equipment.



MODAL TRENDS

The growing population fueled by a growing economy has increased the number of trucks on the road. The number of intra-regional and last-mile truck trips have increased while the average length of haul has declined with more distribution/fulfillment centers being built. Average trip lengths have decreased 37% since 2000, while urban vehicle miles traveled have increased for much of this period. Due to the more frequent but shorter trips, congestion and bottlenecks have increased in dense urban areas. Not only are vehicle miles traveled increasing with more frequent trips, but trucking accidents and fatalities are also on the rise since 2012.



Not only are there more truck crashes occurring, but stakeholders also identified that the cost of insurance is increasing for trucking companies. The trucking industry faces issues when it comes to litigation due to crashes which result in damages, injuries, time-lost, and other associated factors.



Since 2012, there has been a steady increase in the number of traffic crashes involving a truck on Florida's roadways. In 2016, the number of truck crashes increased by 1.6% or 332 accidents from 2015. Fatalities and injuries involving a truck crash have also increased over time with an increase in truck accident deaths of 1.3% (27 fatalities) from 2015 to 2016, and an increase of 11.2% (660) in truck accident-related injuries from 2015 to 2016.

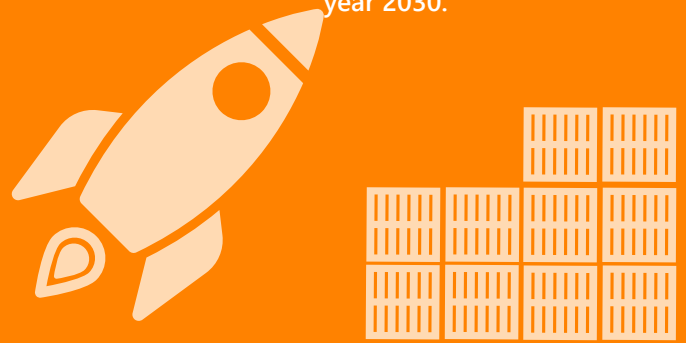


Florida is experiencing the effects of a driver shortage in the trucking industry. The shortage is most notable in the long-haul truckload segment of the market, where drivers are unable to return home every night. Truck drivers are not the only workers in shortage; diesel mechanics and other subsidiary professions are in short supply as well.

As per the Florida Aviation System Plan, Florida ranks #1 in air cargo with Latin American countries. Miami International Airport (MIA) is a leading airport in the U.S. for international freight and ranks 10th globally. Tampa International Airport (TPA) has seen a tremendous growth rate in last decade.



Commercialization of the space industry is attracting significant private investment and creating a new paradigm for the space freight market. Kennedy Space Center is gearing up for more than 100 rocket launches a year and thousands of new high-tech jobs by the year 2030.



Panama Canal Impacts

The expanded Panama Canal - coupled with increases in vessel sizes - has changed the flow of goods movement to U.S. ports. The widened and deepened canal has allowed container ship capacity to grow four-fold and this has reduced the unit cost of shipping cargoes by sea. However the larger vessels and additional volumes are also requiring new investment and technology in marine terminals.

International Marine Industry Consolidations

The cost of fuel and a desire to gain greater market share has helped create alliances – most notably, recent consolidations of several Chinese ocean carriers. The result has been a larger share of the market controlled by fewer (larger) carrier services, which has affected rates.

Rail safety has become a focus to address at federal, state, and local levels due to the increasing rate of highway-railroad incidents over the past decade. Florida had 729 highway-rail incidents from 2008 to 2017.



TECHNOLOGY TRENDS

CONNECTED AND AUTOMATED VEHICLES

Connected and automated technologies hold great potential to significantly reduce crashes, improve capacity and enhance mobility for all transportation users. Truck platooning is a visible form of connected freight technology. By synchronizing multiple truck operations, trucks run closely together resulting in fuel savings and increased safety.



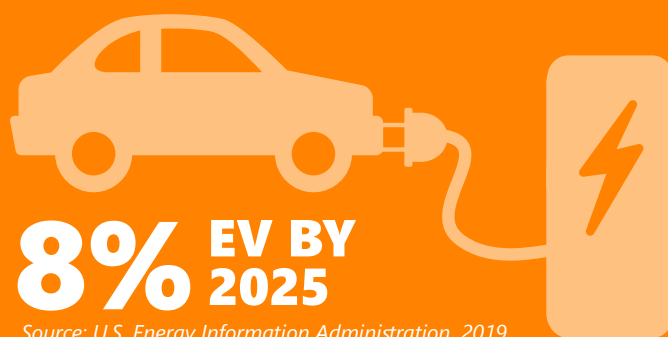
The implementation of full autonomy throughout the motor carrier freight system could reduce total operating costs by up to 45%, an estimated cost savings of at least \$85 billion.

Source: McKinsey and Company, 2018

ALTERNATIVE FUELS

Advancements in electric vehicle technology have reached the freight industry. Today, some localized freight fleets have made the shift to electrified vehicles. As battery and quick charging technology improves, trucking companies may explore shifting from diesel to electric.

Nationally, fully electronic vehicles are projected to represent 8% of total automobiles sold by 2025.



Source: U.S. Energy Information Administration, 2019

BIG DATA
2,500,000,000,000,000
(2.5 QUINTILLION BYTES)
OF DATA ARE CREATED **EACH DAY GLOBALLY.**

While organizations have been using warehouse and distribution system data to conduct transportation and freight analysis for decades, 'big data' allows for the harvesting of the countless enormous datasets in non-traditional ways. Big data is already changing the freight industry with its ability to increase transparency, optimize consumption, improve process quality and performance, and create new revenue streams from new data/products. Blockchain allows for an entire supply chain network to contribute to data validation, helping build trust.



Source: Forbes, 2018

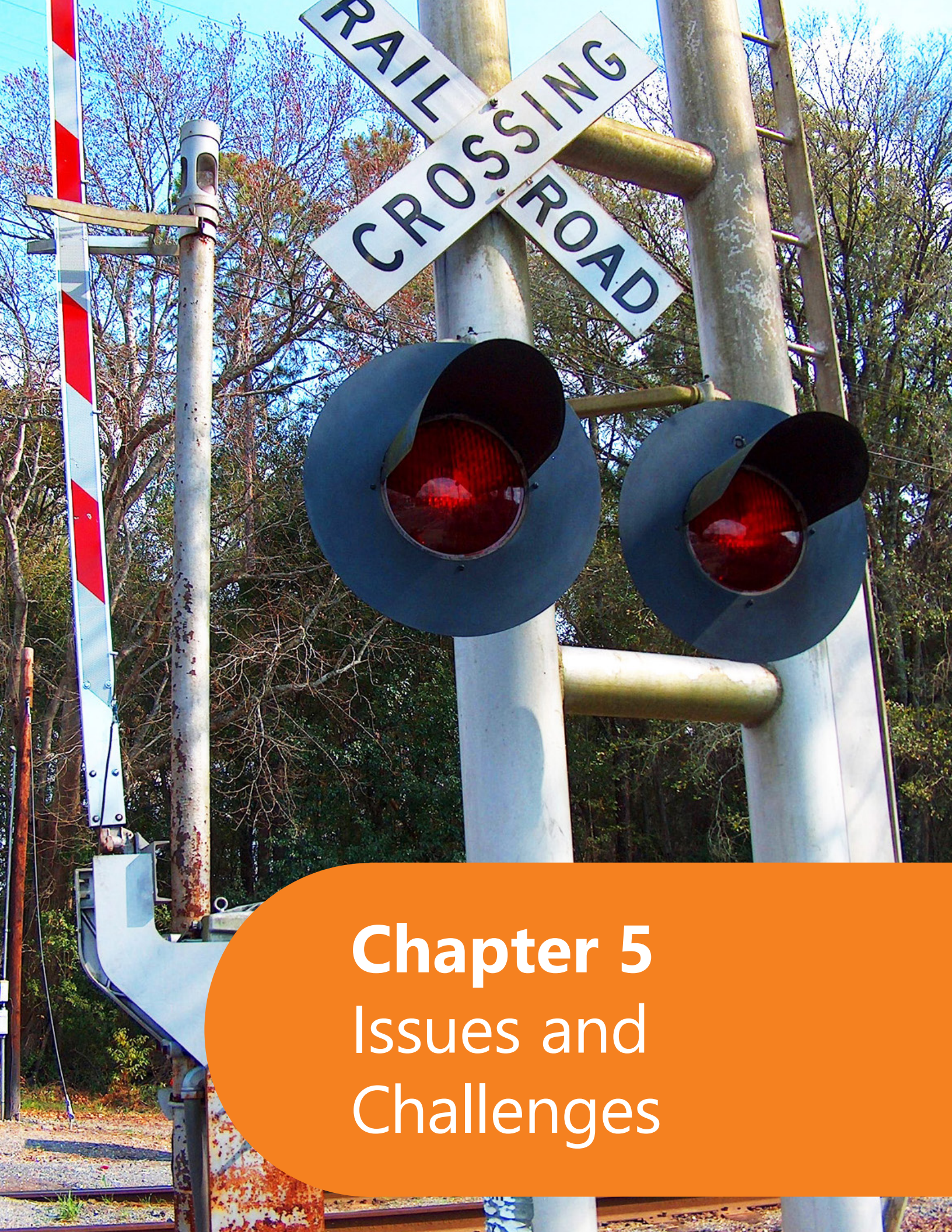
DRONE/ROBOT DELIVERY

The nature of freight deliveries is morphing in both urban and rural settings. Drones, or Unmanned Aerial Vehicles (UAVs), and robots, or Personal Delivery Devices (PDDs), are being tested to fulfil last-mile delivery needs.



AIRSHIPS STOCKED WITH PRODUCTS COULD ACT AS **AIRBORNE WAREHOUSES** TO STREAMLINE DRONE DELIVERY

Source: Amazon, 2019



Chapter 5

Issues and Challenges



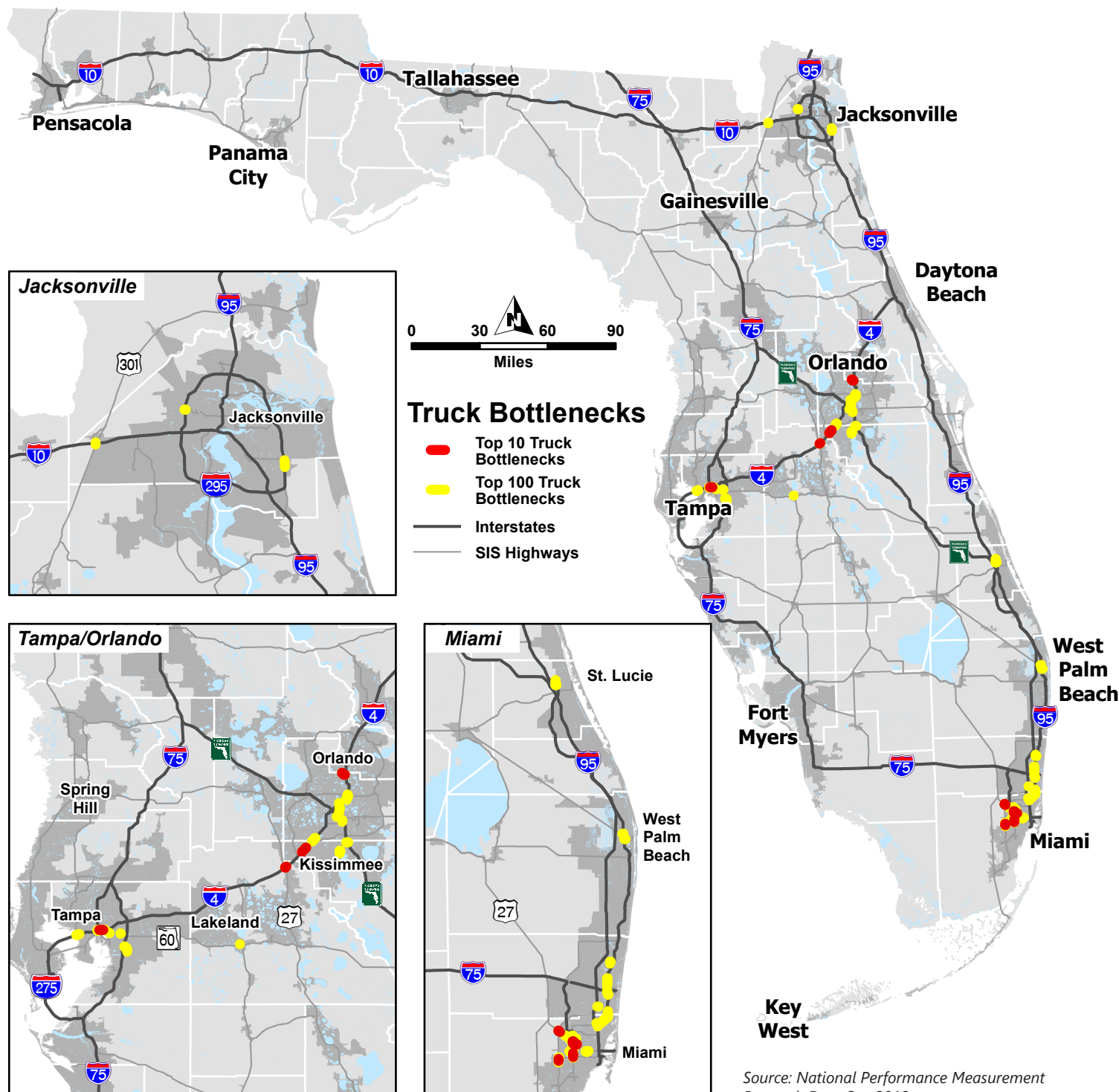
What's Inside

- Congestion/Bottlenecks
- Truck Parking
- Empty Backhaul

The issues/challenges discussed in this chapter were derived from a combination of analysis of Florida's freight performance and input from various stakeholders. The three issues presented were found to be the top issues impacting freight mobility in the state. A more robust discussion of freight issues and challenges impacting Florida can be found in Technical Memorandum 5.

CONGESTION/BOTTLENECKS

There are growing numbers of vehicles on the road creating a mix of truck and passenger (residential and visitor) traffic leading to unpredictability in travel times and an increasing rate of crashes. The congestion cost in 2014 for the seven selected urban areas in Florida was \$8.75 billion. There were approximately 388 million hours in travel delay and 175 million excess gallons of fuel consumed. In 2017, there were 19,100 daily truck hours of delay in Florida. Although truck related congestion is a small percentage of overall congestion, it accounts for a greater percentage of congestion cost due to higher value of time for freight compared to passenger vehicles. In 2016, the freight industry's share of the total cost of congestion in Florida was more than \$5.6 billion. The map below shows the top 100 truck bottlenecks in Florida.



TOP 10 RECURRING & NON-RECURRING TRUCK BOTTLENECKS

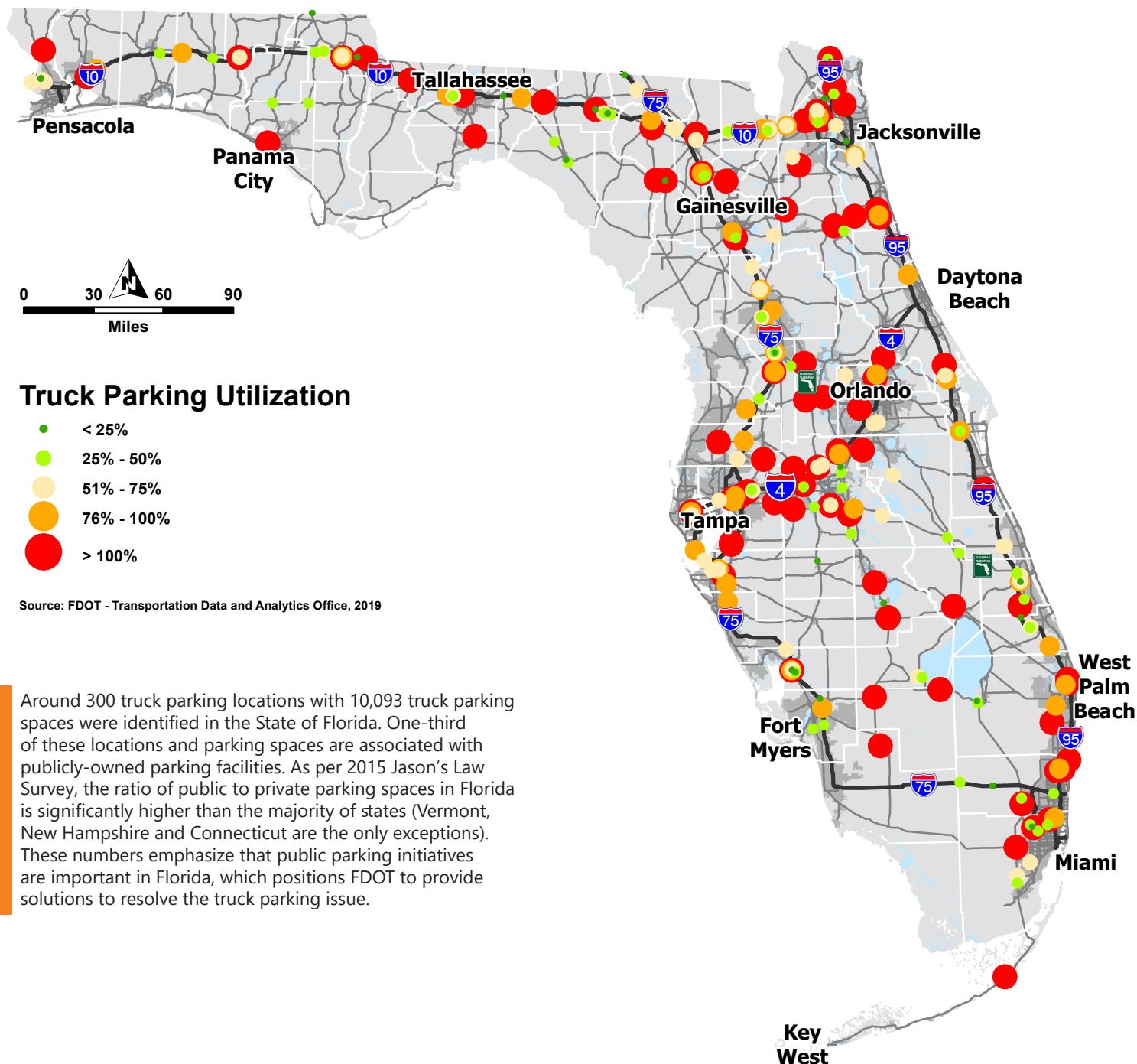
Rank	Recurring Congestion		Non-Recurring Congestion	
	Road	County	Road	County
1	FL-414 eastbound between Seminole/Orange County border and I-4	Orange	FL-414 eastbound between Seminole/Orange County border and I-4	Orange
2	I-4 westbound close to Lee Roy Selmon Expressway	Hillsborough	I-4 westbound close to Lee Roy Selmon Expressway	Hillsborough
3	I-4 westbound approaching I-275	Hillsborough	I-4 eastbound approaching U.S. 27	Polk
4	Palmetto Expressway northbound corridor between the ramps entering and exiting NW 25th St	Miami-Dade	U.S. 27 northbound approaching FL Turnpike	Miami-Dade
5	I-4 westbound between Daniel Webster Western Beltway and S.R. 417-Toll S	Osceola	U.S. 27 northbound between West 12th Avenue and close to Hialeah Expressway	Miami-Dade
6	Florida Turnpike southbound between Dolphin Expressway and U.S. 41	Miami-Dade	Palmetto Expressway northbound close to Miami Airport approaching Dolphin Expressway	Miami-Dade
7	Palmetto Expressway northbound and south of Okeechobee Rd	Miami-Dade	U.S. 27 northbound between West 12th Avenue and south of Hialeah Expressway	Miami-Dade
8	Palmetto Expressway northbound close to NW 74th St	Miami-Dade	U.S. 27 northbound between the ramps entering and exiting FL Turnpike	Miami-Dade
9	Palmetto Expressway northbound and north of Okeechobee Rd	Miami-Dade	Palmetto Expressway northbound corridor between the ramps entering and exiting NW 25th St	Miami-Dade
10	U.S. 27 northbound approaching FL Turnpike	Miami-Dade	Palmetto Expressway southbound and south of Okeechobee Rd	Miami-Dade

The table shows the top 10 recurring and non-recurring congestion segments during a regular weekday. It is important to distinguish these two measures because research shows that freight users can schedule deliveries to consider recurring congestion, however non-recurring congestion is difficult to predict, which can lead to delays in deliveries.

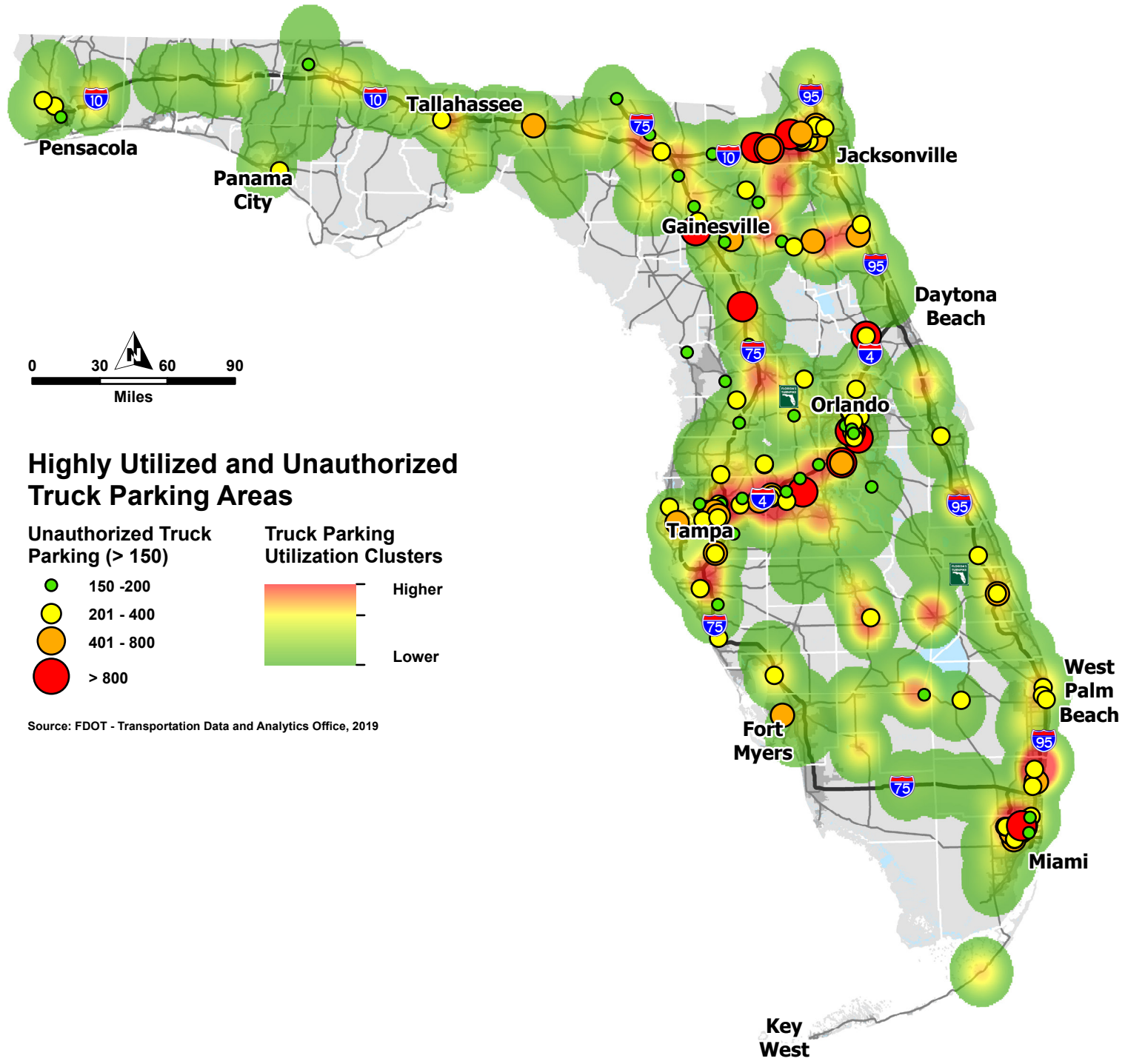


TRUCK PARKING

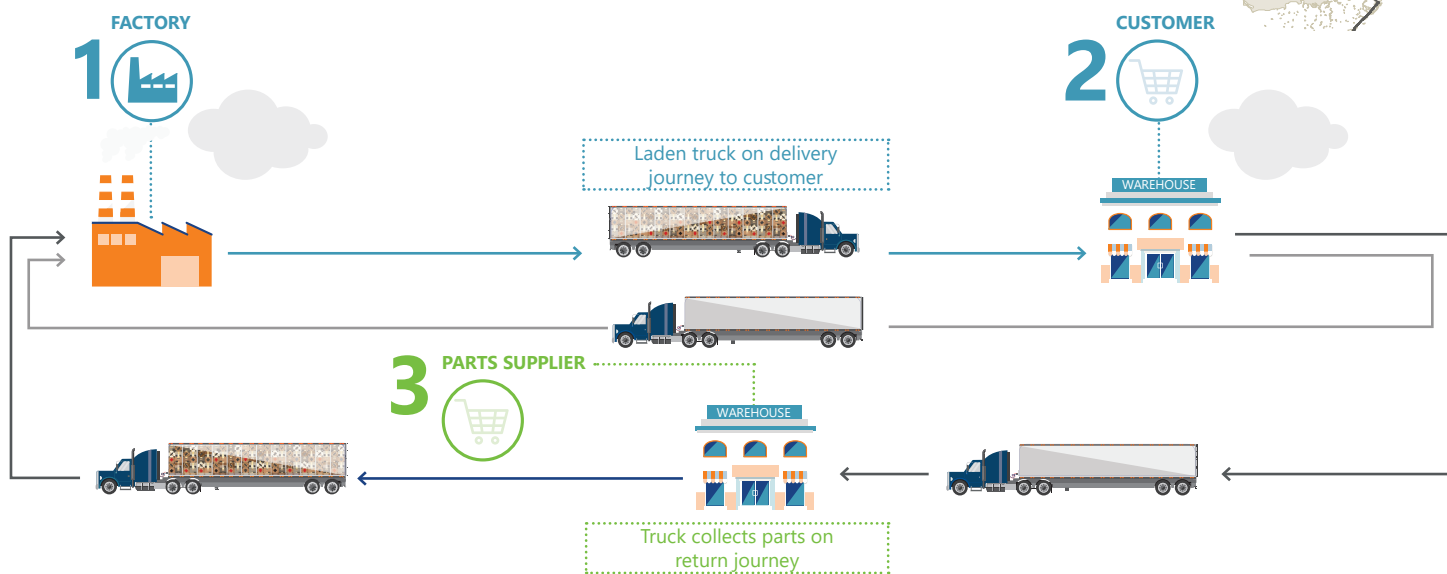
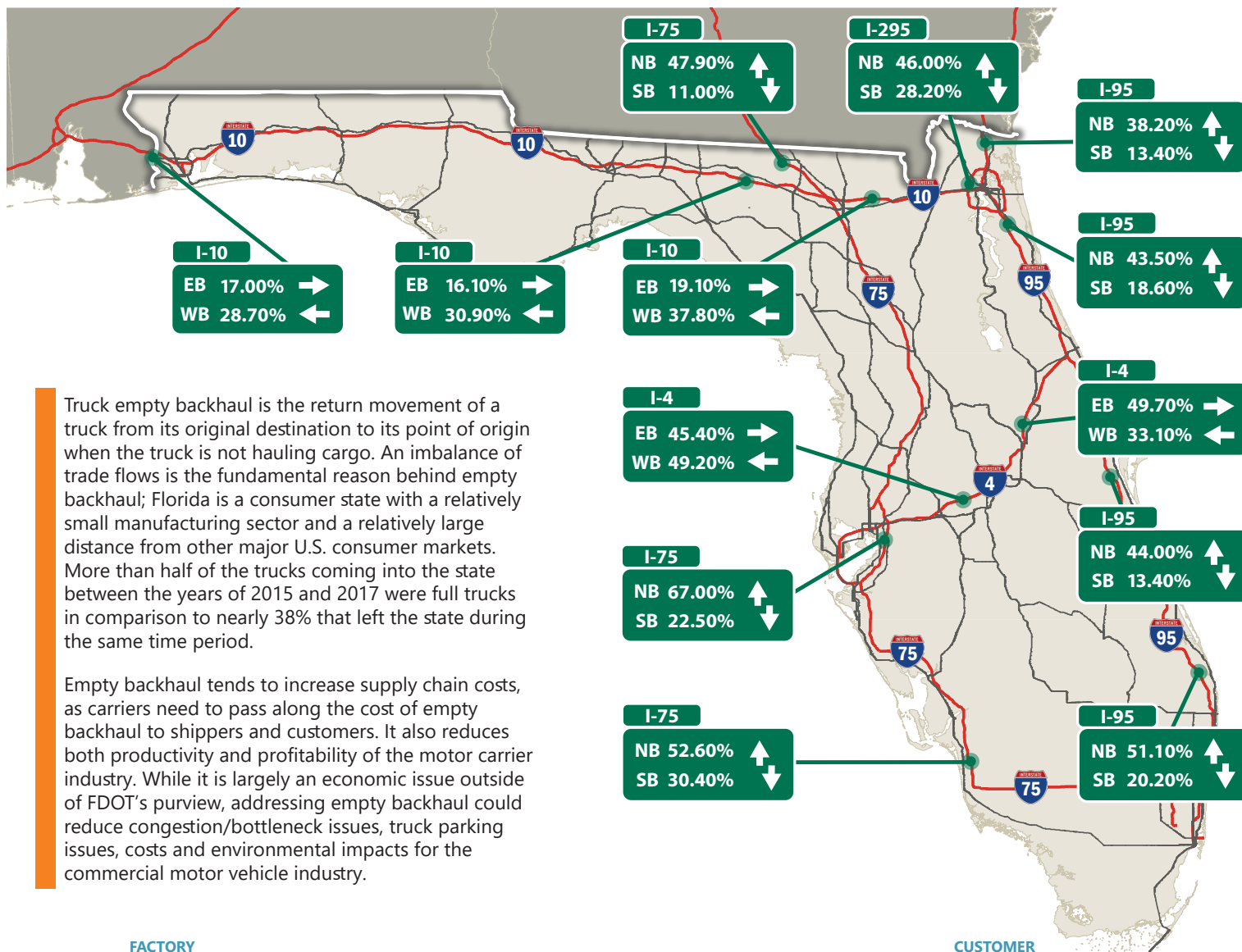
According to the American Transportation Research Institute (ATRI), truck parking is ranked as the second critical issue in the trucking industry by truck drivers in 2018. In Florida, the limited availability of truck parking spaces has caused overcrowding and overflow at existing truck parking locations. When there is limited parking available, drivers often park in unauthorized areas like highway ramps, creating safety hazards. Analysis found that during peak periods truck parking demand can exceed 150 percent in some areas of the state. The map below shows utilization of truck parking facilities in Florida.



This map depicts highly utilized truck parking locations and locations with a high density of unauthorized/illegal truck parking. An ongoing truck parking study is evaluating the issue in each critical area and developing potential solutions. The results of the study will be available in 2020.



TRUCK EMPTY BACKHAUL





Chapter 6

Scenario Planning

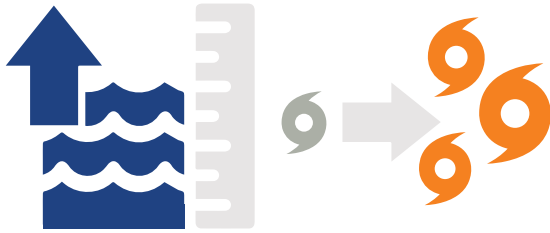
An aerial photograph of an airport tarmac. A large white UPS cargo plane is parked on the left, with its tail featuring the UPS logo. Various ground support equipment, including baggage carts and service vehicles, are scattered around the plane. In the background, there are airport buildings and a road. A large yellow 'X' is overlaid on the bottom right of the image, near a road intersection.

What's Inside

- Resiliency Scenario
- Technology Scenario
- Economy Scenario

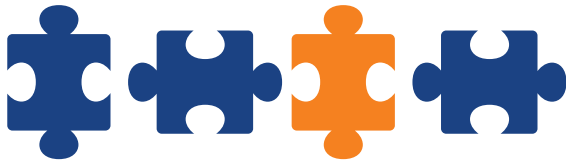
As the future becomes increasingly uncertain, scenario planning provides a framework to prepare for a wide-range of possibilities. Scenarios are narratives or sets of assumptions that explore plausible trajectories of change. They provide a means of visioning possible future changes and different policy and investment options. This chapter identifies three scenarios and lists steps the state could undertake to capitalize on opportunities and mitigate future challenges related to them. More detail can be found in Technical Memorandum 5.

2045 SCENARIO DEFINED



- Average temperatures in Florida have increased by 4 degrees Fahrenheit
- Sea levels have risen by more than 12 inches along most of Florida's coastline
- Coastal communities have had to reinforce and expand seawalls and bulkheads
- Hurricanes are stronger and more frequent
- Flooded roadways due to sea level rise and hurricanes have deteriorated roadway base layers and pavement
- Septic tanks have become a top environmental concern
- Extreme rainfall events (>4 inches/ event) have increased

FREIGHT IMPLICATIONS



- Florida's freight system is able to withstand extreme weather events and recover quickly
- Adequate redundancies have been built into supply chains to address disruptions and risks; hardened infrastructure has been built
- An interagency emergency preparedness plan has been developed and implemented to define roles of all stakeholders and operating procedures ensuring adequate social capital and optimum communication
- Freight operations rely more heavily on parallel corridors and freight bypass routes during emergencies

CASE STUDY: HILLSBOROUGH COUNTY MPO VULNERABILITY ASSESSMENT AND ADAPTATION PILOT PROJECT

On the Gulf-shore of Florida, critical transportation assets are particularly vulnerable to impacts from sea level rise and storm surge. Several critical roadway and railway links in the SIS network would be under water during a Category 3 storm surge with 2040 projected sea level rise. The Hillsborough County Metropolitan Planning Organization conducted a climate change vulnerability assessment in partnership with the FHWA in order to identify cost-effective strategies to mitigate and manage risks of coastal and inland inundation for incorporation into their general transportation decision-making processes in addition to informing the county's 2040 Long Range Transportation Plan and its Post Disaster Redevelopment Plan. The project examined several critical infrastructure assets in the region and evaluated the mobility and economic impacts of scenarios that would involve closing these facilities. One of the links evaluated in this project included a key evacuation route from adjacent Pinellas County to access the Gandy Bridge. Currently, a Category 1 (weakest storm in the five-level scale) storm surge would block this link for approximately one week while a Category 3 storm surge would require closure for approximately four weeks. The assessment returned a recommendation to spend approximately \$1.9 M on various adaptation strategies to allow the facility to continue operations compared to the \$3 M cost of facility replacement.

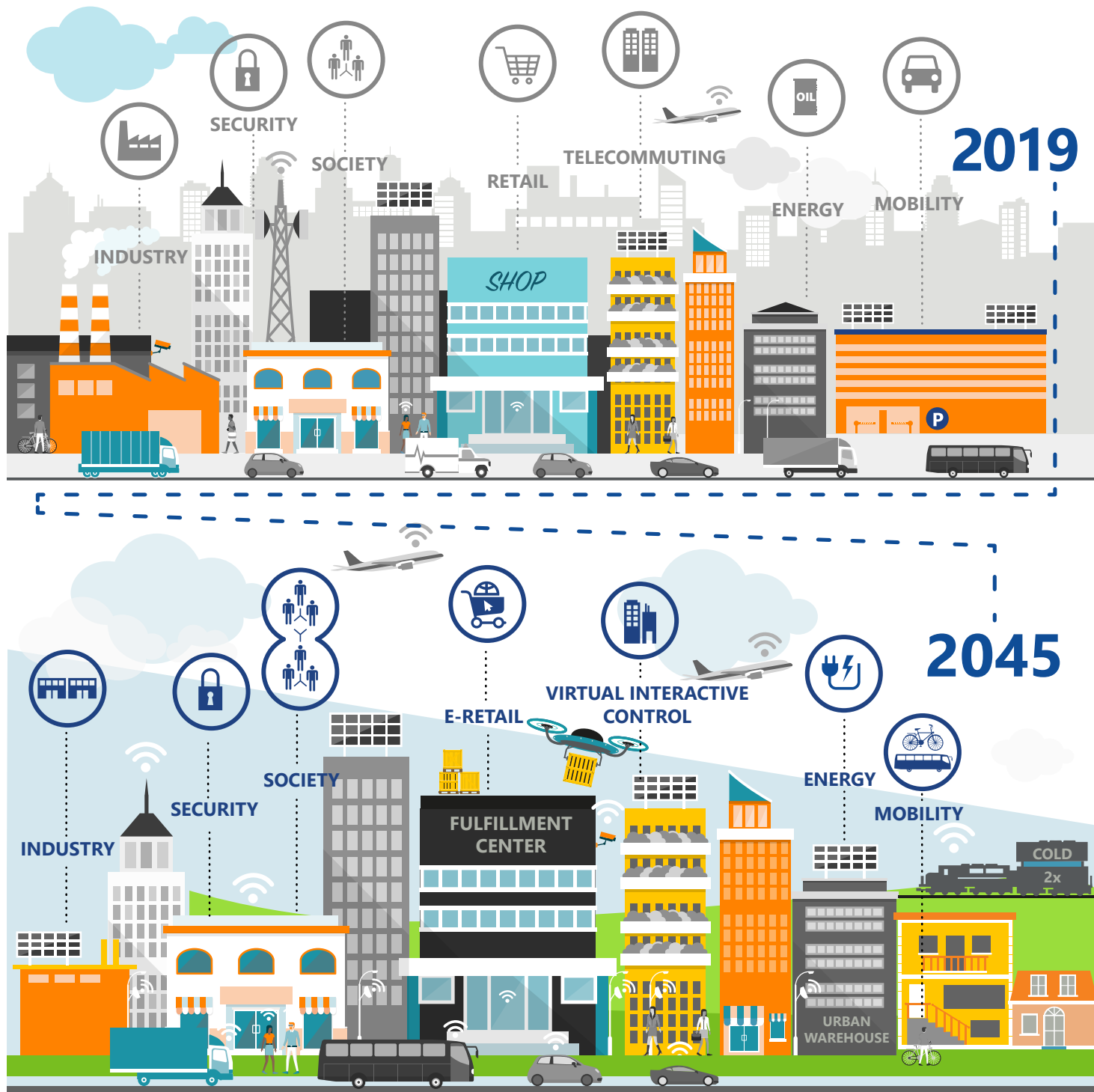
STRATEGIES FOR RESILIENCE



STRATEGY	EXAMPLES	STRATEGY	EXAMPLES
Conduct vulnerability and risk assessments	Conducting quantitative analysis of potential impacts of climate changes and other challenges during asset management process	Incorporate climate-related risks into the location of future transportation projects	Consider results of vulnerability and risk assessments in the planning, project development and design processes
Utilize mitigation measures in concert with adaptation to reduce climate risks	Coordinating land use and transportation infrastructure; supporting innovative technologies; promoting less carbon-intensive freight modes	Coordinate with utility providers for adaptation of infrastructure to ensure that they function during preparation and recovery efforts	Pipeline and other power transmission infrastructure is important to continued operation of intermodal hubs, bascule bridges, and adaptation infrastructure like pumps installed to improve roadway/railway drainage
Leverage logistics knowledge of transportation companies	Establish public-private cooperative agreements to engage major freight carriers to plan disaster mitigation, adaptation, and response strategies	Improve supply chain resiliency of critical commodities during weather events	Integrate the needs of supply chains into mitigation, response, recovery, and resilience planning and actions in order to improve supply chain resilience and ensure the availability of key goods and services (like fuel, power, water supply, etc.)
Evaluate damages caused and costs for repair and compare to other alternatives	Conduct a benefit-cost analysis of repairing or retreating from the infrastructure	Harden core protected network of critical links and nodes against disaster and flood risk	Flood catchment vaults; raise road/rail profile; salt-resistant drainage pumps; levees; raise causeways and stabilize buffer slopes; water plazas and vegetated flood catchment basins; redesign bridge elevations above highest storm surge forecasts; install seawalls; armor erosion-prone slopes; marsh restoration; wave attenuation devices (WADs); enhance roadway bases
Develop post-disaster evaluation framework for infrastructure performance during and after event	Require measurement and evaluation process of infrastructure performance in disaster recovery and incorporate that into planning and development of repairs or expansion of new facilities		
Plan and implement multimodal contingency plans for freight transport of emergency materials after disaster events	Using barges to transport emergency materials to areas inaccessible by other modes due to flooding or inundation events		

2045 SCENARIO DEFINED

In 2045, the digital infrastructure and societal behavior will have profound impacts for the freight industry across all modes. The Internet of Things (IoT) and mobile connectivity enable purchases and transactions, travel decisions, and work/life balances to be conducted more quickly, and frequently, than at any point in history. These decisions influence how individuals interact with society at a micro-temporal scale. App-based services such as retail purchasing platforms, Transportation Network Companies (TNCs) (i.e. UBER and LYFT), universal mobile fare payment options, on-demand pickup and delivery services, and urbanization contribute to how/when/why/where these transactions occur.



FREIGHT IMPLICATIONS



- Guarantees of one-hour delivery windows
- Locally focused fulfillment centers have resulted in more urban warehousing and value-added packaging facilities to satisfy on-demand consumers with a 95 percent delivery reliability
- Distribution centers are smaller and more automated
- On-demand pickup and delivery services (ODPDS) are the preferred transactional option which has reduced the amount of traditional retail locations
- Just-in-Time inventory management and 3D printing capabilities have enabled micro-local production facilities, which results in the transportation of more raw commodities over the road and through ports
- Many last-mile delivery services rely on Highly Automated Trucks (HATs) which operate nearly non-stop
- Diminishing availability of fossil fuels and cost savings have resulted in mass adoption of electric vehicles

PREPARING FOR AN INNOVATIVE FUTURE

TRANSPORTATION IMPACTS

POTENTIAL ACTIONS NEEDED

Dedicated lanes/facilities for trucks

Signage
Striping (for CAVs)
Policy

More frequent last-mile delivery vehicles

Enhanced curb-side management strategies

Highly Automated Vehicles create the need for CAV-Ready infrastructure

Pavement markings, signage, traffic signal contrast, etc. for effective machine-vision recognition of roadways in all conditions
C-V2X RSUs and adequate signal controllers, and supporting backhaul communications (fiber optic cabling, wireless radios, etc.) to enable the exchange of safety critical Basic Safety Messages (BSMs) for Infrastructure-to-Vehicle (I2V) applications
More frequent inventory of roadway characteristics for asset monitoring and maintenance
HD mapping to support Highly Automated Vehicles and locational reference markers (to supplement GPS accuracy)

Widespread use of Highly Automated Vehicles results in reduced demand for truck parking locations, as automated trucks do not meet FMCSA HOS requirements

Re-purposing stranded assets in the future should be a consideration in the planning process

More, smaller production facilities located closer to urbanized areas

Increase in SIS Highway Connectors
May need to consider lower functionally classified roadways for SIS eligibility

Urban warehouses to support on-demand delivery services

Curbside management strategies

Drone delivery

Service providers may opt to implement use of drones in lieu of paying roadway user fees

2045 SCENARIO DEFINED

State decision makers have charted an elevated growth trajectory for sustainably enhanced prosperity of Floridians for generations to come.

*A larger and more productive labor force/
human capital*

*Greater technological
progress/innovation*

*Increased physical capital
stock*

*More growth-supportive
institutional arrangements*

FREIGHT IMPLICATIONS

- Florida has positioned itself to be a major pass-through and value-added logistics hub
- It has increased overall exports globally and to other states
- Freight bottlenecks have been reduced
- On-demand pickup and delivery services (ODPDS) are the preferred transactional option which has reduced the amount of traditional retail locations
- There is an increased stock of physical capital that supports freight movement, with well-integrated multimodal/intermodal connections
- Florida created high-wage jobs by growing manufacturing, exports and trade and logistics

INVESTMENT STRATEGIES FOR ENHANCED PRODUCTIVITY



HUMAN CAPITAL

including education at all levels from K through graduate school, and retraining the labor force for the advanced production processes of the 21st century globalizing knowledge economy.

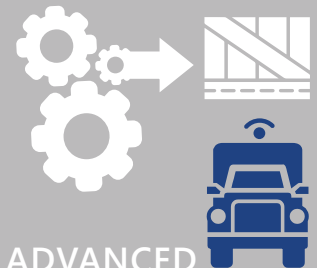


INNOVATIVE TECHNOLOGIES

through fostering research and development, particularly as it pertains to the industry clusters of opportunity (Florida Chamber Foundation, 2017), including: Aerospace and Aviation, Life Sciences, and Tourism where Florida has been in the leadership position, and can further boost its advantages to spill into the larger freight and overall future economic activity.



**PHYSICAL
CAPITAL**
in the form of
expanded and
enhanced
infrastructure.

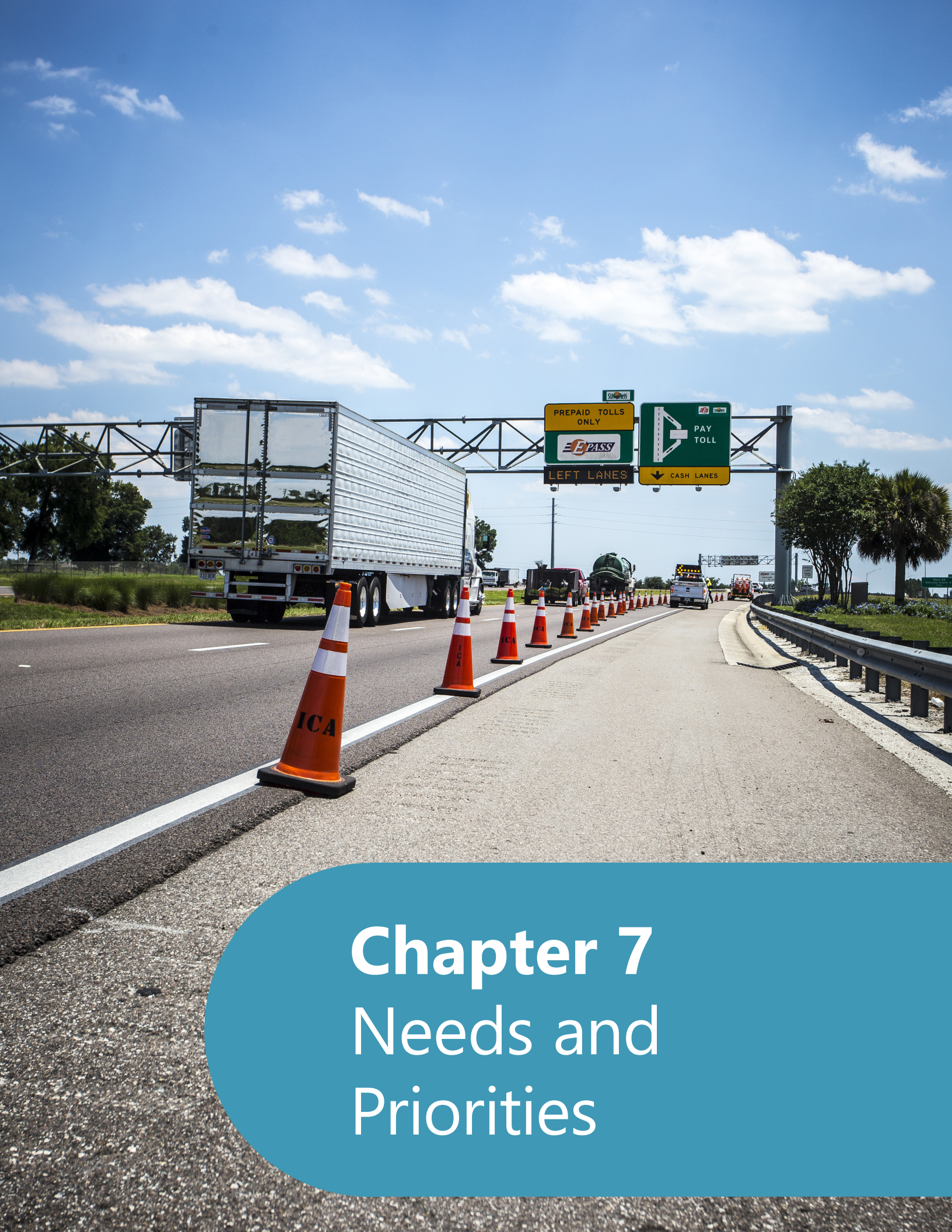


ADVANCED MANUFACTURING AND EXPORT DEVELOPMENT

by leveraging and capitalizing on Florida's strengths as an advanced manufacturing center and global gateway.

**INSTITUTIONAL
ARRANGEMENTS**
to promote dynamic,
competitive forces to
elevate economic growth.






Chapter 7

Needs and Priorities

What's Inside

- Identification of Needs and Project Prioritization Process
- FMO Project Screening Policy
- Project Evaluation Framework



This chapter identifies the immediate and long-range freight needs of the state and establishes a prioritization process for FMO's decision-making – ensuring the right projects are advanced for the right reasons at the right time for the right purpose. More information on project prioritization and selection can be found in Technical Memorandum 6.

IDENTIFICATION OF NEEDS AND PROJECT PRIORITIZATION PROCESS

The process for identifying, prioritizing, and programming freight projects adheres to two guiding principles: it must be objective, consistent, data-driven, and transparent to all involved in the process; and it needs to have flexibility to align with diverse freight system needs. These guiding principles are the core of the three-step process informing the project identification and prioritization methodology. This allows FMO and other modal offices to retain control and responsibility to determine how and when to program and implement specific freight projects and respective modal projects. As such, the overall process is designed to be repeatable and living, so that the priorities reflect the changing industry needs, both short- and long-term.

STEP

IDENTIFICATION OF PROJECTS

1

The process begins with a call for freight projects by FMO. This request is disseminated to the FDOT Districts, MPOs, local jurisdictions, the FLFAC, and all freight stakeholders. FMO also conducts statewide data-driven analysis of issues and needs to identify projects. A Tier 3 Needs List is compiled based on statewide analysis and input from all parties involved.

STEP

PROJECT CLASSIFICATION AND FUNDING ELIGIBILITY SCREENING

2

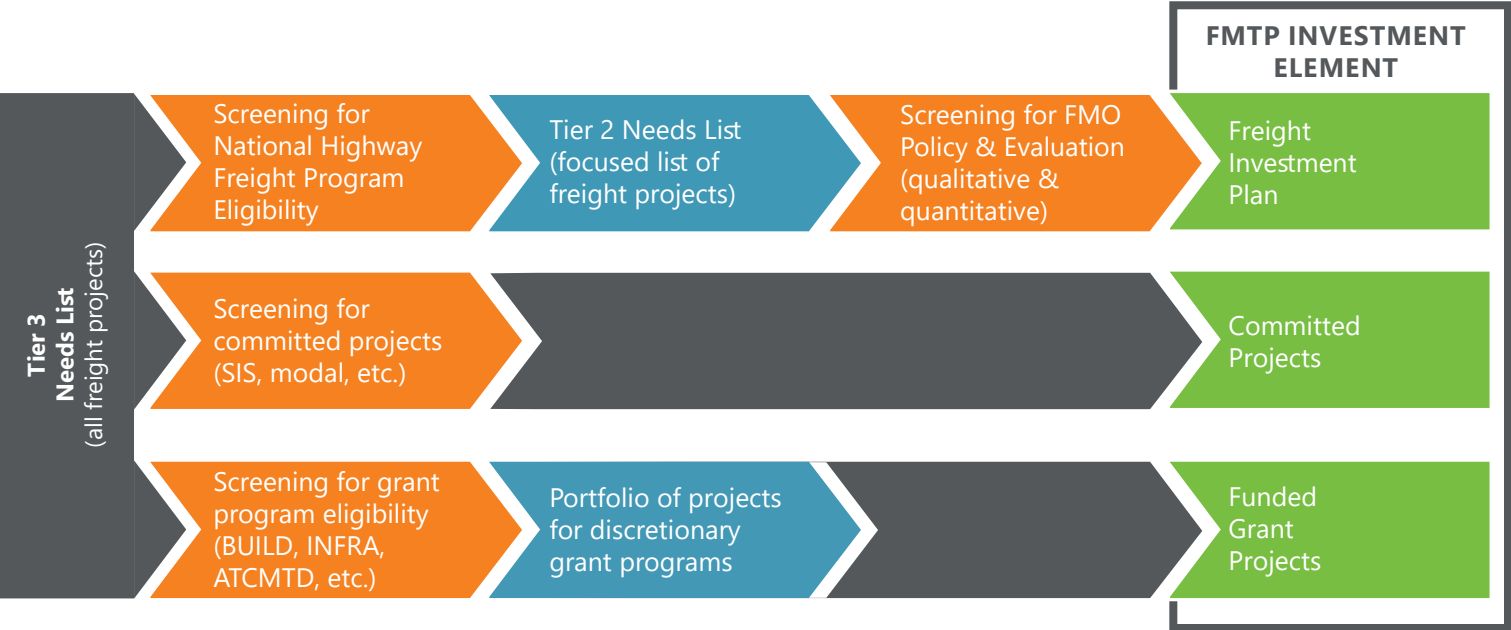
FMO screens the Tier 3 Needs List and advances committed projects to the Investment Plan. Additionally, projects which show significant potential as a federal discretionary grant contender are grouped in a portfolio and advanced to the Investment Plan as they are funded. Remaining projects are screened for National Highway Freight Program funding eligibility, resulting in a Tier 2 Needs List.

STEP

QUALITATIVE AND QUANTITATIVE EVALUATION

3

The Tier 2 Needs List is further screened using an FMO policy framework and evaluated/scored both quantitatively and qualitatively. The projects are subsequently categorized in high, medium and low priority groups based on total project score. Finally, the priority projects are overlaid with funding matrices for selection and programming.



FMO PROJECT SCREENING POLICY

FMO project screening policy reflects the types of projects the Department would like to consider for NHFP funding. In addition to meeting the NHFP eligibility requirements, a project must meet the FMO policies before it can be considered for NHFP funding.

ELIGIBLE PROJECT TYPES



In addition, the FMO screening policy also includes the following:

- NHFP fund allocation should not exceed more than \$20 million per project per year;
- Projects must be ready to implement within 36 months;
- Projects must be completed within 6 years; and
- Clearly identify the need(s) and develop a freight business case to justify project selection.

PROJECT EVALUATION FRAMEWORK

The following project evaluation framework shows how the prioritization process uses the FMTP's performance measures and FLFAC input to arrive at a project score. After each project is given a quantitative score and a qualitative score corresponding to each objective, a weighted average score is computed. The weights are determined by the FLFAC.

FTP GOAL	FMTP OBJECTIVE	QUANTITATIVE EVALUATION		QUALITATIVE EVALUATION		WEIGHT
		CRITERIA	SCORE RANGE	CRITERIA	SCORE RANGE	
Safety and security for residents, visitors, and businesses	Leverage multisource data and technology to improve freight system safety and security	(Truck Injuries/Truck VMT)*1000	0-100	Does this project implement safety or security enhancements?	0-100	25%
		(Truck Fatalities/Truck VMT)*1000		Does this project improve the state’s data gathering efforts?		
		Crime Index				
Agile, resilient, and quality transportation infrastructure	Create a more resilient multimodal freight system	Roadways within 100 year flood zones	0-100	Does this project address the environmental or economic resiliency of the freight system?	0-100	15%
	Ensure the Florida freight system is in a state of good repair	Presence of structurally deficient bridges		Does this project optimize the functionality and efficiency of existing roadways?		
		Presence of poor pavement condition segments		Does this project preserve the existing State Highway System?		
Connected, efficient, and reliable mobility for people and freight	Drive innovation to reduce congestion, bottlenecks and improve travel time reliability	Roadways with top bottlenecks	0-100	Does this project address Truck Parking?	0-100	25%
		Truck AADT		Does this project create a grade separation?		
Transportation choices that improve accessibility and equity	Remove institutional, policy and funding bottlenecks to improve operational efficiencies and reduce costs in supply chains	Not Applicable	0-100	Is this a technology driven or TSM&O project?	0-100	20%
	Improve last mile connectivity for all freight modes	Vicinity to Hubs		Does this project improve multimodal freight connectivity?		
		Roadways within freight intensive areas				
Transportation solutions that strengthen Florida’s economy	Continue to forge partnerships between the public and private sectors to improve trade and logistics	Not Applicable	0-100	Does this project use Public/Private Partnerships?	0-100	10%
	Capitalize on emerging freight trends to promote economic development	Labor Force Size (ratio of labor force by county population relative to average state-wide ratio)		Does this project capitalize on emerging freight trends?		
		County GRP level (relative to the average county GRP level in FL)				
		Transportation and Warehousing Industry Share of Total Employment				
		County Population Density (relative to the average county-level population density in FL)				
	Increase freight-related regional and local transportation planning and land use coordination**	Not Applicable		Is this project on the MPOAC freight project list?		
Transportation solutions that protect Florida’s environment	Promote and support the shift to alternatively fueled freight vehicles	On designated Alternative Fuel Corridors	0-100	Does this project promote the use of LNG/CNG/electric vehicles?	0-100	5%
		Number of alternative fueling stations within 1 mile of roadway				

*The score for each criteria will be revised every year to reflect current priorities

**Objectives 5, 7 and 9 were evaluated qualitatively only



Chapter 8

Investments

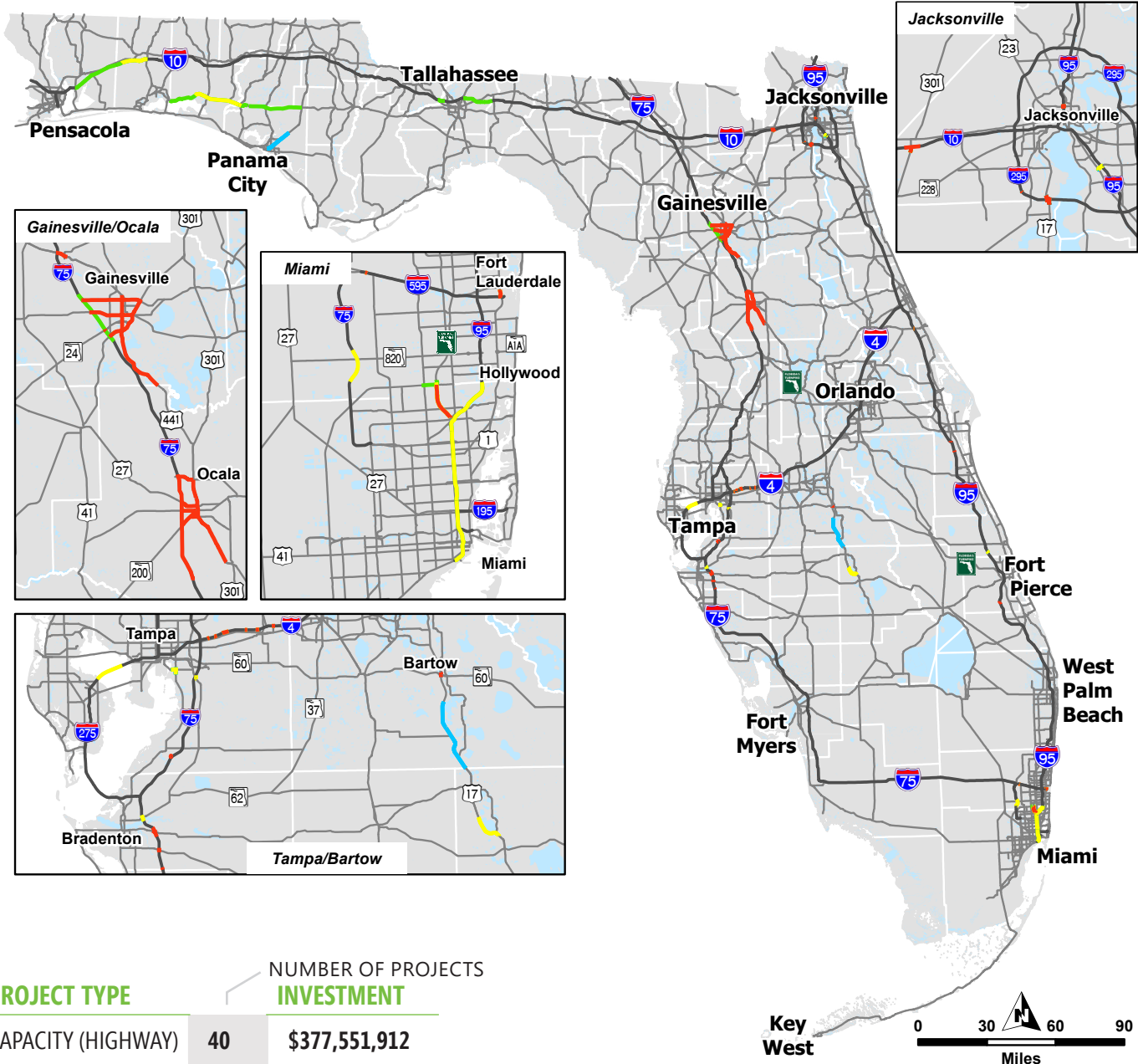
What's Inside

- National Highway Freight Program Funded Projects
- Freight Funding in the Adopted Work Program
- SIS Funded Freight Projects
- Discretionary Grant Funded Freight Projects

The FMTP establishes a 5-year financially constrained Freight Investment Plan inclusive of all funded freight projects with the state. Projects identified as longer term needs will be advanced into this plan as funding is identified and committed. More information can be found in Technical Memorandum 7.

NATIONAL HIGHWAY FREIGHT PROGRAM FUNDED PROJECTS

There are 59 NHFP projects which were selected based on their priority, cost, and ability to improve freight mobility. The total cost of NHFP anticipated projects is \$492 million through 2024. Of the 59 projects, most are capacity and maintenance projects. In addition, there are three technology systems related to adaptive monitoring and signaling ITS systems, and one truck parking project. Florida is historically apportioned \$50-\$60 million per year in NHFP funds. Years that have more than \$60M in anticipated funding include projects originally funded in earlier years that have been deferred to later years.



PROJECT TYPE	NUMBER OF PROJECTS INVESTMENT	
CAPACITY (HIGHWAY)	40	\$377,551,912
ITS	3	\$14,183,578
PRE-PLANNING	15	\$85,327,302
TRUCK PARKING	1	\$15,420,479

NHFP Funded Projects

- Construction & Mega Projects (CON)
- Right of Way (ROW)
- Preliminary Engineering (PE)
- Project Development and Environmental (PDE)

Source: FDOT, 2016-19

NHFP YEARLY TOTALS

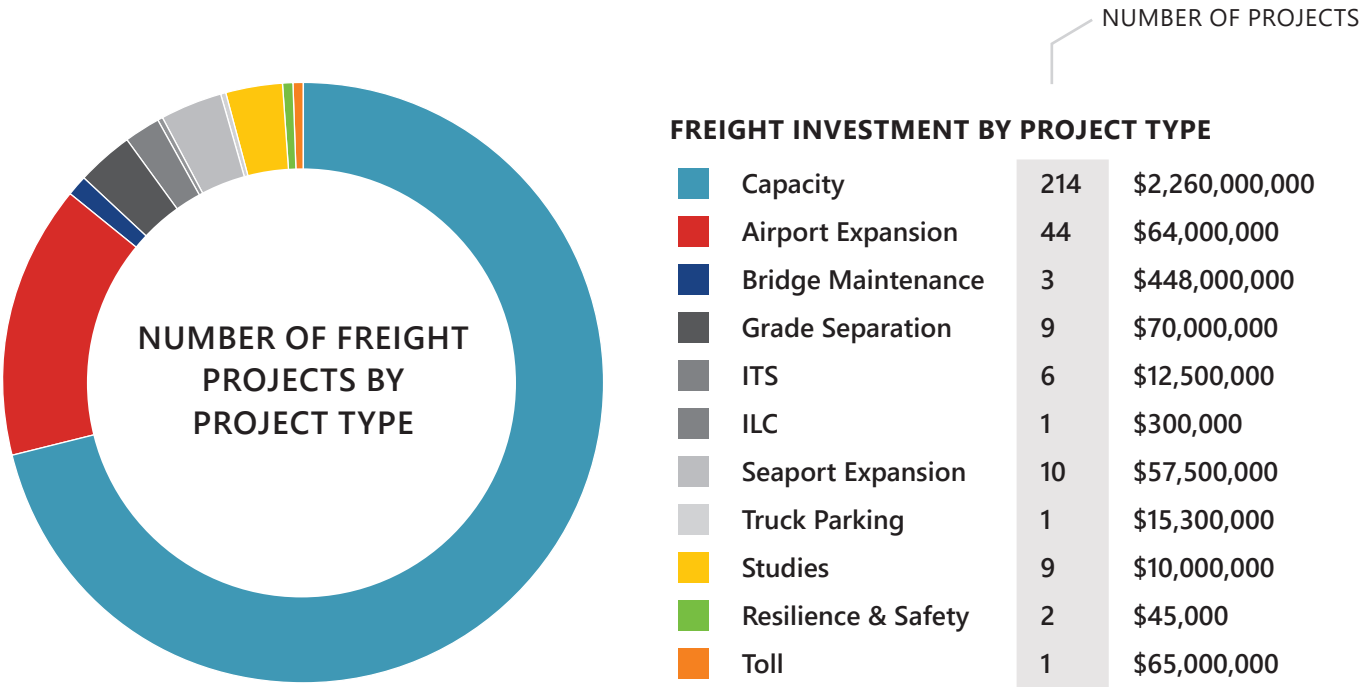
Rounded to the nearest million

161M	89M	44M	67M	66M	66M	492M
2016 - 2019	2020	2021	2022	2023	2024	TOTAL

FREIGHT FUNDING IN THE ADOPTED WORK PROGRAM

FDOT develops a Five-Year Work Program in accordance with Section 339.135 Florida Statutes. This reflects a program of over \$62 billion over a 5-year period (2020 – 2024). FDOT Adopted Work Program (AWP) information is available online at: <https://fdotewp1.dot.state.fl.us/fmsupportapps/workprogram/WorkProgram.aspx>

Within the AWP, there is a set of freight-focused projects that is critical to the FMTP objectives. Totalling just over \$3 billion for the next 5 years, these 300 projects are designated with the group identifier FRGT (freight) in the AWP. The FRGT designation marks projects supporting freight objectives as established by FMO. Utilizing multiple funding sources, these projects have wide ranging implications on the Florida freight network.



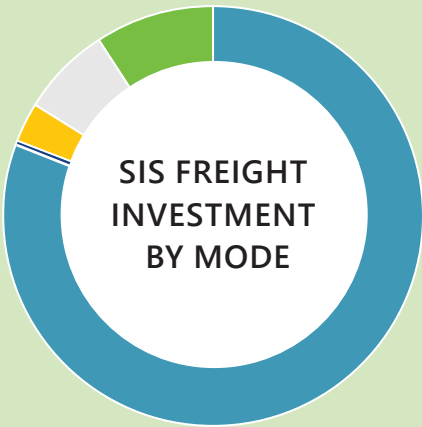
Source: FDOT Office of Work Program and Budget, 2019

AWP FRGT IDENTIFIED PROJECT YEARLY TOTALS					
1.2B	697.4M	431.1M	372.6M	281.0M	3.0B
2020	2021	2022	2023	2024	TOTAL



SIS FUNDED FREIGHT PROJECTS

The Strategic Intermodal System (SIS) Funding Strategy includes three components that identify capacity improvement projects in various stages of development (SIS First Five, SIS Second Five, and SIS Cost Feasible Plan). The combined funding set identifies projects that are funded (Year 1), programmed for proposed funding (Years 2 through 5), planned to be funded (Years 6 through 10), and considered financially feasible based on projected state revenues (Years 11 through 25).



SIS FIRST FIVE YEAR PLAN

The First Five Plan illustrates projects on the SIS that are funded by the legislature in the Work Program (Year 1) and projects that are programmed for proposed funding in the next 2 to 5 years. The SIS freight investments through 2024 are broken out in the pie chart below.

SIS SECOND FIVE YEAR PLAN

The Second Five Year Plan illustrates projects that are planned to be funded in the five years (Years 6 through 10) beyond the SIS First Five. Projects in this plan can move forward into the First Five Year plan as funds become available.

SIS COST FEASIBLE PLAN (CFP)

The 2045 SIS CFP evaluates SIS needs in light of available future revenues and represents a phased plan for capacity improvements utilizing forecasted revenues. The main purpose of the 2045 SIS CFP is to efficiently plan for and fund future capacity improvements and comply with the Section 339.64, Florida Statutes requirement for a long range cost feasible plan.

All of the above SIS plans can be found at the following link:
<https://www.fdot.gov/planning/systems/programs/mspi/plans/default.shtm>

THE SIS CONNECTION

SIS plans are an important tool for FDOT in meeting immediate and long-term freight needs. The SIS network overlaps with the National Highway Freight Network and the SIS objectives align with FMTP objectives. It is imperative that the FMO Office continues to work with the Systems Implementation Office to identify prudent investments and funding strategies.

NUMBER OF PROJECTS

SIS FREIGHT INVESTMENTS BY MODE		
Highway	145	\$6,118,136,000
Air & Space	17	\$701,929,000
Rail	18	\$231,000,000
Sea	14	\$545,811,000
Multimodal	1	\$511,000

Source: FDOT Systems Implementation Office, 2019


SIS FIRST FIVE YEAR FUNDING TOTALS

2.4B	1.10BM	984M	1.7B	1.2B	7.5B
2020	2021	2022	2023	2024	TOTAL

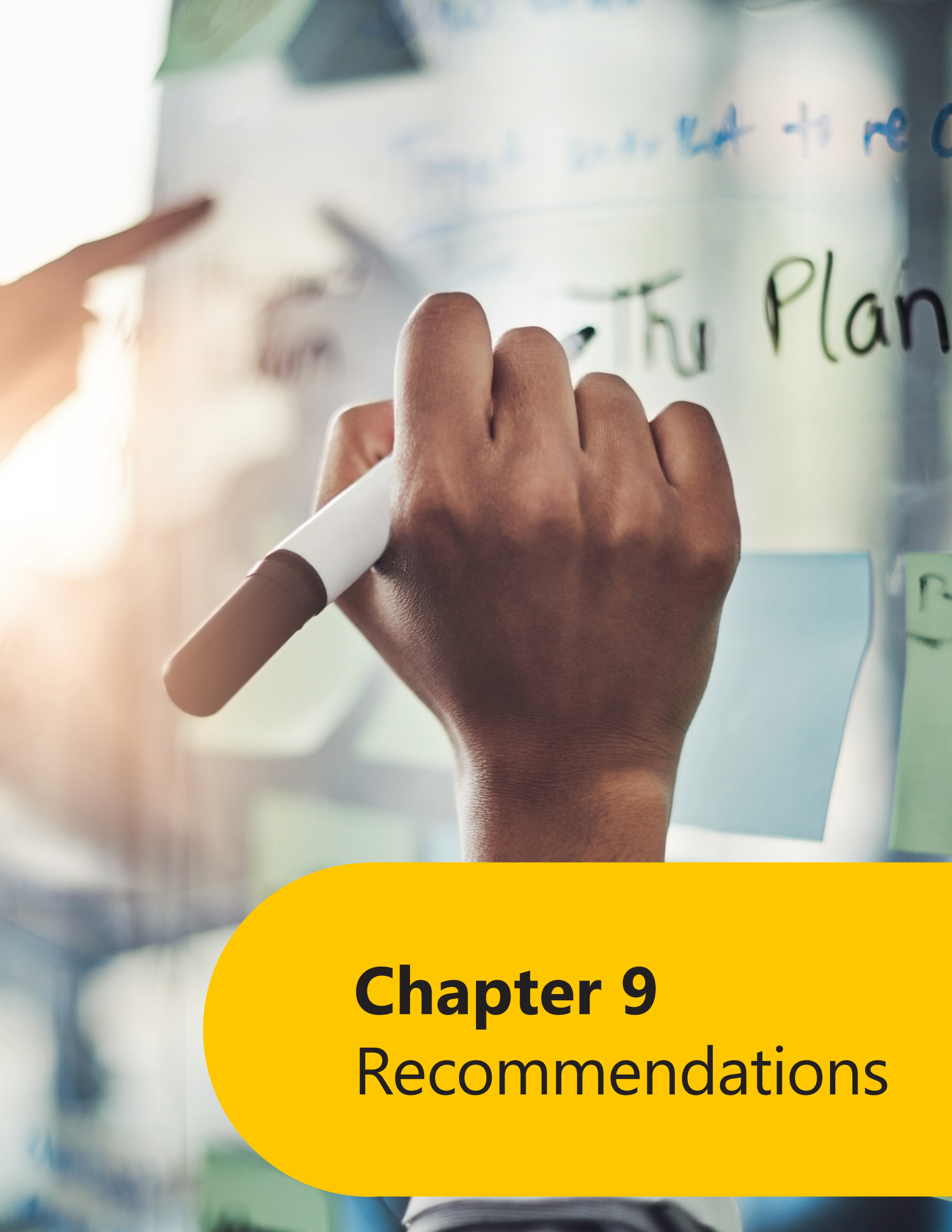


DISCRETIONARY GRANT FUNDED FREIGHT PROJECTS

Discretionary grant opportunities are competitive and must be pursued after the notice of funding opportunity (NOFO) is released by the parent agency. The following projects represent efforts to affect FMO's strategic goals through the use of targeted grant funding. These awards were granted between 2015 and 2020. FDOT and partner agencies are utilizing these funds to accomplish mutual goals. These funds may be sought after by any agency or stakeholder pursuant to grant guidelines.

GRANT	PROJECT 	GRANT AWARD 
INFRA/ FASTLANE	<ul style="list-style-type: none"> Cape Canaveral Spaceport Indian River Bridge Replacement Port Miami Bulkhead Rehabilitation and Capacity Expansion Truck Parking Availability System (TPAS) 	\$90,000,000 \$8,046,741 \$10,778,237
ATCMTD	<ul style="list-style-type: none"> Connecting the East Orlando Communities 	\$11,946,279
CRISI	<ul style="list-style-type: none"> South Florida East Coast Rail Corridor Intrusion Prevention Project Amtrak Sanford Subdivision Infrastructure Renewal Project Florida Strategies for Reducing Railway Trespassing Mitigating Jacksonville's Freight Train-Vehicle/Pedestrian Conflicts 	\$2,373,441 \$3,850,000 \$157,683 \$17,615,500
TIGER/BUILD	<ul style="list-style-type: none"> Port Manatee Marine Highway Port of Miami Rail Access Dames Point Marine Terminal Intermodal Tampa Downtown Multimodal improvement JAXPORT International Cargo Terminal Modernization Project The Underline Multimodal Mobility Corridor Immokalee Complete Streets Broward MPO Regional Complete Streets Initiative 	\$9,000,000 \$22,767,000 \$10,000,000 \$10,943,100 \$20,000,000 \$22,360,352 \$13,132,691 \$11,443,371
FRA PTC Grant	<ul style="list-style-type: none"> FDOT I-ETMS PTC System from DeLand to Poinciana 	\$14,914,238
MARAD	<ul style="list-style-type: none"> M-95 Fernandina Beach to Charleston Barge Service Miami, FL –Glasstech, Corp. for 65-Ton Vessel Transporter 	TBA \$715,688
AIP	<ul style="list-style-type: none"> Significant Airport Improvement Programs across Florida –FAA 	\$203,472,903
PHMSA TAG	<ul style="list-style-type: none"> Pipeline Technical Assistance Grant –East Florida Regional Planning Council Pipeline Safety Training 	\$78,000
CMVOST	<ul style="list-style-type: none"> Commercial Vehicle Operator Safety Training Grant Program – South Florida State College 	\$16,124
HP-ITD	<ul style="list-style-type: none"> High Priority Innovative Technology Deployment –Florida 	\$475,375
AID	<ul style="list-style-type: none"> Accelerated Innovation Deployment–Commercial Vehicle Parking System Project I-95 & I-4 	\$1,000,000

Note: This table does not reflect ALL active discretionary grant projects, but is a sample of freight-focused projects.



Chapter 9

Recommendations

What's Inside

- Recommendations



Recommendations for action are aligned with the FMTP objectives. Five recommendations have been developed for each FMTP objective based on technical analysis results, capturing stakeholder input, and considering emerging market trends and opportunities. More information can be found in Technical Memorandum 8.

OBJECTIVE RECOMMENDATIONS:

1	• Identify commercial vehicle high crash segments and intersections, analyze causal factors, and develop counter measures	●		●
	• Provide more safe and secure truck parking facilities		●	●
	• Identify and implement freight related automated and connected vehicle projects to improve safety and mobility	●	●	●
	• Prioritize rail-highway grade separation needs and implement select projects depending on funding availability	●		
	• Partner with freight related industries to support development of electronic freight management systems that enhance freight flow visibility throughout the entire supply chain, expedite communication among supply chain partners and government agencies, and enhance system security		●	●
2	• Analyze and assess resiliency of the freight system	●		
	• Conduct vulnerability and risk assessments to identify possible freight system disruptions and establish risk tolerance thresholds	●		
	• Develop a contingency plan to support private sector freight mobility continuance of operations and to support disaster relief logistics operations		●	
	• Ensure supply chain resiliency of critical commodities (like fuel) considering all four phases of emergency management (prepare, respond, recover, and mitigate)	●	●	
	• Include resiliency considerations into project life-cycle and decision making processes		●	
3	• Consider data-driven asset management approach to guide multimodal freight investments	●		●
	• Optimize the functionality, efficiency, and reliability of existing freight systems		●	
	• Preserve and maintain the existing State Highway System		●	
	• Maximize use of existing and unused facilities and properties for truck parking		●	●
	• Apportion dedicated funding for truck parking projects either through legislative request or by leveraging NHFP funds		●	●
4	• Promote and support use of ITS and CAV technologies to increase efficiency and reliability of freight movements		●	●
	• Identify and implement low-cost, operational improvements on the freight system in coordination with the SIS Quick Fix program	●	●	
	• Identify feasibility of truck-only lane projects from a statewide perspective	●	●	●
	• Enhance Truck Parking Availability System (TPAS) commensurate with trucking needs			●
	• Clear legislative and funding pathways for automated systems		●	●
5	• Establish Truck Parking Program similar to Rest Area Program and Park and Ride Program		●	●
	• Advocate for regulatory reform to increase freight funding and to reduce impediments to goods movement		●	
	• Enhance and institutionalize the freight network designation process and the freight project prioritization and selection process	●	●	
	• Develop strategies for maximizing discretionary grant opportunities focusing on identifying "competitive" projects and developing a federal grants portfolio	●	●	
	• Optimize statewide freight network to understand opportunities to reduce freight costs and increase productivity	●	●	●

OBJECTIVE RECOMMENDATIONS:

6	• Identify and implement freight movement gap-closing improvements	●		
	• Improve the convenience and efficiency of connecting between multiple freight modes	●	●	
	• Consider emerging last mile logistics trends in planning, project development and design processes	●		●
	• Incorporate innovative curb management strategies into freight design considerations in order to decrease curbside congestion and ensure safety of all road users	●	●	●
	• Improve off-system connections between local freight hot spots and the Strategic Intermodal System in coordination with local government partners		●	
7	• Collaborate with public and private sector partners to address freight transportation and logistics needs and workforce development		●	
	• Communicate and collaborate with other agencies and stakeholders to establish a state freight mobility task force to effectively and successfully implement the FMTP policy and program recommendations		●	
	• Explore public private partnership (P3) opportunities related to truck parking and truck stop electrification		●	●
	• Collaborate with adjacent states to facilitate seamless multistate freight corridors		●	
	• Ensure strategic representation of Florida at the national level to help shape Federal decisions on trade and logistics		●	●
8	• Support the strategic advantages of Florida's transportation hubs for trade and logistics	●	●	
	• Support projects that improve the efficiency of goods movement throughout the state		●	
	• Consider freight needs in the development of multimodal and multi-use corridors	●	●	●
	• Prepare the freight system for smart cities and emerging urban freight delivery patterns	●		●
	• Leverage global economic trends to support the growth of jobs in trade, transportation, logistics, export-oriented manufacturing, and related value-added services	●	●	●
9	• Provide transportation and land use planning guidance to local and regional agencies for economic development and freight efficiencies that support community goals		●	
	• Coordinate freight-related plans and programs of the private sector and local agencies with FDOT's plans for integrated and informed decision-making		●	
	• Utilize truck empty backhaul patterns to identify target areas for attracting and expanding manufacturing, distribution, and other industries that generate and export goods and products out of Florida	●		●
	• Understand unique needs of rural freight transportation and develop/enhance process to designate CRFC	●	●	
	• Understand unique needs of urban freight transportation and develop/enhance process to designate CUFC	●	●	
10	• Support the adoption and transformation of CNG/LNG and electric power use for trucking		●	●
	• Participate in the FHWA Alternative Fuel Corridor Program – develop a statewide application including key freight corridors in coordination with MPOs and local government partners		●	●
	• Support development of natural gas and other alternative fuel infrastructure at seaports and intermodal logistics centers, and along major trade corridors	●		●
	• Collaborate with the Florida Department of Agriculture and Consumer Services Office of Energy (FDACS OOE) on developing Electric Vehicle (EV) Roadmap for freight corridors	●	●	●
	• Evaluate the impacts of alternatively fueled vehicles on funding programs and develop innovative funding strategies	●	●	●




Chapter 10

Implementation



What's Inside

- Policy Implementation
- Program Implementation
- Project Implementation
- Collaboration and Coordination



Recommendations are wishes without a pathway to implementation. FMTP recommendations are an integrated group of policies, programs and projects designed to improve freight mobility, efficiency, reliability and foster economic development. This implementation plan includes a timeline based on short-term (less than 2 years), medium-term (3-5 years), long-term (5+ years) and continuous horizons. It also includes continued collaboration with FDOT offices and partner agencies. More information can be found in Technical Memorandum 9.

POLICY IMPLEMENTATION

The implementation of freight policies sets conditions for improving Florida's freight system. A policy recommendation requires legislative action and/or organizational changes. Short-term implementation actions are meant to be initial steps that will facilitate the implementation of medium- and long-term policy initiatives. To ensure the success of Florida's freight system, continuous policy implementation is required to maintain an efficient regulatory environment. The graphic below highlights the strategic horizons of FMO's policy direction.

SHORT-TERM POLICY IMPLEMENTATION



- Establish a Florida inter-agency freight mobility task force
- Define FDOT's role in advancing freight technology and merging freight data space
- Invest in technological solutions that increase efficiency and throughput
- Develop policy to designate CRFC and CUFC following federal guidelines and accommodating changing needs
- Work with the Systems Implementation Office to designate freight activity areas and freight access facilities for SIS funding eligibility
- Establish policy to define truck parking facility (as opposed to rest areas) and FDOT's role
- Update FDOT SIS and other intermodal capacity improvement programs to include truck parking
- Update rest area formula to adequately account for truck parking needs

MEDIUM-TERM POLICY IMPLEMENTATION



- Provide incentives for private truck stop operators and communities to develop and expand truck stop services and parking capacity
- Establish freight performance targets consistent with the FHWA Transportation Performance Management requirements, in coordination with the MPO partners
- Develop a State Multimodal Freight Policy that is consistent with National Multimodal Freight Policy and meets the unique needs of Florida

LONG-TERM POLICY IMPLEMENTATION



- Consider third party vendor-operations at public rest areas
- Establish a grant program with DEO to provide truck stop owners incentives to increase truck parking in areas of high need
- Develop strategies to mitigate the effects of freight transportation on communities, particularly minority and low-income communities, and the environment

CONTINUOUS POLICY IMPLEMENTATION



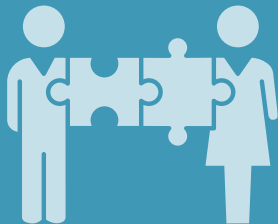
- Establish a continuous and inclusive public engagement policy to elevate FDOT freight awareness
- Provide freight planning guidance and assistance to MPOs and local government partners
- Identify and work to unbind policies that pose undue restrictions on technological improvements
- Improve communication with other Offices and Districts to facilitate understanding of policies

PROGRAM IMPLEMENTATION

The institution of programs creates the structure by which FDOT maintains and enhances the state freight system. Programs are designed to improve internal processes, enhance stakeholder outreach and education, establish and strengthen public-private partnerships, develop network design guidelines and standards, and increase freight planning knowledge and awareness. The graphic below highlights the strategic horizons of FMO's programmatic direction.

SHORT-TERM PROGRAM IMPLEMENTATION

- Enhance freight network designation process and implement freight project prioritization process during next funding cycle
- Develop a statewide truck parking program to address immediate needs and monitor progress over time
- Develop process for identifying and preparing projects for discretionary funding
- Develop a quarterly FMO newsletter to disseminate industry information and highlight program accomplishments



MEDIUM-TERM PROGRAM IMPLEMENTATION

- Collaborate and support an awareness program with other agencies to educate Florida's workforce about careers in the freight transportation and logistics industry
- Develop a Florida freight resilience program
- Develop a truck parking program, in partnership with the private sector and local agencies, to identify locations and solutions to increase truck parking capacity



LONG-TERM PROGRAM IMPLEMENTATION

- Support the development of freight infrastructure design criteria that promotes efficient and safe freight movement in urban areas
- Collaborate with the private sector and freight modal carriers to set conditions that will allow CAV and other technologies to be implemented
- Support private sector operational strategies to improve efficiencies and lower transportation costs, i.e. off-hour delivery, alternative fuels, truck route information, modal transload facilities, etc.



CONTINUOUS PROGRAM IMPLEMENTATION

- Continue to work with FDLE to improve freight safety and security
- Continue to monitor structurally deficient bridges and pavement conditions
- Continue to invest in maintenance of freight facilities



PROJECT IMPLEMENTATION

Projects are planned actions to provide a new transportation facility or to improve or maintain the existing system. Projects are categorized in several ways: purpose, type, size, etc. The table below shows a set of example project types based on the freight issues facing the state.

PROJECT EXAMPLES

Issue / Focus	Solution	Type	Size	Time Frame
Bottleneck	Efficiency and fluidity	Operational, ITS/CAV	Small	Near-term (1-2 yrs)
Truck parking	Capacity, information	Reconfigure & repurpose, IT	Small	Near-term (1-2 yrs)
Unsafe conditions	Safety	Engineering, enforcement, education, and emergency response	Medium	Mid-term (3-5 yrs)
Connectivity	Last-mile connector	Capacity and operations	Small to Medium	Mid-term (3-5 yrs)
Congestion	Reliability	New capacity	Large	Long-term (5+ yrs)
Resilience	Reliability, durability	Rehabilitation	Medium to Large	Mid-term to Long-term
Economic development	Efficiency, productivity	Any	Medium to Large	Mid-term to Long-term
Environmental	Quality of life	Any	Medium to Large	Mid-term to Long-term




COLLABORATION AND COORDINATION

Collaboration and coordination, both internal and external, are necessary to implement policies, programs, and projects. Many of the needed actions are beyond the immediate purview of the FMO and will require partnerships with other FDOT offices, other state and federal agencies, MPOs, local governments, and stakeholders. A strong partnership is necessary to effectively implement the FMTP recommendations. The tables below show example collaboration topic areas with other FDOT offices, partner agencies and stakeholders.

FDOT OFFICE	TOPIC	FDOT OFFICE	TOPIC
Aviation and Spaceports	Program and projects	Systems Implementation	SIS funding
Communications	Outreach	Research Center	Research projects
Design	Multimodal freight design	Safety	Truck traffic safety
Emergency Management	Resiliency	Seaport and Waterways	Programs and projects
Environmental Management	Environmental considerations	Traffic Engineering and Operations	TSM&O, CAV
Finance and Administration	Work program	Transportation Data and Analytics	Data needs
Maintenance	Truck parking and pavement conditions	Transportation Technology	Operational technologies
Forecasting and Trends	Performance measures	Legislative Programs	Legislative actions
Policy Planning	Policy issues	Districts	Implementation

AGENCY	TOPIC
Executive Office of Governor	<ul style="list-style-type: none"> Economic development Inter-agency collaboration framework
Florida Dept. of Transportation	<ul style="list-style-type: none"> Safety Economic development Freight mobility Intermodal connectivity
Florida Dept. of Agriculture	<ul style="list-style-type: none"> Truck size & weight Produce (fruits/vegetables/sugar) and livestock products to market
Florida Dept. of Energy	<ul style="list-style-type: none"> Alternative fuels Air quality
Florida Dept. of Revenue	<ul style="list-style-type: none"> IFTA (state commercial fuel tax) Commercial truck registrations
Florida Dept. of Highway Safety and Motor Vehicles	<ul style="list-style-type: none"> Truck size and weight Safety Evacuation Cargo security
Dept. of Homeland Security	<ul style="list-style-type: none"> Evacuation Cargo security
Florida National Guard	<ul style="list-style-type: none"> Disaster recovery/truck routes
Florida Dept. of Workforce Development	<ul style="list-style-type: none"> Available and qualified truck drivers Maintaining and creating jobs
Florida Dept. of Economic Opportunity, and Enterprise Florida, Inc.	<ul style="list-style-type: none"> Freight mobility - goods to market Maintaining and creating jobs Domestic trade imbalance
Florida Chamber of Commerce	<ul style="list-style-type: none"> Freight mobility - goods to market Domestic trade imbalance
Florida Trucking Association	<ul style="list-style-type: none"> Trucking operating costs Qualified and available drivers Truck parking
Florida MPOs	<ul style="list-style-type: none"> Local truck route and last mile connectivity between major freight generators and the multimodal system



*The FMO Office is poised to initiate
the FMTP implementation
in order to continue enhancing
Florida's economy and communities.*



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Freight Mobility and Trade Plan

Acronym Index

April 2020



Acronym	Term
3D	Three-dimensional
AADDTT	Average Annual Daily Truck Traffic
AADT	Average Annual Daily Traffic
AASHTO	American Association of State Highway Transportation Officials
ACES	Autonomous, Connected, Electric, and Shared
ADAS	Advanced Driver Assistance Systems
AFC	Alternative Fuel Corridor
AFMS	Advanced Freight Mobility Solutions
AGVs	Automated Ground Vehicles/ Autonomous Ground Vehicles
ASCE	American Society of Civil Engineers
ATRI	American Transportation Research Institute
AV	Autonomous Vehicle
AWI	Florida Agency for Workforce Innovation
AWP	Adopted Work Program
B	Billion
bcf/d	billions cubic day per day
BEBR	Bureau of Economic and Business Research
BSM	Basic Safety Message
BTS	Bureau of Transportation Statistics
BUILD	Better Utilizing Investments to Leverage Development
CAV	Connected/Automated Vehicle
CBP	Customs and Border Protection
CFN	Critical Freight Network
CFP	Cost Feasible Plan
CFR	Code of Federal Regulations
CNG	Compressed Natural Gas
CR	County Road
CRFC	Critical Rural Freight Corridors
CRS	Computerized Reservation Systems
CTMT	Combination Truck Miles Traveled
CTTMT	Combination Truck Ton-Miles
CUFC	Critical Urban Freight Corridors
CV	Connected Vehicle
C-V2X	Cellular Vehicle-to-Everything
DATP	Driver-Assistive Truck Platooning
DBPR	Florida Department of Business and Professional Regulation
DC	Distribution Center
DCA	Department of Community Affairs



Acronym	Term
DEM	Department of Emergency Management
DEO	Department of Economic Opportunity
DEP	Department of Environmental Protection
DHSMV	Department of Highway Safety and Motor Vehicles
DOR	Department of Revenue
DOT	Department of Transportation
DSRC	Dedicated Short Range Communications
DVA	Department of Veterans Affairs
EB	Eastbound
EFI	Enterprise Florida
EIA	Energy Information Administration
ELD	Electronic Logging Device
ELEC	Electric
EOG	Executive Office of the Governor
EPA	Environmental Protection Agency
ESRI	Environmental Systems Resources Institute
EV	Electric Vehicle
F.S.	Florida Statutes
FAF	Freight Analysis Framework
FASP	Florida Aviation System Plan
FAST Act	Fixing America's Surface Transportation Act
FASTLANE	Fostering Advancements in Shipping and Transportation for the Long-term Achievement of National Efficiencies
FC	Fulfillment Center
FDACS OOE	Florida Department of Agriculture and Consumer Services Office of Energy
FDEM	Florida Division of Emergency Management
FDLE	Florida Department of Law Enforcement
FDOD	Florida Department of Citrus
FDOT	Florida Department of Transportation
FECCR	Florida East Coast Railroad
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FLE	Florida Law Enforcement
FLFAC	Florida Freight Advisory Committee
FLL	Ft. Lauderdale/Hollywood International
FMaaS	Freight Mobility as a Service
FMCSA	Federal Motor Carrier Safety Administration
FMO	Freight and Multimodal Operations



Acronym	Term
FMTP	Freight Mobility and Trade Plan
FRA	Federal Railroad Administration
FRGT	Freight
FSA	Florida Space Authority
FSSP	Florida Spaceport System Plan/ Florida Seaport System Plan
FTP	Florida Transportation Plan
FTZ	Foreign Trade Zone
FXE	Ferromex
FY	Fiscal Year
GDP	Gross Domestic Product
GRP	Gross Regional Product
HATs	Highly Automated Trucks
HD	High Definition
HOS	Hours of Service
HPMS	Highway Performance Monitoring System
HUD	Housing and Urban Development
I-10	Interstate-10
I2V	Infrastructure-to-Vehicle
I-ETMS	Interoperable Electronic Train Management System
ILC	Intermodal Logistics Center
INFRA	Infrastructure for Rebuilding America
INMFN	Interim National Multimodal Freight Network
IoT	Internet of Things
ISTEA	Intermodal Surface Transportation Efficiency Act (1991)
ITS	Intelligent Transportation Systems
JACIP	Joint Automated Capital Improvement Program
JAX	Jacksonville Intermodal Airport
JTB	J Turner Butler
KCSM	Kansas City Southern de Mexico
KTons	Kilotons = 1,000 Tons
kWh	Kilowatts
LiDAR	Laser Imaging Detection and Ranging
LNG	Liquefied natural Gas
LOS	Level of Service
LPG	Liquid Propane Gas
M	Million
MAP-21	Moving Ahead for Progress in the 21st Century
MARAD	Maritime Administration



Acronym	Term
MCO	Orlando International Airport
M-CORES	Multi-use Corridors of Regional Economic Significance
MCSAW	Motor Carrier Size and Weight Inspection Stations
MCSP	Motor Carrier Safety Plan
MIA	Miami International Airport
MIC	Miami Intermodal Center
MPO	Metropolitan Planning Organization
MPOAC	Metropolitan Planning Organization Advisory Council
NAICS	North American Industry Classification System
NASA	National Aeronautics and Space Administration
NB	Northbound
NHFN	National Highway Freight Network
NHFP	National Highway Freight Program
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
NOAA	National Oceanic and Atmospheric Administration
NOFO	Notice of Funding Opportunity
NPIAS	National Plan of Integrated Airport Systems
NPMRSD	National Performance Measurement Research Data Set
NPMS	National Pipeline Mapping System
NW	Northwest
OAG	Official Airline Guide
ODD	Operational Design Domain
ODPDS	On-Demand Pickup and Delivery Services
OIDP	Office of Infrastructure Development and Planning
OST	Office of the Secretary of Transportation
PAC	Project Advisory Committee
PDDs	Personal Delivery Devices
PHFS	Primary Highway Freight System
PIH/TIH	Poisonous- or Toxic-by-Inhalation
PII	Personally-Identifiable Information
PNS	Pensacola International Airport
PPP/P3	Public Private Partnership
PSR	Precision Scheduled Railroading
PTC	Positive Train Control
PTI	Planning Time Index
R&D	Research & Development
RCI	Roadway Characteristics Inventory



Acronym	Term
ROWTF	Right of Way Acquisition and Bridge Construction Trust Fund
RSUs	Road Side Units
SB	Southbound
SCTG	Standard Classification for Transported Goods
SERT	State Emergency Response Team
SFRC	South Florida Rail Corridor
SHS	State Highway System
SIB	State Infrastructure Bank
SIO	Systems Implementation Office
SIS	Strategic Intermodal System
SIT	Strategic Investment Tool
SLR	Sea Level Rise
SR	State Route
STRACNET	Strategic Rail Corridor Network
STRAHNET	Strategic Highway Network
STTF	State Transport Trust Fund/ Surface Transportation Trust Fund
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TAMP	Transportation Asset Management Plan
TDA	Traffic Data and Analytics
TEUs	Twenty-foot Equivalent Units
TIA	Tampa International Airport
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIMs	Traveler Information Messages
TMT	Truck Miles Traveled
TNC	Transportation Network Companies
TPA	Tampa International Airport
TPAS	Truck Parking Availability System
TPO	Transportation Planning Organization
TSM&O	Transportation Systems Management and Operations
TTMS	Telemetered Traffic Monitoring Sites
TTTR	Truck Travel Time Reliability
U.S.C.	United States Code
UAVs	Unmanned Aerial Vehicles
UPS	United Parcel Service
US	United States
US1	U.S. Route 1
USDOE	U.S. Department of Energy
USDOT	U.S. Department of Transportation



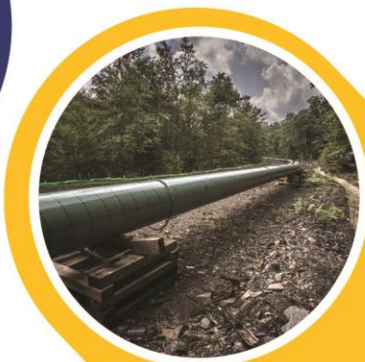
Acronym	Term
V2V	Vehicle-to-Vehicle
VDH/M	Vehicle (Truck) Hours of Delay per Segment Mile
VHD	Vehicle-Hours of Delay
VHU	Vehicle (Truck) Hours of Unreliability
VHU/M	Vehicle (Truck) Hours of Unreliability per Segment Mile
VMT	Vehicle-Miles Traveled
VOL	Volunteer Florida
WB	Westbound
WIM	Weigh in Motion



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Freight Mobility and Trade Plan

Technical Memorandum 1
Policies, Performance Measures, and
Outreach

April 2020



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Freight Mobility and Trade Plan

This technical memorandum is the first step in creating a single cohesive FMTP update that consolidates FMTP documents and integrates key freight aspects of the FDOT Modal Plans, Florida Chamber Foundation's Florida 2030 Study, the Florida Trade and Logistics Study 2.0, and the Florida Department of Economic Opportunity Strategic Plan for Economic Development.

In February 2018, the Federal Highway Administration (FHWA) determined that the combined documents of FDOT's Freight Mobility and Trade Plan (FMTP) met the State Freight Plan requirements which are specified in the Fixing America's Surface Transportation (FAST) Act.

Overall Vision – Florida Transportation Plan (FTP)

It is important to recognize that the FMTP is just one piece of the larger FDOT family of freight related and transportation plans. Most notably, the FMTP is designed to help the state meet its overarching transportation goals in the Florida Transportation Plan (FTP), Figure 1. Concurrent to the FMTP update, the FTP is also being updated. The FTP's overall goals are expected to remain the same – but the document will have renewed emphasis on:

- Technology
- Resilient supply chains and transportation systems
- State and interregional freight mobility and trade
- Regional and local transportation planning and land use coordination

FDOT has also completed a series of modal specific freight plans. The FMTP leverages the lessons learned from each modal plan to ensure that the complete set of plans represent an integrated approach to improve freight mobility and trade in Florida.



Figure 1 | Florida Transportation Plan Goals



2013 FMTP Policy Element

The FMTP Policy Element was developed in response to HB 599, which required FDOT to develop a plan which, “enhance(d) the integration and connectivity of the transportation system across and between transportation modes throughout the state.” Specifically, the Policy Element addressed four statutory goals, shown in Figure 2.

Trade	ILCs	Manufacturing	Alternative Energy
<ul style="list-style-type: none">•Increasing the flow of domestic and international trade through the state’s seaports and airports, including specific policies and investments that will recapture cargo currently shipped through seaports and airports located outside the state.	<ul style="list-style-type: none">•Increasing the development of Intermodal Logistics Centers (ILCs) in the state, including specific strategies, policies, and investments that capitalize on the empty backhaul trucking and rail market in the state.	<ul style="list-style-type: none">•Increasing the development of manufacturing industries in the state, including specific policies and investments in transportation facilities that will promote the successful development and expansion of manufacturing facilities.	<ul style="list-style-type: none">•Increasing the implementation of compressed natural gas (CNG), liquefied natural gas (LNG), and propane energy policies that reduce transportation costs for businesses and residents located in the state

Figure 2 | 2013 FMTP Goals Established by HB 599

Freight movement is essentially the economy in motion. While transportation, trade, and energy are functions that exist to support citizens and businesses, the 2013 FMTP recognized that these activities are inherently linked and collectively impact and support the economic wellbeing of Florida. Therefore, the effort coupled commerce and energy with transportation which produced solutions that were cross-cutting, and multi-functional.

Additionally, the 2013 FMTP was designed to support the FTP and integrate lessons learned from research such as the Florida Chamber’s Trade and Logistics study.

2013 FMTP Objectives

Due to this broader, more comprehensive vision for freight, FDOT developed a series of objectives that guided the overall development of the 2013 plan. The seven objectives aligned the various views and issues identified in each respective related plan and lessons learned from the FMTP’s extensive outreach effort (see Figure 3). The Policy Element identified policy-level strategies to outline how each objective might be met. Similarly, most strategies were also supported by actionable tactics. Appendix A details how the strategies and tactics support each of the FMTP objectives.



Objective 1	•Capitalize on the freight transportation advantages of Florida through collaboration on economic development, trade, and logistics programs
Objective 2	•Increase operational efficiency of goods movement
Objective 3	•Minimize costs in the supply chain
Objective 4	•Align public and private efforts for trade and logistics
Objective 5	•Raise awareness and support for freight movement investments
Objective 6	•Develop a balanced transportation planning and investment model for all forms of transportation
Objective 7	•Transform the FDOT's organizational culture to include consideration of supply chain and freight movement issues

Figure 3 | 2013 FMTP Policy Element Objectives

The 2013 FMTP's objectives established the framework for current freight initiatives in the state of Florida. Through these original objectives, a focus on collaboration was created, and the establishment of District Freight Coordinators and freight outreach sessions helped give rise to an open forum between public and private partners in the freight industry. In the interim years, this foundation of collaboration helped shaped FDOT's position toward a technology-oriented set of priorities as established in the 2019 update.

Modal Plans

In addition to the 2013 FMTP, FDOT developed a series of modal freight plans. Key takeaways from these plans are included in the FMTP to create a comprehensive multimodal freight plan. These documents include:

- Air Cargo Study (2016)
- Aviation System Plan (2014)
- Florida Seaport/Waterways System Plan (2015)
- Motor Carrier System Plan (2017)
- Rail System Plan (2018)
- Spaceport System Plan (2018)



Air Cargo Study

The 2016 Air Cargo Study reviewed global air cargo trends and their implications on the Florida air cargo market. Since the project was a study, not a plan, there were no goals or recommendations developed. However, the study looked at major trends within the air cargo industry, air cargo capacity at Florida airports, forecasted future air cargo demand, and explored the economic impact of the industry.

Florida Aviation System Plan/Economic Impact Study

The 2014 Florida Aviation System Plan (FASP) developed a 20 year vision for the state’s 129 public airports. The FASP focused on building a responsive framework for an uncertain future. Specifically, it focused on changing aviation and economic trends, including emerging technologies, projected funding shortfalls, and shifting priorities.

The plan provided a framework for investigating issues such as intermodal transportation networking, the economic impact of airports on their local communities and the state, and development of long-range strategies to meet the future aviation needs. Figure 4 depicts the FASP goals.

- Support new technologies and innovations
- Contribute to sustainable growth while remaining sensitive to the environment
- Efficient, safe, convenient, and secure airports
- Enhance Florida’s leadership and prominence in the aviation industry
- Protect airspace and promote compatible land use planning around Florida airports
- Promote aviation to business, government, and the public
- Foster Florida’s reputation as a military-friendly state.

Figure 4 | Florida Aviation System Plan Goals



Rail System Plan

Updated in 2018, the Rail System Plan describes the state's existing rail network, its challenges and opportunities, and rail related economic and socio-environmental impacts of rail in Florida. The plan includes goals and objectives that support the Florida Transportation Plan goals (see Figure 5). Publicly sponsored short and long-range capital improvements and policy recommendations were developed as action steps to support implementation of the rail plan.

Safety and Security

- Identify and support rail and rail-highway safety improvements and coordinate with appropriate partners to identify and implement security and emergency response plans.

Agile, Resilient, Quality

- Maintain and preserve rail infrastructure and service, and modernize the rail system.

Efficient and Reliable Mobility

- Emphasize improvements in on-time performance of passenger trains and for fluidity of the state's rail system for handling freight and passenger rail traffic.

More Transportation Choices

- Aggressively pursue opportunities for funding rail projects in cooperation with leaders at the local, regional, state, and national levels.

Economic Competitiveness

- Invest in rail system capacity improvements to enhance the interstate and intrastate movement of people and goods when public benefit can be demonstrated.

Quality Places

- Integrate rail and land use planning at the state, regional, and local levels.

Environment and Conserve Energy

- Integrate transportation and environmental decisions into the statewide, regional, and local planning processes

Figure 5 | 2018 Rail System Plan Included Goals



Motor Carrier System Plan (MCSP)

The 2013 FMTP identified several issues that were related to trucking. In 2017, FDOT developed a Motor Carrier System Plan (MCSP) to address highway specific mobility challenges from a trucking perspective. The plan establishes a foundation of critical issues to address. Key performance analyses complement the input from stakeholders to build a more complete picture of freight movements by truck in Florida. The goals of the plan are shown in Figure 6.

The FDOT Truck Empty Backhaul report and the (Statewide) Truck Parking Study are two major initiatives which were a result of issues identified in the MCSP.

Safety and Security

- Identify, support, and implement freight highway safety improvements and initiatives

Agile, Resilient, Quality

- Continue to invest in quality infrastructure that can be adapted to meet the needs of future freight vehicles and technology

Efficient and Reliable Mobility

- Increase operational efficiency of goods movement and maintain reliable mobility for trucks

More Transportation Choices

- Increase the number of quality options for moving freight to, from, and within Florida

Economic Competitiveness

- Support Florida's global competitiveness and increase the flow of domestic and international trade

Quality Places

- Coordinate early and often with local communities to ensure mobility for trucks that is consistent with local and regional priorities

Environment and Conserve Energy

- Balance the need for environmental protection and conservation with seeking motor carrier efficiencies

Figure 6 | 2017 Motor Carrier Plan Goals

Florida Seaport/Waterways System Plans

The 2015 Florida Seaport System Plan (FSSP) and the 2015 Florida Waterways System Plan (FWSP), illustrate the seaport and waterways conditions, challenges, trends, visions, goals, and areas of focus for the FDOT Seaport and Waterways Office. These plans provide a look at the history of the Florida Seaport System and insight into the economic contribution and partnerships which have spurred the dynamic growth of seaport development, waterborne commerce, international trade, and the cruise industry in Florida.

The FSSP includes four program focus areas (seaport access enhancement, seaport capacity expansion, seaport efficiency improvement, and waterborne freight supply chain optimization)



and seaport program strategies that are meant to address the focus areas. Specifically, the plan outlined eight strategies to improve business at the state's seaports:

- Facilitate local, state, and federal agency responsiveness to Florida seaport issues and opportunities, through outreach, education, coordination, and collaboration.
- Monitor local, regional, statewide, national, and global industry events, issues, and trends to ensure the relevance of Florida seaport investments and initiatives.
- Coordinate with intermodal industry partners and agencies to ensure multi-modal connectivity and coordination in seaport and intermodal network development.
- Collaborate with seaports and industry stakeholders to identify and fund the areas of greatest need and opportunity.
- Collect and analyze data to track the effectiveness of investments over time, and to identify new or emerging issues or trends.
- Use state resources to leverage local, private, and federal investments in Florida Seaports.
- Work with seaport and maritime stakeholders to support and create educational and employment training opportunities for seaport, supply chain, and maritime-related businesses.
- Partner with seaports to address specific problem areas, or to explore new technologies or systems to enhance seaport efficiencies, capabilities, and capacities.

Florida Spaceport System Plan (FSSP)

In April 2013, Florida published its Spaceport System Plan, the first of its kind in the nation. The space transportation industry has seen rapid and dramatic developments since publication of the initial Florida Spaceport System Plan (FSSP). The plan was updated in 2018 and addresses the most significant of those developments while recognizing the sound foundation of the original plan.

The plan describes the elements and functionality of Florida's current and future spaceport system. It includes the evolving space transportation industry's place within the Florida Transportation Plan and Strategic Intermodal System, and describes Space Florida's existing statewide spaceport authority role and how that role is evolving. Most importantly, the FSSP establishes clear system goals that align with those of the Florida Transportation Plan along with an implementation approach for determining system-wide needs and identifying system-wide priorities for funding. Figure 7 shows the goals of the FSSP.



Freight *Mobility* and Trade Plan

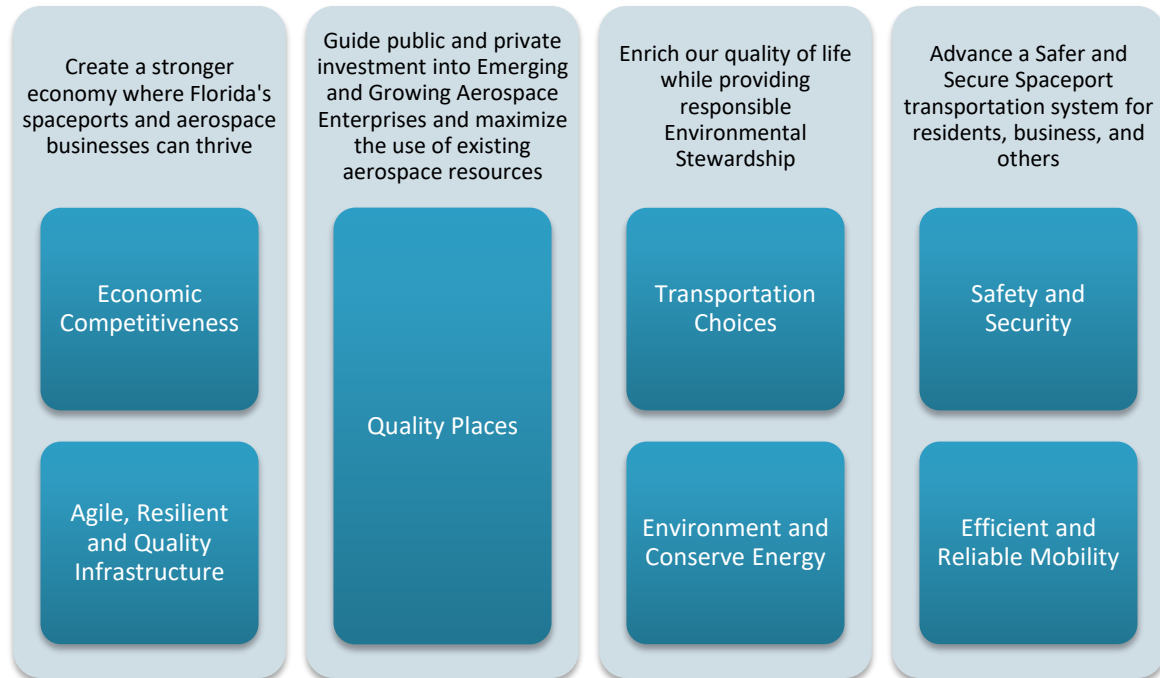


Figure 7 | Florida Spaceport System Plan Goals

Florida Trade and Logistics Study 2.0

In 2010, the Florida Chamber Foundation released the Florida Trade and Logistics Study that examined trade flows and related logistics activity in Florida. In 2013, a 2.0 version of the plan was published. This updated study built upon the 2010 research, with greater emphasis on growing Florida-origin exports and expanding value-added services that can support Florida's trading businesses or trading partners, in addition to developing workforce, economic development, and business climate strategies.

A committee representing all freight transportation modes, major shippers and receivers, economic development organizations, state agencies, and landowners provided overall direction for the study. Based on this input, the study review committee developed recommended goals and strategies for Florida's future global business development activities.

The Chamber Foundation, in partnership with FDOT, is continuing its efforts to increase and improve Florida trade activities and enhance Florida's logistics industry. In 2018 the Florida Chamber developed the Infrastructure Coalition Report on Accelerating Florida Forward and is currently developing the Florida Trade and Logistics Study 3.0.



Florida Chamber of Commerce Six Pillars

The Florida Chamber Foundation created the Six Pillars, an organizational framework that identifies key factors driving Florida's future economy and helps communities, agencies and organizations speak with one voice. See Figure 8. These Six Pillars are designed to create vibrant communities that enjoy prosperity and high-paying jobs, leveraging Florida's competitive advantage in the global economy. The Six Pillars is a framework to help organize strategic planning at the state and local level and is still prevalent in the most recent update, Florida 2030.



Figure 8 | Florida Chamber of Commerce's Six Pillars

In addition to the aforementioned plans, Appendix C provides a list of Florida's relevant freight-related plans, initiatives, and studies, mostly conducted by FDOT.



Building a Vision for the Future

This section of the plan identifies the steps taken to update the FMTP’s objectives and strategies in order to develop one cohesive plan to move freight forward in Florida.

Step 1: Align Existing Plans with Florida Transportation Plan Goals

The FMTP includes the integration of the FDOT modal plans and studies into a cohesive Freight Mobility and Trade Plan that is focused on supporting the Florida Transportation Plan’s goals and federal freight goals. The overall relationship between these plans is described in Figure 9. The first step is to align the goals from past efforts with the Florida Transportation Plan (FTP) Goals. Figure 10 shows how the modal and aligned plans fit within the goals of the FTP.

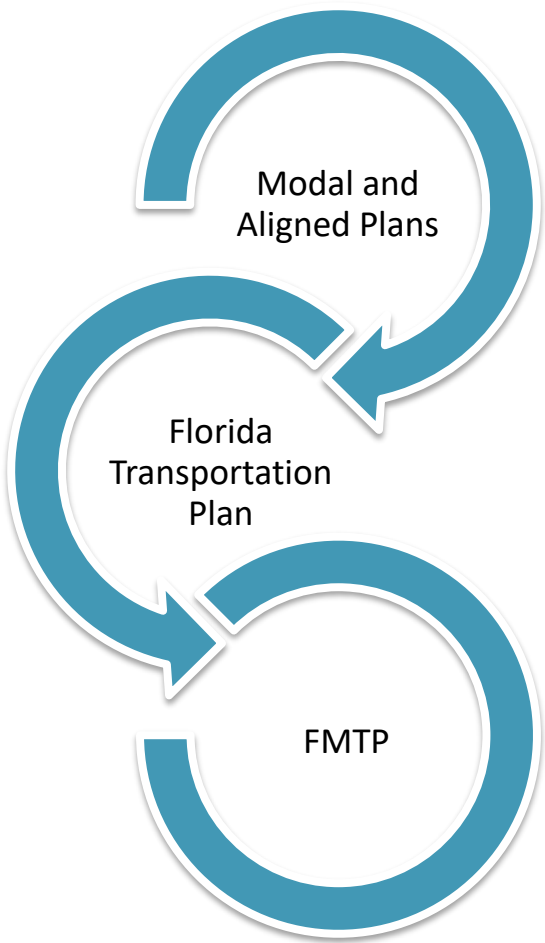


Figure 9 | Process to Develop Updated FMTP Objectives

	FTP Goals						
	Safety and Security	Agile, Resilient, Quality	Efficient & Reliable Mobility	Transportation Choices	Economic Competitiveness	Quality Places	Environment & Conserve Energy
Freight Mobility and Trade Plan – Policy Element							
Capitalize on the freight transportation advantages of Florida through collaboration on economic development, trade, and logistics programs		✓	✓	✓	✓		
Increase operational efficiency of goods movement		✓	✓	✓	✓		✓
Minimize costs in the supply chain		✓	✓		✓	✓	
Align public and private efforts for trade and logistics	✓	✓	✓		✓		✓
Raise awareness and support for freight movement investments	✓	✓	✓		✓		
Develop a balanced transportation planning and investment model for all forms of transportation		✓	✓	✓	✓	✓	✓
Transform the FDOT’s organizational culture to include consideration of supply chain and freight movement issues		✓	✓		✓	✓	
Air Cargo Plan							
These plans did not identify traditional goals or objectives.							
Florida Aviation System Plan							
Support new technologies and innovations	✓	✓	✓	✓	✓	✓	✓
Contribute to sustainable growth while remaining sensitive to the environment			✓		✓		✓
Efficient, safe, convenient, and secure airports	✓	✓				✓	
Enhance Florida’s leadership and prominence in the aviation industry					✓		
Protect airspace and promote compatible land use planning around Florida airports			✓	✓		✓	✓
Promote aviation to business, government, and the public					✓		
Foster Florida’s reputation as a military-friendly state					✓		
Rail System Plan							
Identify and support rail and rail-highway safety improvements and coordinate with appropriate partners to identify and implement security and emergency response plans.	✓						
Maintain and preserve rail infrastructure and service, and modernize the rail system		✓					
Emphasize improvements in on-time performance of passenger trains and for fluidity of the state’s rail system for handling freight and passenger rail traffic			✓				
Aggressively pursue opportunities for funding rail projects in cooperation with leaders at the local, regional, state, and national levels				✓			



Freight Mobility and Trade Plan

	FTP Goals						
	Safety and Security	Agile, Resilient, Quality	Efficient & Reliable Mobility	Transportation Choices	Economic Competitiveness	Quality Places	Environment & Conserve Energy
Invest in rail system capacity improvements to enhance the interstate and intrastate movement of people and goods when public benefit can be demonstrated					✓		
Integrate rail and land use planning at the state, regional, and local levels						✓	
Integrate transportation and environmental decisions into the statewide, regional, and local planning processes							✓
Motor Carrier Plan							
Identify, support, and implement freight highway safety improvements and initiatives	✓						
Continue to invest in quality infrastructure that can be adapted to meet the needs of future freight vehicles and technology		✓					
Increase operational efficiency of goods movement and maintain reliable mobility for trucks			✓				
Increase the number of quality options for moving freight to, from, and within Florida				✓			
Support Florida's global competitiveness and increase the flow of domestic and international trade					✓		
Coordinate early and often with local communities to ensure mobility for trucks that is consistent with local and regional priorities						✓	
Balance the need for environmental protection and conservation with seeking motor carrier efficiencies							✓
Florida Seaport/Waterways System Plans							
These plans did not identify goals or objectives.							
Spaceport System Plan							
Create a stronger economy where Florida's spaceports and aerospace businesses can thrive		✓			✓		
Guide public and private investment into Emerging and Growing Aerospace Enterprises and maximize the use of existing aerospace resources						✓	
Enrich our quality of life while providing responsible Environmental Stewardship				✓			✓
Advance a Safer and Secure Spaceport transportation system for residents, business, and others	✓		✓				



	FTP Goals						
	Safety and Security	Agile, Resilient, Quality	Efficient & Reliable Mobility	Transportation Choices	Economic Competitiveness	Quality Places	Environment & Conserve Energy
Chamber of Commerce Six Pillars							
Talent Supply and Education					✓	✓	
Innovation and Economic Development					✓	✓	
Infrastructure and Growth Leadership	✓	✓	✓	✓	✓		
Business Climate and Competitiveness		✓	✓		✓		
Civic and Governance System			✓				
Quality of Life and Quality Places			✓		✓	✓	✓

Figure 10 | Goals Matrix

Step 2: Create Updated FMTP Objectives

Much has changed since the 2013 Policy Element's objectives were developed. The freight market continues to evolve, the economy continues to grow, and FDOT has continued to integrate freight efforts into their processes. After reviewing the collective freight planning work undertaken by FDOT and their partners, and receiving feedback from the 2019 FMTP's Project Advisory Committee (PAC) and the Florida Freight Advisory Committee (FLFAC), the project team developed ten objectives that directly support the overall system goals developed by the Florida Transportation Plan (see Figure 11). In Appendix B, a matrix is provided to illustrate how the FTP goals and FMTP objectives support the federal freight goals.



Safety and Security

- Leverage multisource data and technology to improve freight system **safety** and **security**.

Agile, Resilient, Quality

- Create a more **resilient** multimodal freight system.
- Ensure the Florida freight system is in a **State of Good Repair**.

Efficient & Reliable Mobility

- Drive innovation to reduce **congestion, bottlenecks** and improve travel time **reliability**.

Transportation Choices

- Remove **institutional, policy** and **funding bottlenecks** to improve operational efficiencies and reduce costs in supply chains.
- Improve **last mile connectivity** for all freight modes.

Economic Competitiveness

- Continue to forge **partnerships** between the **public and private sectors** to improve trade and logistics.
- Capitalize on **emerging freight trends** to promote economic development.

Quality Places

- Increase freight-related regional and local **transportation planning and land use coordination**.

Environment & Conserve Energy

- Promote and support the shift to **alternatively fueled** freight vehicles.

Figure 11 | 2019 FMTP Objectives



Step 3: Align Objectives to Support National Freight Goals

The FAST Act requires State Freight Plans to describe how they will improve the ability of the state to meet the National Multimodal Freight Policy goals (section 70101(b) of Title 49) and National Highway Freight Program goals (section 167 of title 23) (see Figure 12). FDOT's FTP goals and supporting FMTP objectives outline how Florida will work towards meeting those goals.

National Multimodal Freight Policy Goals	National Highway Freight Program Goals
<ol style="list-style-type: none">1. To identify infrastructure improvements, policies, and operational innovations that --<ul style="list-style-type: none">o Strengthen the contribution of the National Multimodal Freight Network (NMFN) to the economic competitiveness of the United Stateso Reduce congestion and eliminate bottlenecks on the NMFNo Increase productivity, particularly for domestic industries and businesses that create high-value jobs2. To improve the safety, security, efficiency, and resiliency of multimodal freight transportation3. To achieve and maintain a state of good repair on the NMFN4. To use innovation and advanced technology to improve the safety, efficiency, and reliability of the NMFN5. To improve the economic efficiency and productivity of the NMFN6. To improve the reliability of freight transportation7. To improve the short- and long-distance movement of goods that—<ul style="list-style-type: none">o Travel across rural areas between population centerso Travel between rural areas and population centerso Travel from the Nation's ports, airports, and gateways to the NMFN8. To improve the flexibility of States to support multi-State corridor planning and the creation of multi-State organizations to increase the ability of States to address multimodal freight connectivity9. To reduce the adverse environmental impacts of freight movement on the NMFN10. To pursue the goals described in this subsection in a manner that is not burdensome to State and local governments	<ol style="list-style-type: none">1. To invest in infrastructure improvements and to implement operational improvements on the highways of the United States that—<ul style="list-style-type: none">o Strengthen the contribution of the National Highway Freight Network (NHFN) to the economic competitiveness of the United Stateso Reduce congestion and bottlenecks on the NHFN;o Reduce the cost of freight transportationo Improve the year-round reliability of freight transportationo Increase productivity, particularly for domestic industries and businesses that create high-value jobs2. To improve the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas3. To improve the state of good repair of the NHFN4. To use innovation and advanced technology to improve the safety, efficiency, and reliability of the NHFN5. To improve the efficiency and productivity of the NHFN6. To improve the flexibility of States to support multi-State corridor planning and the creation of multi-State organizations to increase the ability of States to address highway freight connectivity7. To reduce the environmental impacts of freight movement on the NHFN

Figure 12 | Federal Freight Goals



Consistency with National Multimodal Freight Policy and National Highway Freight Program Goals

A description of how the FMTP will improve the ability of the State of Florida to meet the National Multimodal Freight Policy goals and National Highway Freight Program goals is required by the FAST Act. A consistency review of the updated FMTP objectives with the national goals is provided in Appendix B.

Performance Measures

The performance measures considered in this plan are consistent with FDOT's Source Book, FDOT's Transportation Asset Management Plan (TAMP), Transportation Performance Management (TPM) federal performance measures, FTP goals, the FMTP objectives and the Highway Performance Monitoring System (HPMS). These measures indicate whether Florida's transportation system is achieving the objectives outlined in this plan and also show whether progress is being made towards federal and organizational goals. Measures included in the plan are categorized by mode: highway, rail, seaport and aviation. Additionally, performance measures required by FHWA, such as bridge and pavement conditions, are also presented. Performance measures included in this plan are described according to the following dimensions:

- **Quantity** - How much freight is moved;
- **Quality** – How good or bad the travel experience is, in addition to how good or bad system conditions are rated; and
- **Utilization** – How much of the transportation system is used/available.



Measures considered for this plan are as follows in Table 1:

Table 1 | Performance Measures

Mode	Quantity	Quality	Utilization
Highway	<ul style="list-style-type: none">• Truck Miles Traveled• Combination Truck Miles Traveled• Combination Truck Ton Miles	<ul style="list-style-type: none">• Combination Truck On-Time Arrival• Combination Truck Planning Time Index• Combination Truck Hours of Delay• Truck Bottlenecks• Percent of travel meeting Level of Service• Highway Pavement Conditions• Bridge Conditions• Highway (Truck) Safety	<ul style="list-style-type: none">• Truck Empty Backhaul• Truck Parking Utilization
Rail	<ul style="list-style-type: none">• Rail Tonnage	<ul style="list-style-type: none">• Rail crashes	
Water	<ul style="list-style-type: none">• Seaport Tonnage		
Aviation	<ul style="list-style-type: none">• Aviation Tonnage	<ul style="list-style-type: none">• Aviation Departure Reliability	

The above performance measures are further explained in Technical Memorandum 3, "Performance Measures and Conditions."

Strengths and/or weaknesses discovered during performance measure analysis can assist in the identification of specific needs or other transportation issues. This process supports the project identification and development phase to construct the freight project needs list. Therefore, performance measures analysis can be used as a guide for decision-making in freight-related transportation investments. These performance measures are consistent with the Florida Transportation Plan (FTP) goals and FMTP objectives. It is important to note that there are different freight and freight-related project types. For example, proposed highway rail-grade crossing projects, truck parking projects, and highway improvement projects all have different criteria that should be assessed using the applicable performance measures. Table 2 depicts performance measures and criteria that have been identified to assess highway improvement projects.



Table 2 | Performance Measures for Project Prioritization

FTP Goal	FMTP Objective	Measures/Criteria
Safety and security for residents, visitors, and businesses	Leverage multisource data and technology to improve freight system safety and security	(Truck Injuries/Truck VMT)*1000
		(Truck Fatalities/Truck VMT)*1000
		Crime Index
Agile, resilient, and quality transportation infrastructure	Create a more resilient multimodal freight system.	Roadways within 100 year flood zones
	Ensure the Florida freight system is in a State of Good Repair	Presence of structurally deficient bridges
		Presence of poor pavement conditions segments
Connected, efficient, and reliable mobility for people and freight	Drive innovation to reduce congestion, bottlenecks and improve travel time reliability	Roadways with top bottlenecks
		Truck AADT
Transportation choices that improve accessibility and equity	Improve last-mile connectivity for all freight modes	Vicinity to Hubs
		Roadways within freight intensive areas
Transportation solutions that strengthen Florida's economy	Capitalize on emerging freight trends to promote economic development	Labor Force Size (Ratio of Labor force by County Population relative to average state wide ratio)
		County GRP (Compared to State Average)
		Transportation and Warehousing Industry Share of Total Employment
		Population Density (Compared to State Average)
Transportation solutions that enhance Florida's environment	Promote and support the shift to alternatively fueled freight vehicles	On designated Alternative Fuels Corridors
		Number of alternative fueling stations within 1 mile of roadway



While there are seven FTP goals, only six of them were used in the prioritization schema.

“Transportation systems that enhance Florida’s communities” was left out specifically for a lack of quantitative criteria with which to assess it. The FMTP objective which falls under it, “Increase freight-related regional and local transportation planning and land use coordination,” was used as a criteria on the qualitative side of the prioritization schema under “Transportation solutions that strengthen Florida’s economy.”

FMTP Stakeholder Engagement and Outreach

The following chapters of this plan document Florida’s existing freight network, the connection between freight and the economy, the demands placed on the system with a growing population, and the importance of continuing to invest in freight infrastructure. While continued investment in infrastructure is a key component in Florida’s freight future, there are other freight issues of varying severity to be considered. This portion of the technical memorandum discusses the process used to identify these key freight topics. The development of the FMTP objectives and recommendations involved input from stakeholders representing all freight transportation modes, industry representatives, elected officials, and other key stakeholders.

Collaborative Sessions

To facilitate involvement by the private and public sector in the development of the plan, three separate outreach initiatives were held to ensure that each stakeholder group had significant opportunity to give input on the FMTP. Two of these three initiatives were open to the public and advertised as such.

Three Florida Freight Advisory Committee (FLFAC) meetings were held with the FMTP as the focus. These meetings, which are always open to the public, involve a freight committee consisting of representatives from a cross-section of public and private sector freight stakeholders. The members and corresponding organizations of the FLFAC involved in this process are listed in Table 3.

Table 3 | FLFAC Membership 2019

Organization	First Name	Last Name
City of Pensacola	Amy	Miller
Walmart	Robert	Midgett
Broward County	David	Anderton
Genesee Wyoming Railroad	Joe	Arbona
Space Florida	Mark	Bontrager
Florida TransAtlantic Holdings	John	Dohm
Interport Logistics, LLC	Gary	Goldfarb
Crowley Logistics	Stan	Parkes
Brevard County	Troy	Post
Broward County MPO	Greg	Stuart
US Sugar	Malcolm	Wade
Florida Trucking Association	Alix	Miller
Florida East Coast Railroad	Bob	Ledoux
Winter Haven Economic Development Council	Bruce	Lyon
Florida Atlantic University	Dan	Liu
University of North Florida	David	Swanson
Franklin Street	Larry	Kahn
Enterprise Florida	Mason	Henson
Florida Ports Council	Mike	Rubin
Atlantic Logistics Inc.	Robert	Hooper
University of South Florida	Seckin	Ozkul
Florida Fruit and Vegetable Association	Tori	Bradley

The FLFAC’s purpose is to advise on freight-related priorities, issues, projects, and funding needs with a particular look into sharing of information between the public/private sectors. The purpose of these meetings was to ensure that the objectives and topic priorities that were decided upon were weighted correctly and had the best opportunity at resolving any Florida freight issues. To better integrate stakeholder input, each issue required majority agreement for consideration as policy. The final meeting was held to confirm project prioritization weighting.

- FLFAC 1: March 22, 2019
- FLFAC 2: June 26, 2019
- FLFAC 3: September 26, 2019



The Project Advisory Committee (PAC), an internal body consisting of representatives from FDOT offices related to freight and the District Freight Coordinators, provided guidance on the development of the plan and helped validate the results along the way. The PAC meetings also served to enhance internal freight mobility needs and awareness in FDOT's planning activities. Five Project Advisory Committee (PAC) meetings were held during the development of the FMTP.

- PAC 1: April 11, 2019
- PAC 2: July 24, 2019
- PAC 3: August 14, 2019
- PAC 4: September 19, 2019
- PAC 5: October 31, 2019

Finally, seven Regional Freight Forums were conducted. These were a series of public meetings designed to obtain input on freight needs, issues, impacts, and solutions from private industries, carriers, other freight stakeholders, and the public. These were held throughout the state:

- FDOT District Three: May 20, 2019
- FDOT District One: May 22, 2019
- FDOT District Two: May 23, 2019
- FDOT District Five: May 28, 2019
- FDOT District Seven: May 29, 2019
- FDOT District Six: June 11, 2019
- FDOT District Four: June 12, 2019

This collaborative approach for gleaning input from key private sector business leaders and local/regional partners in freight logistics was positively received by attendees and fostered a cooperative relationship for further engagement.

Regional Freight Forum Feedback

The freight forums held throughout the state were open to all interested persons in the public and private sectors. Many attendees rely on the multimodal freight system to support their respective businesses. As users of the freight system, many attendees provided valuable observations and insights on issues, needs, trends, and recommendations.

Key discussion questions were:

- What are the most critical freight challenges/issues you encounter?
- What are the most important needs in your region?
- What opportunities do you see with freight?



- What new & developing technologies should Florida support to enhance freight mobility?
- How can we leverage collaboration to improve freight mobility?

In addition, stakeholders were asked to provide comments throughout the conversation on:

- Deficiencies of the freight transportation system;
- Solutions to remedy those conditions and issues;
- Future needs envisioned to support growth;
- The effects of technology on freight;
- Specific topics and objectives that should be pursued by FDOT (as designated in the 'Needs and Issues' technical memorandum)

During the breakout sessions at each forum, notes were captured on easel boards. These notes were compared to get a sense of the differences and commonalities between the forums in each District. The top challenges/issues across all the Districts were found to be:

- Congestion/Bottlenecks
 - There are a growing number of vehicles on the road
 - There is a dangerous mix of freight traffic and people traffic (residential and visitor)
 - Lots of unpredictability in travel times and a high rate of incidents
- Truck Parking
 - There are burdensome federal regulations that are not in sync with current industry demands and consumer expectations
 - There is nowhere to park in certain parts of the state
- Empty Backhaul
 - There are large quantities of freight traveling south in the state and a lot of empty freight containers traveling north
 - How can we attract more manufacturing to have a more balanced import/export ratio?
 - There may be opportunities to use geo-tagging/GIS/network to reduce empty backhaul

Additional recurring themes included:

- Attracting talent to the trucking labor force is a big topic in an industry that is seeing a shortage of drivers and mechanics
 - Education will be an important piece to resupplying the workforce, but will also necessary to inform the general public about freight and change its perception



Freight Mobility and Trade Plan

- Funding is needed across the board. There tends to be a lack of prioritization for freight policy – with both projects and funding
- There is a consensus that the state would benefit from limited access freight corridors/bypasses/truck only lanes to reduce issues from competing interests on the road
- There are a number of land use compatibility issues that impact freight
 - local development tends to be focused on residential development, squeezing down room for industrial areas
 - challenging to increase connectivity, access, and safety for all modes in urban areas – trucks can't park in many urban areas where land value is high
 - zoning and land uses change without notice, impacting the surrounding area and makes it hard to plan
- Communication/collaboration is seen as an opportunity in many different facets of these challenges, with data sharing being at the forefront

The topics discussed helped to inform the most pressing freight issues and opportunities in the State. After the forums, the responses were placed into categories and weighed by how many Districts discussed the topics to take a deeper dive into what was captured.

The regional freight forums collected input on the issues facing Florida freight and potential solutions. This collaborative process provided venues and opportunities for interaction with those who utilize, provide, and plan for the freight transportation system. Incorporating an industry participation approach allowed the state to better understand the needs of freight stakeholders and proactively streamline freight investments.



Appendix A: 2013 Freight Mobility and Trade Plan Objectives, Strategies and Tactics

FMTMP Objective 1: Capitalize on the Freight Transportation Advantages of Florida through Collaboration on Economic Development, Trade, and Logistics Programs

Characterize and highlight the strategic strengths of Florida's freight transportation system including hubs like seaports, airports, and ILCs collaboratively with industry, and with other agencies and states, to establish Florida as the international gateway for trade.

Maximize the strategic advantage of Florida's transportation hubs for trade logistics

- Characterize and highlight the unique strengths of each seaport
- Develop criteria for strategic port investments in tandem with private investments to respond to market needs nimbly and transparently
- Determine the operating characteristics of transportation hubs and improve the connecting distribution/transportation system to match their particular logistic needs and opportunities
- Develop a comprehensive plan to support/facilitate international exports and interstate commerce

Foster the development and deployment of ILCs through cooperative efforts with industry

- Include ILCs in the SIS and roadways and railways serving ILCs
- Expedite the resolution of local issues for ILC development
- Include onsite capacity to facilitate international exports
- Implement the ILC infrastructure support program

Support the branding of Florida as the Gateway to the Western Hemisphere for trade

- Include all freight transportation modes

Focus general collaboration with other agencies

- Host a joint website as a comprehensive portal for freight mobility and trade matters with Enterprise Florida, Workforce Florida, and the Florida Chamber of Commerce to facilitate manufacturers locating and expanding in Florida; e.g., "the freight base"
- Include Enterprise Florida, Workforce Florida, and the Department of Economic Opportunity as ex officio members of the predominantly industry sector CEO Freight Leadership Group

Support the Statewide Economic Development Strategic Plan led by the DEO

- Factor logistics efficiency and sustainability into comprehensive economic development strategies
- Proactive participation by the FDOT economic development liaison to the DEO
- Coordinate and inform transportation programs with the initiatives and policies of the DEO
- Expand interagency collaboration and coordination
- Foster relationships with local government economic development staff

Collaborate with Enterprise Florida to address transportation and logistics needs for the targeted industries

- Identify and address transportation issues and challenges for each of the targeted industries
- Match trade and transportation needs of the targeted industries with the characteristics of the ports, airports, and ILCs as branding enhancements
- Inventory and brand beneficial transportation characteristics of the different regions to support economic development branding

Collaborate with Workforce Florida to develop a trade and logistics workforce

- Identify needed skills, abilities, and best strategies for attracting and developing the necessary workforce



FMTF Objective 1: Capitalize on the Freight Transportation Advantages of Florida through Collaboration on Economic Development, Trade, and Logistics Programs

Characterize and highlight the strategic strengths of Florida's freight transportation system including hubs like seaports, airports, and ILCs collaboratively with industry, and with other agencies and states, to establish Florida as the international gateway for trade.

Develop jointly sponsored vocational and technical training academies for maritime operations, trade and logistics staff, and other skills needed for increased manufacturing, trade, and logistics operations in Florida

Explore mutual interests and highlight value that Florida can bring to neighboring states

Participate in the update of the Latin American Transportation and Trade Study

Coordinate freight planning activities with states in our region as encouraged by federal legislation

FMTF Objective 2: Increase Operational Efficiency of Goods Movement

Identify and strengthen the critical freight network, and use ITS and other enhancements to increase the efficiency, reliability, safety, and security of freight movements, including under emergency situations

Identify the critical freight transportation network for the state, which includes the national freight network designated by the USDOT

No tactics listed

Identify and implement freight movement gap-closing improvements

Improve hub connections (last mile and beyond)

Work with local governments to support and back-up efforts to maintain and improve freight movement access and reduce negative local impacts

Identify and implement freight movement efficiency enhancements

Prioritize investments on connections (distribution hubs, ILCs, etc.)

Promote and support use of Intelligent Transportation Systems (ITS) technology to increase efficiency and reliability of freight movements

Establish appropriate role to promote and support the use of best practice information technology among all Florida trucking companies (in coordination with transportation systems management and operations [TSM&O])

Foster uniform information technology among all Florida seaport for trucking and rail operators

Expedite the implementation of recommendations and lessons from the Freight Advanced Traveler Information System (FRATIS) pilot

Champion and support needed freight capacity expansions

Identify and implement projects to eliminate freight bottlenecks

Examine dedicated freight facilities or freight shuttles when existing capacity has been maximized

Explore the appropriate role of marine highways or short-sea shipping

Anticipate future freight facility needs

Examine dedicated facilities for "non-freight" activity that serves to restore capacity for freight movement

Identify and implement safety and security enhancements

Information technology cargo and truck, truck parking, dedicated truck lanes

Employ alternative delivery mechanisms for rest-stops/lay-over areas and other safety-enhancing facilities

Facilitate the safe implementation of autonomous vehicles (driverless vehicles and unmanned space vehicles)



FMTF Objective 2: Increase Operational Efficiency of Goods Movement

Identify and strengthen the critical freight network, and use ITS and other enhancements to increase the efficiency, reliability, safety, and security of freight movements, including under emergency situations

Assess possible freight network disruptions and develop contingency plans or principles that support the logistics industry and disaster response

Conduct periodic strengths, weaknesses, opportunities, and threats (SWOT) analyses of the complete freight and logistics network

FMTF Objective 3: Minimize Costs in the Supply Chain

Support and facilitate the use of more economical and environmentally friendly fuels like LNG and CNG; evaluate new approaches to freight infrastructure financing and regulatory reform; and balance trade flows.

Advance the use of more environmentally friendly alternative fuels

Support and provide fuel site information and locations to LNG and CNG users

Support and facilitate the deployment of CNG/LNG use for hub logistics and long-haul trucking in collaboration with the Florida Department of Agriculture

Explore alternative fuel corridors with suppliers and first-adopters (facilitation to address local issues)

Coordinate initiatives for user conversions as market evolves (via incentives to level playing field)

Evaluate alternative fuel taxing options as a successor to gasoline taxes

Assess impact of alternative tax or user fee proposals

Advocate for regulatory reform and federal inspection agencies staffing to reduce impediments to goods movement (e.g., weight limits)

Support integration and implementation of technology to reduce inspection time

Support manufacturing and assembly that reduces empty backhauling

Expand FTZ benefits to ILCs with potential for manufacturing capacity

Facilitate transportation and CNG/LNG supply to support such ILCs

Strategize with freight forwarders on how to maximize freight forwarding opportunities for goods manufactured in other states for export through Florida ports and airports

FMTF Objective 4: Align Public and Private Efforts for Trade and Logistics

Formalize private sector engagement for freight policy through the Freight Leadership Group and develop frameworks for joint public-private investments in freight facilities.

Formalize CEO Freight Leadership Group from the FMTF Florida Freight Leadership Forum to function in the role of the freight advisory committee encouraged by federal law

Establish freight policy and program input and feedback mechanisms

Convene regularly to discuss and strategize on trade and logistics issues

Devise public-private partnership framework options for joint investments for freight mobility

Focus public investment in long-term infrastructure

Leverage private investment in technology and operational improvements

Solicit public-private partnership for infrastructure investment

Bring business community into transportation planning process

Maintain continuous contact with freight system users via listening sessions, webinars, surveys, etc.



FMTP Objective 5: Raise Awareness and Support for Freight Movement Investments

Coordinate a common language public-private campaign to tell Florida's Freight Story by educating the public, businesses, young people, and elected officials.

Tell the Freight Story – undertake a joint public-private communications campaign

- To educate the public about the importance of freight transportation
- To educate young people about the job opportunities in the freight and logistics field
- To educate and inform elected officials about freight

Develop a common lexicon of freight terms for transportation and business partners to use to minimize confusion over terms

- Identify existing freight terminology dictionary sources
- Encourage private freight sector partners to review and revise periodically

FMTP Objective 6: Develop a Balanced Transportation Planning and Investment Model that Considers and Integrates All Forms of Transportation

Align state, regional, and local initiatives for freight movement, including regional partnership and integration, and strive for consistency of state policies and programs to enhance freight transportation.

Provide transportation and land use planning guidance and direction to local and regional agencies for enhanced economic development and freight efficiencies that support community goals

- In coordination with FDOT Districts, facilitate on-going discussions with private sector stakeholders, MPOs and local agencies on transportation needs and solutions

Coordinate across state agencies to ensure consistency of regulations that impact freight operations and mobility

- Continue to support and collaborate with ITTS/Freight in the Southeast conference

Coordinate and integrate freight-related plans and programs of freight facility owners, local jurisdictions, Metropolitan Planning Organizations (MPOs) and the FDOT (Central Office & Districts) for expedited and informed decision-making

- In coordination with FDOT Districts, facilitate on-going discussions with private sector stakeholders, MPOs and local agencies on transportation needs and solutions

Facilitate and maintain regional partnerships for multi-jurisdictional consensus and collaboration

- In coordination with FDOT Districts, facilitate on-going discussions with private sector stakeholders, MPOs and local agencies on transportation needs and solutions

Assign specific responsibility to FDOT leadership to ensure alignment of state and local freight transportation policies, plans, and programs

- Upon completion of the FMTP, develop and present information to FDOT leadership on topics and matters where policies, programs, and projects may be in conflict or not congruent



FMTP Objective 7: Transform the FDOT's Organizational Culture to Include Consideration of Supply Chain and Freight Movement Issues

Adopt a supply chain perspective for the FDOT's programs and operations with an integrated approach across the modes and inform planning, programming, and operational decisions with freight performance needs.

Integrate modal perspectives with multimodal supply chain perspective

- Add freight factors to Strategic Investment Tool (SIT) prioritization process
- Add freight movement metrics to the FDOT performance measures
- Add criteria for inclusion of ILCs in the SIS
- Position and support emerging freight facilities: spaceports, marine highways, etc.

Instill goods movement perspective in the transportation planning process and decisions

- Revise FDOT policies to incorporate freight movements in planning, design, and operations
- Revise FDOT organization and processes to be more truly multimodal
- Provide freight policy guidance to Districts and local agencies
- Streamline FDOT procedures to respond nimbly to market changes

Prioritize freight projects across the modes

- Establish procedures to identify critical freight infrastructure investments that reflect private sector and local goals and needs
- Leverage freight infrastructure investments to amplify private sector investments
- Establish ROI or value criteria to focus investments
- Develop multimodal investment and decision tools
- Support freight infrastructure investments from the SIS, State Infrastructure Bank (SIB), Transportation Infrastructure Finance and Innovation Act (TIFIA), etc.



Appendix B: Federal Freight Goals

This appendix describes how the 2019 FMTP Update will improve the ability of the State of Florida to meet the National Multimodal Freight Policy Goals and National Highway Freight Program goals is required by the FAST Act.

Safety and Security

- Leverage multisource data and technology to improve freight system **safety** and **security**

Agile, Resilient, Quality

- Create a more **resilient** multimodal freight system.
- Ensure the Florida freight system is in a **State of Good Repair**

Efficient & Reliable Mobility

- Drive innovation to reduce **congestion, bottlenecks** and improve travel time **reliability**

Transportation Choices

- Remove **institutional, policy** and **funding bottlenecks** to improve operational efficiencies and reduce costs in supply chains
- Improve **last mile connectivity** for all freight modes

Economic Competitiveness

- Continue to forge **partnerships** between the **public and private sectors** to improve trade and logistics
- Capitalize on **emerging freight trends** to promote economic development

Quality Places

- Increase freight-related regional and local **transportation planning and land use coordination**

Environment & Conserve Energy

- Promote and support the shift to **alternatively fueled** freight vehicles



<div>FTP Goals</div> <div>2019 FMTP Objectives</div> <div>National Multimodal Freight Policy Goals</div>	Safety and Security	Agile, Resilient, Quality		Efficient & Reliable Mobility	Transportation Choices		Economic Competitiveness		Quality Places	Environment & Conserve Energy
	Leverage multisource data and technology to improve freight system safety and security	Create a more resilient multimodal freight system.	Ensure the Florida freight system is in a State of Good Repair	Embrace innovation to reduce congestion, bottlenecks and improve travel time reliability	Remove institutional, policy and funding bottlenecks to improve operational efficiencies and reduce costs in supply chains	Improve last mile connectivity for all freight modes	Continue to forge partnerships between the public and private sectors to improve trade and logistics	Capitalize on emerging freight trends to promote economic development	Increase freight-related regional and local transportation planning and land use coordination	Promote and support the shift to alternatively fueled freight vehicles
To identify infrastructure improvements, policies, and operational innovations that -- <ul style="list-style-type: none"> Strengthen the contribution of the National Multimodal Freight Network (NMFN) to the economic competitiveness of the United States Reduce congestion and eliminate bottlenecks on the NMFN Increase productivity, particularly for domestic industries and businesses that create high-value jobs 				✓	✓		✓	✓	✓	
To improve the safety, security, efficiency, and resiliency of multimodal freight transportation	✓	✓		✓	✓					
To achieve and maintain a state of good repair on the NMFN			✓							
To use innovation and advanced technology to improve the safety, efficiency, and reliability of the NMFN	✓	✓								
To improve the economic efficiency and productivity of the NMFN				✓	✓			✓		
To improve the reliability of freight transportation		✓		✓	✓	✓				
To improve the short- and long-distance movement of goods that— <ul style="list-style-type: none"> Travel across rural areas between population centers Travel between rural areas and population centers Travel from the Nation’s ports, airports, and gateways to the NMFN 	✓	✓	✓	✓	✓	✓	✓	✓	✓	
To improve the flexibility of States to support multi-State corridor planning and the creation of multi-State organizations to increase the ability of States to address multimodal freight connectivity					✓		✓	✓	✓	
To reduce the adverse environmental impacts of freight movement on the NMFN		✓		✓					✓	✓
To pursue the goals described in this subsection in a manner that is not burdensome to State and local governments	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓



FTP Goals	Safety and Security	Agile, Resilient, Quality		Efficient & Reliable Mobility	Transportation Choices		Economic Competitiveness		Quality Places	Environment & Conserve Energy
	Leverage multisource data and technology to improve freight system safety and security	Create a more resilient multimodal freight system.	Ensure the Florida freight system is in a State of Good Repair	Embrace innovation to reduce congestion, bottlenecks and improve travel time reliability	Remove institutional, policy and funding bottlenecks to improve operational efficiencies and reduce costs in supply chains	Improve last mile connectivity for all freight modes	Continue to forge partnerships between the public and private sectors to improve trade and logistics	Capitalize on emerging freight trends to promote economic development	Increase freight-related regional and local transportation planning and land use coordination	Promote and support the shift to alternatively fueled freight vehicles
2019 FMTP Objectives										
National Highway Freight Program										
To invest in infrastructure improvements and to implement operational improvements on the highways of the United States that— <ul style="list-style-type: none"> Strengthen the contribution of the National Highway Freight Network (NHFN) to the economic competitiveness of the United States Reduce congestion and bottlenecks on the NHFN; Reduce the cost of freight transportation Improve the year-round reliability of freight transportation Increase productivity, particularly for domestic industries and businesses that create high-value jobs 	✓	✓	✓	✓	✓	✓	✓	✓		
To improve the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas	✓	✓	✓	✓	✓	✓				
To improve the state of good repair of the NHFN			✓							
To use innovation and advanced technology to improve the safety, efficiency, and reliability of the NHFN	✓	✓		✓	✓	✓				
To improve the efficiency and productivity of the NHFN	✓	✓	✓	✓	✓	✓	✓	✓	✓	
To improve the flexibility of States to support multi-State corridor planning and the creation of multi-State organizations to increase the ability of States to address highway freight connectivity					✓		✓		✓	
To reduce the environmental impacts of freight movement on the NHFN	✓	✓			✓	✓			✓	✓



Appendix C: List of Florida Plans, Studies and Initiatives

Serial Number	Title	FDOT Office	Project Type	FDOT Region	Year	Other Agencies
1	The Florida Connected Vehicle Initiative	Traffic Engineering and Operations Office	Initiatives	Central Office	Ongoing	-
2	Florida Transportation Plan	Office of Policy Planning	Plan	Central Office	Ongoing	-
3	ITS Strategic Plan	Traffic Engineering and Operations Office	Plan	Central Office	Ongoing	-
4	Statewide Rest Area Long Range Plan	Systems Implementation Office	Plan	Central Office	Ongoing	-
5	2019-2023 Five-Year Florida Seaport Mission Plan	-	Plan	-	2019	Florida Ports Council
6	Connected & Automated Vehicles Business Plan	Traffic Engineering and Operations Office	Plan	Central Office	2019	-
7	Florida Traffic Incident Management (TIM) Strategic Plan	Traffic Engineering and Operations Office	Plan	Central Office	2019	-
8	Florida Transportation Asset Management Plan	Planning	Plan	Central Office	2019	-
9	Strategic Highway Safety Plan	Safety Office	Plan	Central Office	2019	-
10	Florida Strategic Plan for Economic Development	-	Plan	-	2018	Florida Department of Economic Opportunity
11	Rail System Plan	Freight and Multimodal Operations Office	Plan	Central Office	2018	-
12	Spaceport System Plan	Aviation and Spaceports Office	Plan	Central Office	2018	-
13	Tampa Bay Regional Strategic Freight Plan	Freight Logistics and Passenger Operations	Plan	District 7	2018	-
14	Aviation System Plan	Aviation and Spaceports Office	Plan	Central Office	2017	-
15	Florida Seaport/Waterways System Plan	Seaport and Waterways Office	Plan	Central Office	2017	-
16	Motor Carrier System Plan	Freight and Multimodal Operations Office	Plan	Central Office	2017	-
17	Strategic Intermodal System Plans	Systems Implementation Office	Plan	Central Office	2016	-
18	Evaluation of Freight and Transit Signal Priority Strategies in Multi-Modal Corridor for Improving Transit Service Reliability and Efficiency	Freight Logistics and Passenger Operations	Study	Central Office	Ongoing	-
19	Evaluation of Truck Tonnage Estimation Methodologies	Forecasting and Trends Office	Study	Central Office	Ongoing	-
20	Florida Index for Transportation: A System of Systems Approach to Understanding the Changing Nature of Transportation	Forecasting and Trends Office	Study	Central Office	Ongoing	-
21	Incorporating Reliability Measures into the Freight Project Prioritization Decision Support System	Freight and Multimodal Operations Office	Study	Central Office	Ongoing	-
22	Large Truck Crash Analysis for Freight Mobility and Safety Enhancement in Florida	Freight and Multimodal Operations Office	Study	Central Office	Ongoing	-
23	Regional Freight Network Optimization	Freight and Multimodal Operations Office	Study	Central Office	Ongoing	-
24	Truck Parking Availability System	Traffic Engineering and Operations Office	Study	-	Ongoing	-
25	District-Wide Freight Activity Center Connector Definition and Evaluation	-	Study	District 1	2019	-



Serial Number	Title	FDOT Office	Project Type	FDOT Region	Year	Other Agencies
26	Employability Skills Framework	-	Study	-	2019	Florida Chambers of Commerce
27	Estimation of System Performance and Technology Impacts to Support Future Year Planning	Forecasting and Trends Office	Study	Central Office	2019	-
28	Florida Bridge Inventory Report	Office of Maintenance	Study	Central Office	2019	
29	Florida Seaports Resiliency Report	-	Study	-	2019	Florida Ports Council
30	Florida Statewide Economic Impact Study	Freight Logistics and Passenger Operations	Study	-	2019	-
31	MPO Profiles	Forecasting and Trends Office	Study	Central Office	2019	-
32	Northeast Florida Truck Parking Study	-	Study	District 2	2019	-
33	Statewide Truck GPS Data Analysis - Parking Supply and Utilization	Transportation Data and Analytics Office	Study	Central Office	2019	-
34	Truck Taxonomy and Classification Using Video and Weigh-In Motion (WIM) Technology	Transportation Data and Analytics Office	Study	Central Office	2019	-
35	Attracting Distribution Center and Related Logistics Investment to Florida to Anchor Traffic through Florida Ports	-	Study	-	2018	Florida Seaport Transportation and Economic Development Council
36	Commercial Truck Parking Detection Technology Evaluation for Columbia County Rest Area	Traffic Engineering and Operations Office	Study	Central Office	2018	-
37	Driver Assistive Truck Platooning: Considerations for Florida State Agencies	Reports to the Legislature	Study	Central Office	2018	-
38	Economic Analysis Framework for Freight Transportation Based on Florida Statewide Multi-Modal Freight Model	Forecasting and Trends Office	Study	Central Office	2018	-
39	Evaluation of Florida's Inbound and Outbound Freight Imbalance	Freight and Multimodal Operations Office	Study	Central Office	2018	
40	Florida 2030: The Blueprint to Secure Florida's Future	-	Study	-	2018	Florida Chambers of Commerce
41	Florida Aviation Activity Forecast Methodologies and Tools Development	Aviation and Spaceports Office	Study	Central Office	2018	-
42	Florida Seaports are Handling Larger Ships	Seaport and Waterways Office	Study	Central Office	2018	
43	Freight Data Fusion From Multiple Data Sources For Freight Planning Applications In Florida	Forecasting and Trends Office	Study	Central Office	2018	-
44	Panama Canal Expansion and Florida Seaports	Seaport and Waterways Office	Study	Central Office	2018	-
45	Polk County Freight Facility Dataset	Transportation Data and Analytics Office	Study	Central Office	2018	-
46	The FDOT Source Book	Forecasting and Trends Office	Study	Central Office	2018	-
47	Truck Empty Back Haul	Transportation Data and Analytics Office	Study	Central Office	2018	-
48	Analysis of Freight Transport Strategies and Methodologies	Research Office	Study	Central Office	2017	-
49	Automated Data Collection for Origin/Destination Studies of Freight Movement, Phase 2	-	Study	District 5	2017	-
50	Florida Jobs 2030	-	Study	-	2017	Florida Chambers of Commerce
51	Fueling Freight Movement: Emerging Technologies Help Clarify South Florida's Regional Petroleum Supply Chain: Freight Demand Modeling and Data Improvement Implementation Support	Strategic Highway Research Program 2	Study	District 4	2017	-
52	Truck Route Choice Modeling using Large Streams of GPS Data	-	Study	District 7	2017	-
53	Air Cargo Study	Aviation and Spaceports Office	Study	Central Office	2016	-



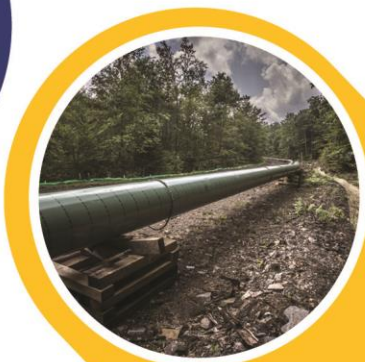
Serial Number	Title	FDOT Office	Project Type	FDOT Region	Year	Other Agencies
54	Evaluation of Logistics Led Economic Development	Transportation Data and Analytics Office	Study	Central Office	2016	
55	Examining the Value of Travel Time Reliability for Freight Transportation to Support Freight Planning and Decision-Making	Freight and Multimodal Operations Office	Study	Central Office	2016	-
56	Florida Trade and Logistics Study 2.0	-	Study	-	2016	Florida Chambers of Commerce
57	Freight Facility Dataset	Transportation Data and Analytics Office	Study	Central Office	2016	-
58	GPS Data for Truck-Route Choice Analysis of Port Everglades Petroleum Commodity Flow	Forecasting and Trends Office	Study	Central Office	2016	-
59	Multimodal Freight Data Inventory and Management	Transportation Data and Analytics Office	Study	Central Office	2016	-
60	SWOT Analysis of Transearch and FAF Data	Transportation Data and Analytics Office	Study	Central Office	2016	-
61	Impact and Feasibility Study of Solutions for Doubling Heavy Vehicles	-	Study	-	2015	United States Department of Transportation
62	Using Truck Fleet Data in Combination with Other Data Sources for Freight Modeling and Planning	Forecasting and Trends Office	Study	Central Office	2014	-



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Freight Mobility and Trade Plan

Technical Memorandum 2
Systems and Assets

April 2020



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Introduction

Florida's freight systems and assets are essential to the efficient movement of goods and commodities across all modes within the state. This technical memorandum provides a comprehensive inventory and description of Florida's freight systems assets. Florida's freight transportation system serves a diverse range of needs by providing for the movement of goods across local, regional, interstate, and international multimodal networks. As such it is imperative to understand the characteristics and locations of existing infrastructure throughout the state in order to assess freight system trends, needs, and issues.

National Freight and Freight Related System Designations

This section provides an overview of all freight and freight related systems that have been designated by national and federal organizations. These systems are listed below:

- National Highway System (NHS)
- National Highway Freight Network (NHFN)
- Interim Multimodal National Freight Network (IMNFN)
- Alternative Fuel Corridors (AFC)
- Foreign Trade Zones (FTZ)
- Pipelines Under the Jurisdiction of the Pipeline and Hazardous Materials Safety Administration (National Pipeline Mapping System (NPMS))

National Highway System

Definition: The National Highway System (NHS) consists of roadways important to the nation's economy, defense, and mobility. It was developed by the U.S. Department of Transportation (USDOT) in cooperation with state DOT's, local officials, and metropolitan planning organizations (MPOs). Regulatory procedures for the system actions on NHS are explained in the Code of Federal Regulations (23 CFR 470).¹ The NHS is inclusive of the following subsystems of roadways (note that a specific highway route may be on more than one subsystem):

- Interstate: The Eisenhower Interstate System of highways retains its separate identity within the NHS.
- Other Principal Arterials: These are highways in rural and urban areas which provide access between an arterial and a major port, airport, public transportation facility, or other intermodal transportation facility.
- Strategic Highway Network (STRAHNET): This is a network of highways which are important to the United States' strategic defense policy and which provide defense access, continuity and emergency capabilities for defense purposes.
- Major Strategic Highway Network Connectors: These are highways which provide access between major military installations and highways which are part of the STRAHNET.
- Intermodal Connectors: These highways provide access between major intermodal facilities and the other four subsystems making up the National Highway System.

Importance to Freight: The NHS consists of interconnected urban and rural principal arterials and highways (including toll facilities) which serve major population centers, international border crossings, ports, airports, public transportation facilities, other intermodal transportation facilities and other major travel destinations. This network also serves interstate and

¹ [NHS Procedures](#)

interregional travel. States are encouraged to utilize federal funds on improving the efficiency and safety of this network. Ultimately, the NHS is one of the most important networks in stimulating and maintaining Florida's economy, as this network carries the most heavy truck traffic linking goods and commerce to and from major population centers and intermodal hubs.

Data Source: Roadway Characteristics Inventory, 2018

Summary Statistics: Figure 1 depicts the statewide coverage of the NHS. Table 1 lists the mileage of different subsystems of NHS roadways in Florida. Table 2 provides the center line mileage, lane mileage, and daily vehicle miles traveled on the Florida portion of the NHS for the year 2018.

Table 1 | National Highway System (NHS) Mileage

Subsystems of roadways	Mileage (as of April 1,2019)
Interstate	1,546
MAP-21 Principal/Minor Arterials	4,345
Other Principal Arterials	2,333
Intermodal Connectors	162
Strategic Highway Network (STRAHNET)	343
Major Strategic Highway Network Connectors	121
Total	8,850

Table 2 | National Highway System (NHS) Mileage (includes State Highway System only)

Roadway Classifications	Center Line Miles	Lane Miles	Daily Vehicle Miles Traveled ('000s)
Rural Interstate	717.3	3,512.2	30,137.3
Rural Toll	175.6	682.6	6,143.9
Rural Other	2,549.2	7,309.3	22,901.6
Urban Interstate	778.0	4,982.9	83,885.0
Urban Toll	473.4	2,399.4	34,287.1
Urban Other	3,514.6	15,587.0	115,221.8
Total	8,208.0	34,473.3	292,576.8



Freight *Mobility* and Trade Plan

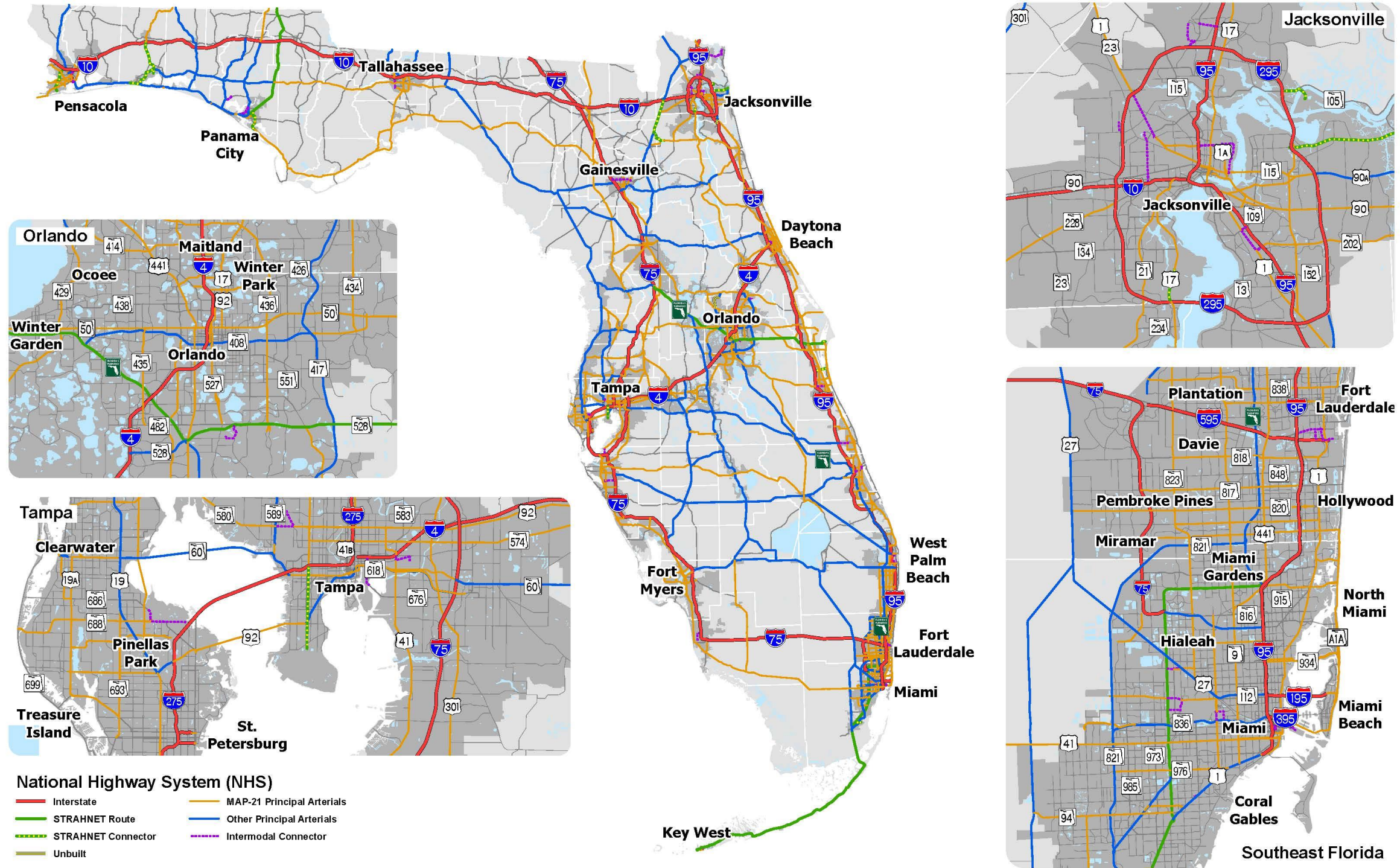


Figure 1 | National Highway System

National Highway Freight Network

Definition: The National Highway Freight Network (NHFN), established by the FAST Act, helps strategically direct resources toward improved system performance for efficient movement of freight on highways. The NHFN includes the following subsystems of roadways:

- **Primary Highway Freight System (PHFS):** This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system.
- **Other Interstate portions not on the PHFS:** These highways consist of the remaining portion of Interstate roads not included in the PHFS. These routes provide important continuity and access to freight transportation facilities.
- **Critical Rural Freight Corridors (CRFCs):** These are public roads not in an urbanized area which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities.
- **Critical Urban Freight Corridors (CUFCs):** These are public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities.

Appendix A describes NHFN designation procedures and the list of all designated CRFCs and CUFCs in accordance with Section 1116 of the FAST Act.

Importance to Freight: This network is expected to assist different states in strategically directing resources toward improved system performance for efficient movement of freight on highways, including the NHS, freight intermodal connectors and aerotropolis transportation systems. The FAST Act established the National Highway Freight Program to improve the efficient movement of freight on the NHFN.

Data Source: Freight and Multimodal Operations Office, 2018

Summary Statistics: Figure 2 depicts the statewide coverage of the NHFN. Table 3 lists the mileage of different subsystems of NHFN roadways in Florida.

Table 3 | Statewide Mileages of National Highway Freight Network

Subsystem of roadways	Statewide Mileages
Primary Highway Freight System (PHFS) Routes	1,538.92
PHFS Intermodal Connectors	61.77
Interstate Not on the PHFS	54.63
Critical Urban Freight Corridors (CUFC)	159.86 (Maximum Allowable Limit = 160.07)
Critical Rural Freight Corridors (CRFC)	309.89 (Maximum Allowable Limit = 320.14)
Total	2,125.07



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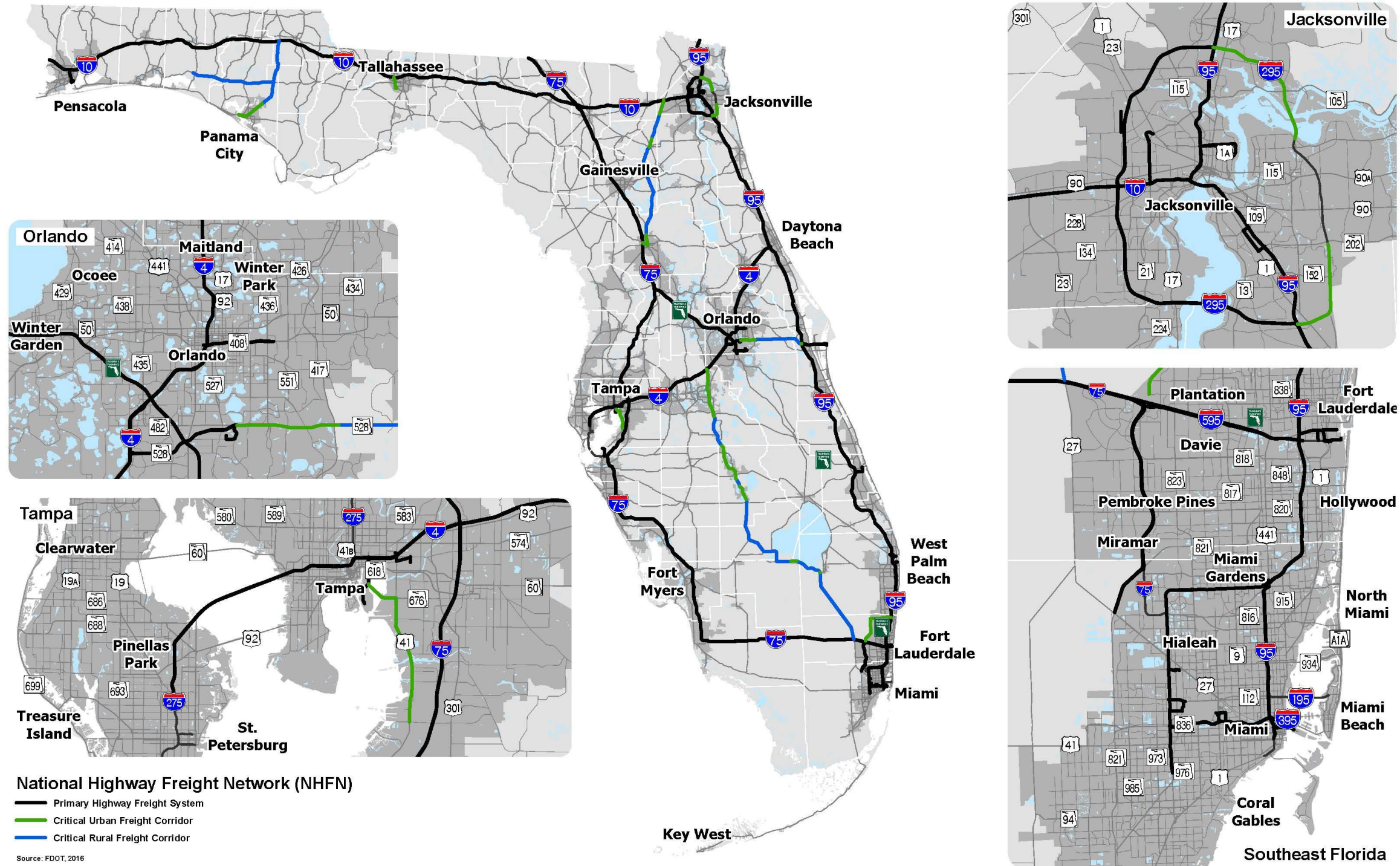


Figure 2 | National Highway Freight Network

Interim National Multimodal Freight Network

Definition: The Interim Multimodal Freight Network (Interim NMFN) is based on the statutory requirements identified in 49 U.S.C. 70103(b)(2)² and includes the National Highway Freight Network, the freight rail systems of Class I railroads, the public ports of the United States that have total annual foreign and domestic trade of at least 2,000,000 short tons, the inland and intracoastal waterways of the United States, the Great Lakes, the St. Lawrence Seaway, and coastal and ocean routes along which domestic freight is transported, the 50 airports located in the United States with the highest annual landed weight, and other strategic freight assets such as railroad connectors and border crossings.

Importance to Freight: Section 70103 of Title 49, U.S.C., established in Section 8001 of the FAST Act, directs the Under Secretary of Transportation for Policy to establish a NMFN that will be used to:

- Assist states in strategically directing resources toward improved system performance for the efficient movement of freight on the NMFN;
- Inform freight transportation planning;
- Assist in the prioritization of federal investment; and
- Assess and support federal investments to achieve the national multimodal freight policy goals and the national highway freight program goals.

Data Source: U.S. Department of Transportation, 2018

Summary Statistics: Table 4 and Figure 3 provide the statewide information for the Interim NMFN.

Table 4 | Statewide Statistics of Interim National Multimodal Freight Network

Subsystem of Roadways	Statewide Statistics
National Highway Freight Network	2,125.07miles
Rail Freight Network Routes	2,142 miles
Ports	7
Domestic Waterway Routes	765 miles
Cargo Airports	4

² [Establishment of Interim National Multimodal Freight Network, 2015](#)



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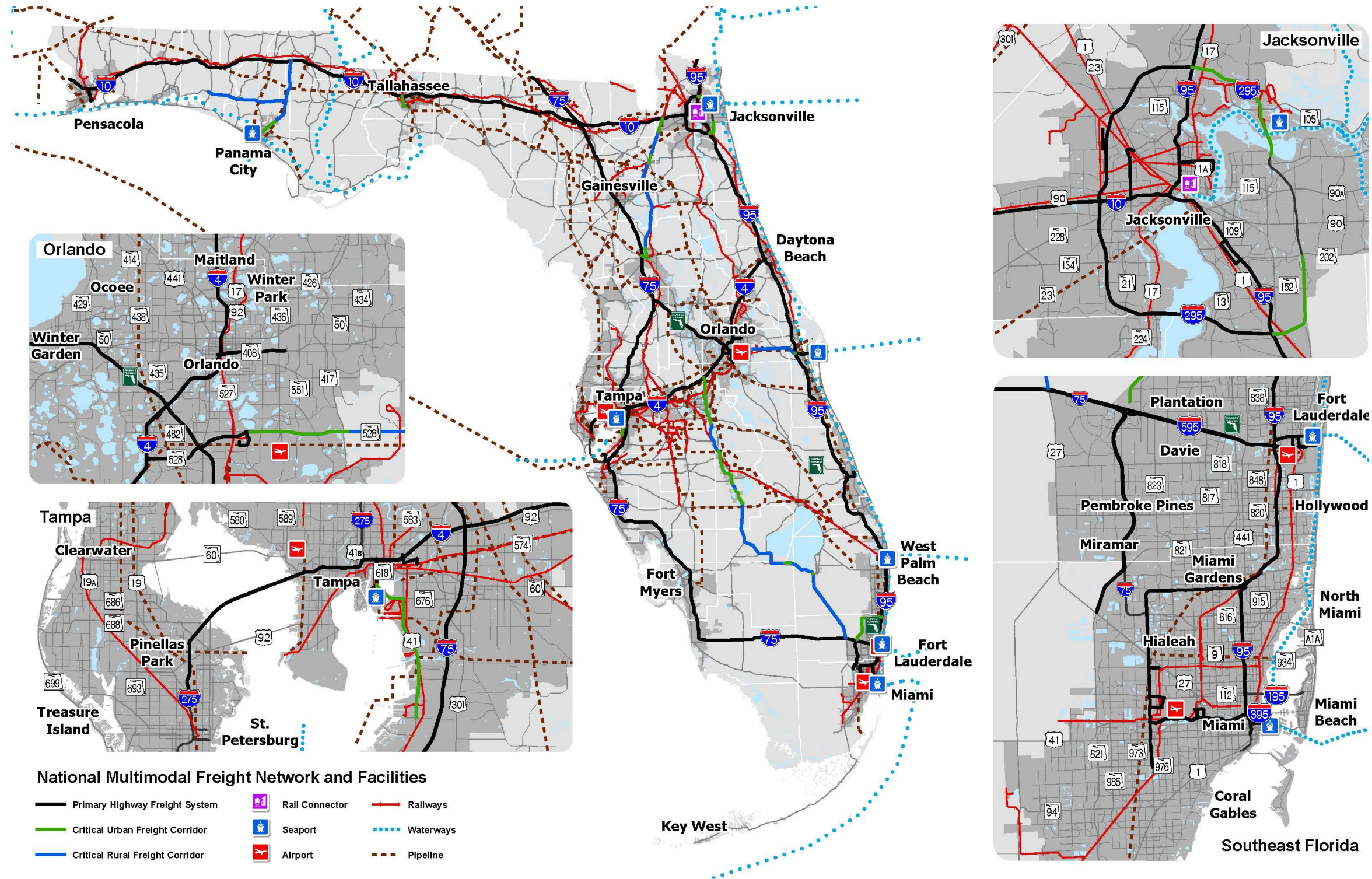


Figure 3 | National Multimodal Freight Network



Alternative Fuel Corridor Designations

Definition: The U.S. Department of Transportation (USDOT) has designated national plug-in electric vehicle charging and hydrogen, propane, and natural gas fueling corridors in strategic locations along major highways to improve the mobility of alternative fuel vehicles. To designate these corridors, USDOT solicits nominations from state and local officials with insight from industry stakeholders. Every five years after the establishment of the corridors, USDOT will update and redesignate the corridors.

Importance to Freight: With the designation of alternative fuel corridors, FHWA has sought to establish a national network of alternative fueling and charging infrastructure along NHS corridors. FHWA intends to support the expansion of this national network through the following process:

- Provide the opportunity for formal corridor designations on an annual basis;
- Ensure that corridor designations are selected based on criteria that promote the "build out" of a national network;
- Develop national signage and branding to help catalyze applicant and public interest;
- Encourage multi-state and regional cooperation and collaboration; and,
- Bring together a consortium of stakeholders including state agencies, utilities, alternative fuel providers, and car manufacturers to promote and advance alternative fuel corridor designations in conjunction with the Department of Energy.

Data Source: Federal Highway Administration, 2016

Summary Statistics: Designated corridors in Florida include I-10, I-295, SR-105 and SR A1A. Table 5 and Figure 4 provide the details of the alternative fuel corridor designations in the state of Florida. Figure 4 also includes the alternative fueling stations locations.

Alternative fuel stations as depicted in Figure 4 include 1,468 Electric (ELEC), 138 Liquefied Petroleum Gas (LPG), 87 E85 Ethanol (E85), 66 Compressed Natural Gas (CNG), 12 Biodiesel (BD) and 4 Liquefied Natural Gas (LNG) stations.

Table 5 | Corridor-Pending and Corridor-Ready Alternative Fuel Corridors (2016)

	Corridor Pending (2016)	Corridor Ready (2016)
Lead Agency	N. Florida TPO	N. Florida TPO
Fuel(s)	EV, CNG, LNG, LPG, H2	EV, CNG, LNG, LPG, H2
EV¹	I-10: From Jacksonville to Lake City, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A	I-95 From FL/GA border to St. Augustine, I-295
CNG²	I-10: From Jacksonville to Lake City, I-95: From FL/GA border to Jacksonville, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A	I-95 From Jacksonville to St. Augustine, I-295 Entire length of highway
LNG³	I-10: From Jacksonville to Lake City, I-95: From FL/GA border to St. Augustine, I-295: Entire length of highway, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A	I-10: From Jacksonville to Lake City, I-95: From FL/GA border to St. Augustine, I-295: Entire length of highway, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A
LPG⁴	I-10: From Jacksonville to Lake City, I-95: From FL/GA border to St. Augustine, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A	I-295
Hydrogen Pending⁵	I-10: From Jacksonville to Lake City, I-95: From FL/GA border to St. Augustine, I-295: Entire length of highway, SR-A1A: From Fernandina Beach to Marineland, SR-105: From Jacksonville @intersection w/I-95 to intersection w/SR-A1A	

¹Includes only DCFC, 50 miles between stations, 5 miles from highway, public stations only, no Tesla facilities

²150 miles between stations, 5 miles from highway, public stations only, fast fill, 3,600 psi

³200 miles between stations, 5 miles from highway, public stations only

⁴150 miles between stations, 5 miles from highway, public stations only, primary stations only

⁵100 miles between stations, 5 miles from highway, public stations only (includes non-road facilities that are compliant with SAE J2601 standards)





Foreign Trade Zones

Definition: A Foreign Trade Zone (FTZ) is a secure area under the supervision of the Bureau of Customs and Border Protection (CBP). FTZs are considered outside the customs territory of the United States for the purposes of payment of duty. The authority for establishing zones is granted by the Foreign Trade Zone Board, under the Foreign-Trade Zones Act of 1934, as amended (19 U.S.C. 81a-81u), and the FTZ Board's regulations (15 C.F.R. 400).

Importance to Freight: The purpose of establishing FTZs is to "expedite and encourage foreign commerce and other purposes." The FTZ Act is administered in the context of evolving U.S. economic and trade policy and economic factors relating to international competition.

Data Source: Foreign Trade Zone Board, 2017

Summary Statistics:³

- Florida has the 2nd largest FTZ Network in the United States.
- Florida is ranked 8th in the US for exports (\$) and 20th for merchandise received (\$).
- For warehouse and distribution activity Florida is ranked 3rd in the US for exports (\$) and 11th for merchandise received (\$).
- For production activity, Florida is ranked 18th in the US for exports (\$) and 19th for merchandise received (\$).
- For warehouse and distribution activity (\$) Broward County (Zone 25) is ranked 4th, Miami-Dade County (Zone 281), is ranked 7th, Miami (Zone 32) is ranked 19th, and Orlando (Zone 42) is ranked 21st out of all zones in the US for exports. Broward County (Zone 25) is ranked 22nd out of all zones in the US for merchandise received.
- The major products by value include oil/petroleum (39%), vehicles (14%), machinery/equipment (10%), beverage/spirits (10%) and consumer products (8%).

³ 79th Annual Report of the Foreign-Trade Zones Board to the Congress of the United States



Table 6 provides the list of Foreign Trade Zones in the state. Figure 5 provides the locations.

Table 6 | Florida Foreign Trade Zones

Foreign Trade Zones (FTZ) Number	Merchandise Received	Exports	Employees
FTZ No. 25 Broward County	\$1,000-5,000 Mil	\$1,000-5,000 Mil	501-750
FTZ No. 32 Miami	\$500-750 Mil	\$250-500 Mil	1,501-2,000
FTZ No. 42 Orlando	\$500-750 Mil	\$250-500 Mil	151-250
FTZ No. 64 Jacksonville	\$1,000-5,000 Mil	\$100-250 Mil	1,001-1,250
FTZ No. 65 Panama City	\$100-250 Mil	\$0	501-750
FTZ No. 79 Tampa	\$750-1,000 Mil	\$25-50 Mil	251-500
FTZ No. 135 Palm Beach County	\$1-5 Mil	\$1-5 Mil	51-75
FTZ No. 136 Brevard County	\$250-500 Mil	\$1-5 Mil	26-50
FTZ No. 166 Homestead	\$0	\$0	0
FTZ No. 169 Manatee County	\$0	\$0	0
FTZ No. 180 Miami (Wynwood)	NA	NA	NA
FTZ No. 193 Pinellas County	\$50-75 Mil	\$50-75 Mil	501-750
FTZ No. 198 Volusia County	\$0	\$0	0
FTZ No. 213 Fort Myers	\$75-100 Mil	\$5-10 Mil	26-50
FTZ No. 215 Sebring	\$0-.5 Mil	\$0	1-25
FTZ No. 218 St. Lucie County	\$.5 Mil-1 Mil	\$.5 Mil-1 Mil	1-25
FTZ No. 241 Fort Lauderdale	\$100-250 Mil	\$100-250 Mil	51-75
FTZ No. 249 Pensacola	\$1000-5,000 Mil	\$0	251-500
FTZ No. 250 Seminole County	\$25-50 Mil	\$5-10 Mil	1-25
FTZ No. 281 Miami-Dade County	\$1,000-5,000 Mil	\$500-750 Mil	1,251-1,500
FTZ No. 292 Lake County	\$0	\$0	0



Freight Mobility and Trade Plan

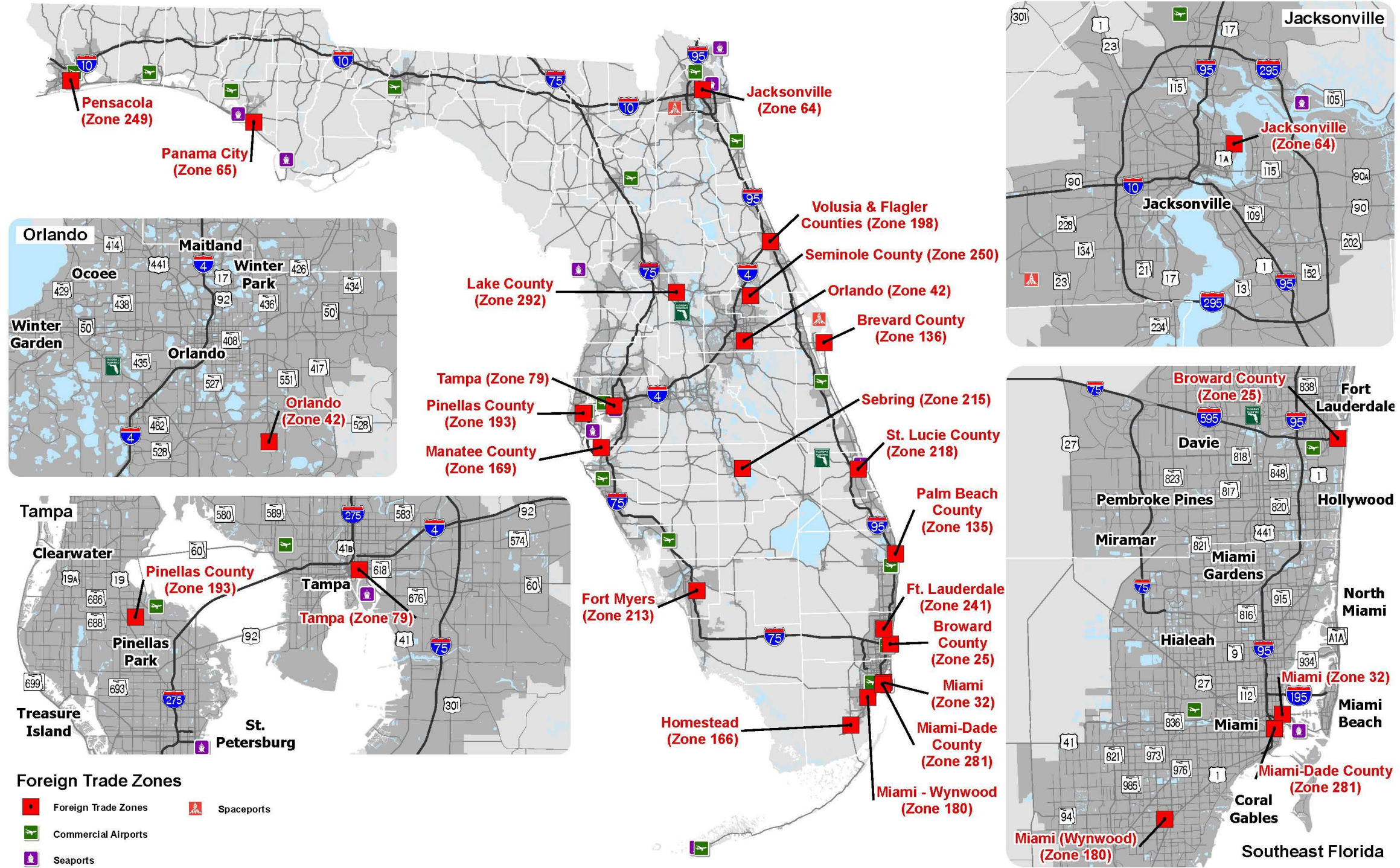


Figure 5 | Foreign Trade Zones in Florida

Pipelines

The National Pipeline Mapping System (NPMS) contains hazardous liquid and gas transmission pipelines. The gas transmission and hazardous liquid mileage is provided in Table 7 below. This summary of mileage by county includes all pipelines in the NPMS categorized as active (pipelines categorized as 'permanently abandoned' are not included in the mileage).

Data Source: National Pipeline Mapping System (NPMS), 2019

Table 7 | Top 10 Counties by Pipeline Mileage (Gas Transmission or Hazardous Liquid)

County Name	Gas Transmission Mileage	County Name	Hazardous Liquid Mileage
Polk	405.5	Hillsborough	139.79
Hillsborough	273.28	Polk	125.5
Palm Beach	247.22	Osceola	29
Santa Rosa	193.18	Escambia	26.38
Brevard	173.93	Palm Beach	24.37
Marion	173.42	Broward	22.92
Osceola	163.2	Orange	18.71
Suwannee	155.98	Santa Rosa	16.32
Levy	152.7	Miami-Dade	16
Martin	151.06	Martin	13.71
Florida	5447.95	Florida	450.09

Source: National Pipeline Mapping System (NPMS) as of 6/25/2019

Transmission of all anhydrous ammonia is operated by Tampa Bay Pipeline Co. Additionally, Tampa Bay Pipeline Co. transports anhydrous ammonia to three major plants serving an integral part of Florida's fertilizer industry. Transmission of all crude oil is operated by Genesis Pipeline USA, L.P. The fuel grade ethanol is transmitted by Central Florida Pipeline Corp. Nearly 26 different operators play a role in natural gas transmission in Florida. Florida Gas Transmission Co., operates the majority, with 70.9% of all the natural gas pipelines. Six operators handle non-Highly-Volatile Liquids (HVL) products. Central Florida Pipeline Corp. (47.51%), Florida Power and Light Co. (25.77%) and Buckeye Partners, L.P. (18.79%) manage the majority of pipelines transmitting non-HVL products. Approximately 97% of Florida's population is located in counties served by natural gas.

Florida ranks 3rd nationally for total energy consumption and uses 894 billion cubic feet of natural gas annually, with roughly 85% attributed to the generation of electricity. Natural gas has a wide range of applications. Homes and businesses use natural gas for heat-intensive



applications, such as water heating, cooking, clothes drying, grilling, pool/spa heating, etc. Common industrial uses include manufacturing, agriculture, and standby power generation. A large percentage of Florida's natural gas consumption is used for electric power generation. In 2008, natural gas provided 47% of the state's electric utility generation and by 2018 this had grown to 72%. This growth has also been supported by natural gas pipeline expansion. According to the Energy Information Administration's (EIA) Natural Gas Pipeline State-to-State Capacity database, natural gas pipeline delivery capacity to Florida increased from 4.1 billion cubic feet per day (bcf/d) in 2008 to 6.2 bcf/d in 2018, up 50%. Natural gas is also rapidly gaining momentum as an alternative transportation fuel. Figure 6 provides pipeline mileage by commodity type.

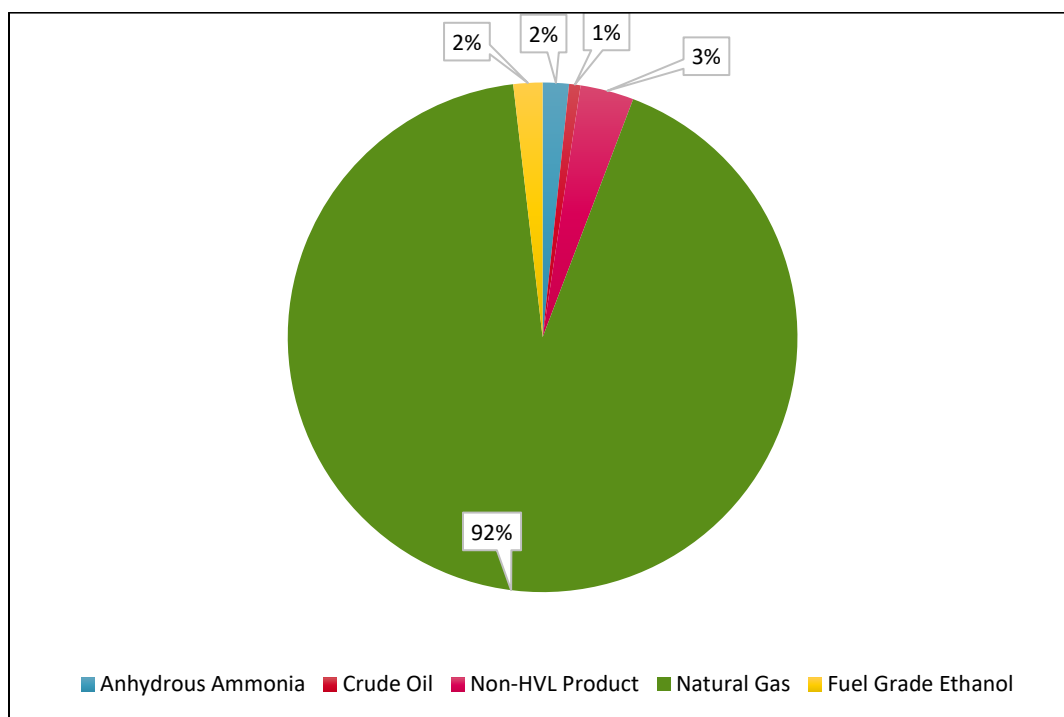


Figure 6 | Percent of Pipeline Mileage by Commodity Type



Statewide Freight and Freight Related System Designations

This section provides an overview of all freight and freight related systems that have been designated by the state of Florida. These systems are listed below:

- Strategic Intermodal System (SIS)
- Functional Classification
- State Highway System (SHS)
- Rail Network
- Intermodal Logistics Centers (ILCs)

Strategic Intermodal System

Definition: The Strategic Intermodal System (SIS) is Florida's high priority network of transportation facilities most important to the state's economy and mobility. The Governor and Legislature established the SIS in 2003 to focus the state's transportation resources on the facilities most significant for interregional, interstate and international travel. The SIS is the state's highest priority for transportation capacity investments and a primary focus for implementing the Florida Transportation Plan (FTP), the state's long-range transportation vision and policy plan.

Importance to Freight: The SIS includes the state's largest and most significant commercial service and general aviation airports, spaceports, public seaports, intermodal freight terminals, rail corridors, waterways, and highways. SIS facilities are the workhorses of Florida's transportation system and account for a dominant share of the people and freight movement to, from, and within Florida. The SIS also includes facilities that have strategic growth importance. All facilities designated on the SIS are eligible for state transportation investments consistent with the policy framework defined in the SIS Policy Plan.

Data Source: Systems Implementation Office, 2019

Summary Statistics: Figure 7 depicts the statewide coverage of new SIS network designations which include the SIS and strategic growth SIS network. As of September 2019, the documentation for new SIS designations are in the draft phase.



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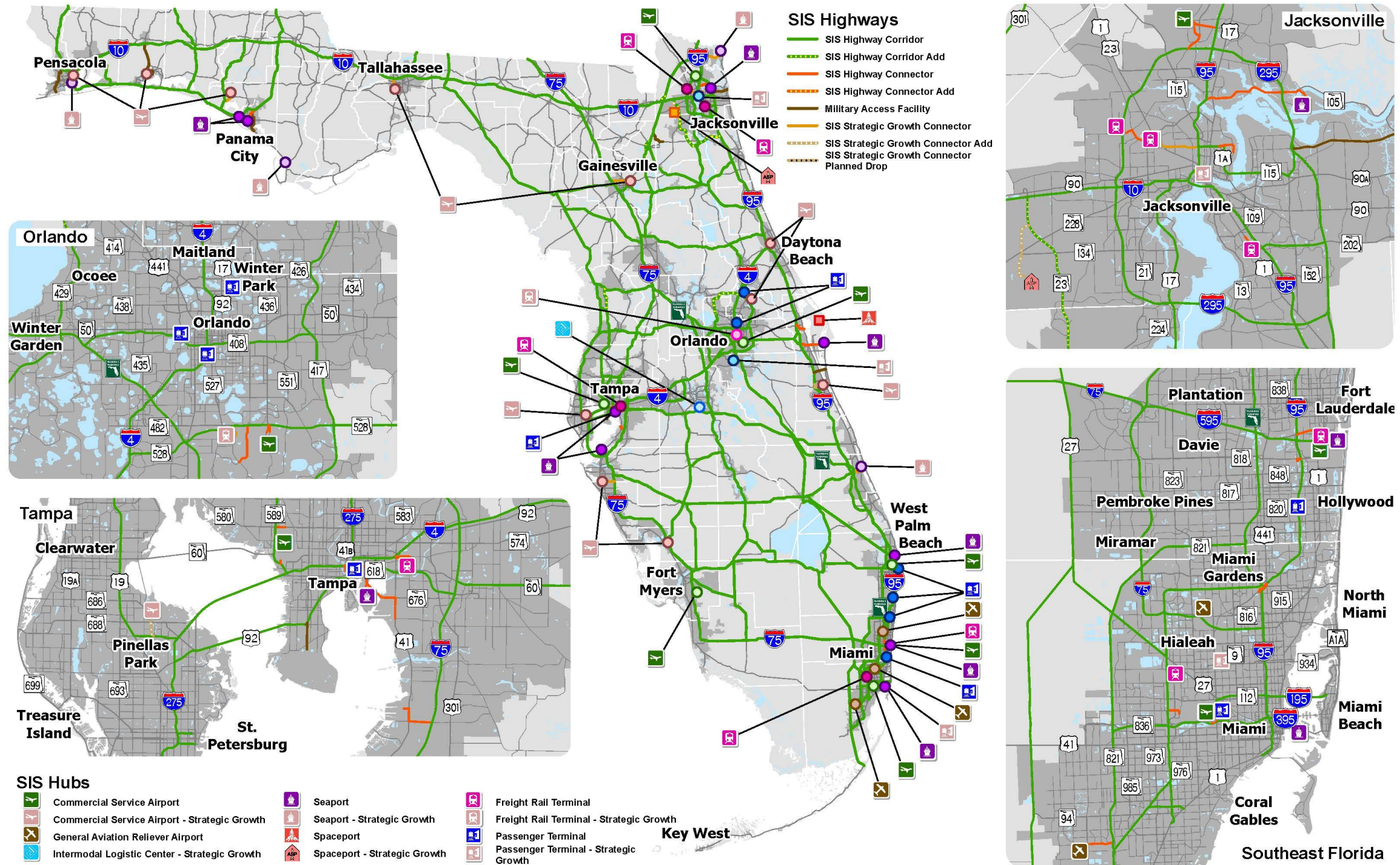


Figure 7 | Strategic Intermodal System

Functional Classification

Definition: Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the service they are intended to provide. Five functional classification categories are common to rural and urban roads. The rural or urban designation is part of the complete functional classification designation. The procedure is developed by the FDOT.⁴ They are classified in the following categories:

- Principal Arterial (Urban and Rural)
- Minor Arterial (Urban and Rural)
- Major Collector (Urban and Rural)
- Major Collector (Urban and Rural)
- Minor Collector (Urban and Rural)
- Local (Urban and Rural)

Importance to Freight: These functional classifications are important as many of the principal categories of the functional classification system roads become a part of NHS, SIS and other major designations.

Data Source: Transportation Data and Analytics, Annual SHS Mileage Reports, 2018

<https://www.fdot.gov/statistics/mileage-rpts/default.shtm#SHS>

Summary Statistics: Table 8 and Figure 8 depict the coverage of the functional classification system for the state.

Table 8 | Functional Classification Mileages (2018)

Roadway Classifications	Center Line Mileage	Lane Miles	Daily VMT (1000s)
Rural Principal Arterial	3,479.60	11,579.00	59,569.70
Rural Minor Arterial	1,762.10	3,632.50	8,080.60
Rural Major Collector	404.9	813.5	1,062.80
Rural Minor Collector	0	0	0.00
Urban Principal Arterial	4,783.40	23,070.50	234,284.30
Urban Minor Arterial	1,504.80	4,938.20	29,567.90
Urban Total Collector	165	381.4	1,624.30
Total	12,099.80	44,415.10	334,189.60

⁴ [Urban Boundary and Functional Classification of Roadways \(Topic Number: 525-020-311-b\), 2018](#)



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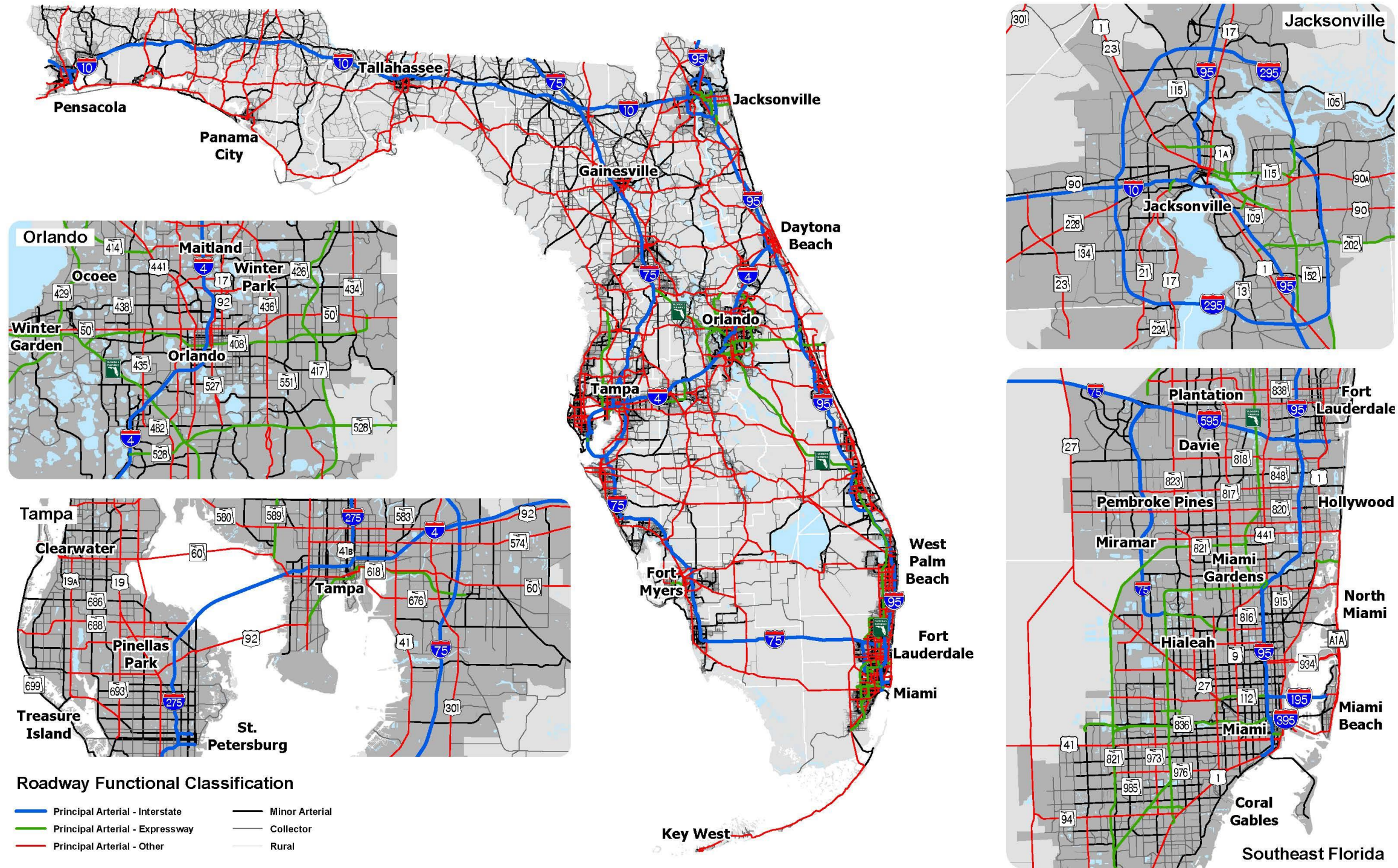


Figure 8 | Roadway Functional Classification

State Highway System

Definition: The State Highway System (SHS) includes roadways under the jurisdiction of the FDOT, state-chartered expressway authorities, and other state agencies. Per FS. 335.02, FDOT, state-chartered expressway authorities, and other state agencies have the authority to designate roads as part of the SHS. The procedure and handbooks are developed by the FDOT.⁵

Importance to Freight: By designating through the SHS, Florida is able to maintain and monitor its roadways for an efficient, reliable, and safe system that ensures mobility of people and goods.

Data Source: Roadway Characteristics Inventory, 2018

Summary Statistics: Table 9 provides the center line mileage, lane mileage and daily vehicle miles traveled on SHS for 2018.

Table 9 | State Highway System Mileages (2018)

Subsystems	Center Line Mileage	Lane Miles	Daily VMT (1000s)
Interstate - Rural	717.3	3,512.20	30,137.30
Toll - Rural	188.3	710.8	6,254.90
Other - Rural	4,741.30	11,802.50	32,321.60
Interstate - Urban	778	4,982.90	83,885.00
Toll - Urban	490	2,451.80	34,613.70
Other - Urban	5,188.50	20,964.00	147,003.70
Total	12,103.40	44,424.20	334,216.20

Rail Network

As per the Association of American Railroads (AAR), in 2017, Florida ranked 23rd in the country for total number of railroads (15 freight railroads) and ranked 24th in the country for railroad mileage (with 2,700+ miles of mainline railroads). Railroads are classified based on their annual operating revenues. The class to which a carrier belongs is determined in accordance with the following revenue thresholds:

- Class I railroads have annual carrier operating revenues of greater than \$250 million.
- Class II railroads have annual carrier operating revenues less than \$250 million but more than \$20 million.
- Class III railroads have annual carrier operating revenues of less than \$20 million.

Florida's freight rail system is operated by two Class I railroads (CSX Transportation and Norfolk Southern Corp.), one Class II railroad, and multiple Class III railroads that are further categorized

⁵ [Transportation System Jurisdiction and Numbering \(525-020-010-h\), 2016](#)

as switching and terminal railroads or short lines. Florida has 3,843 miles of railroads, including 2,742 miles of mainline. CSX is the largest railroad in the state, owning over 50% of total rail mileage. The Florida East Coast (FEC) is the second largest railroad owner at 15%, although some mileage is operated by a short line. FDOT is the third largest owner, though all its mileage is operated by others. Table 10 and Figure 9 provide the statewide mileages and statewide coverage of the rail network.

Data Source: Florida Department of Transportation, 2018

Table 10 | Statewide Mileages of the Rail Network

Subsystem of Railroads	Statewide Mileages
CSX Transportation	2,057
Norfolk Southern Railway	126
Florida East Coastal Railway	561
Short Lines	819
Florida DOT	137
Other	142
Total Mileage	3,843

As of September 2018, there are a total of 5,324 open highway-rail crossings in the state. 92% of those are at-grade crossings, while the other 8% are instances where tracks go under or over a road. Out of all the crossings in the state, 75% are public.

The Strategic Rail Corridor Network (STRACNET) is another designated rail network which is important to the United States' strategic defense policy and which provides defense access, continuity, and emergency capabilities for defense purposes.



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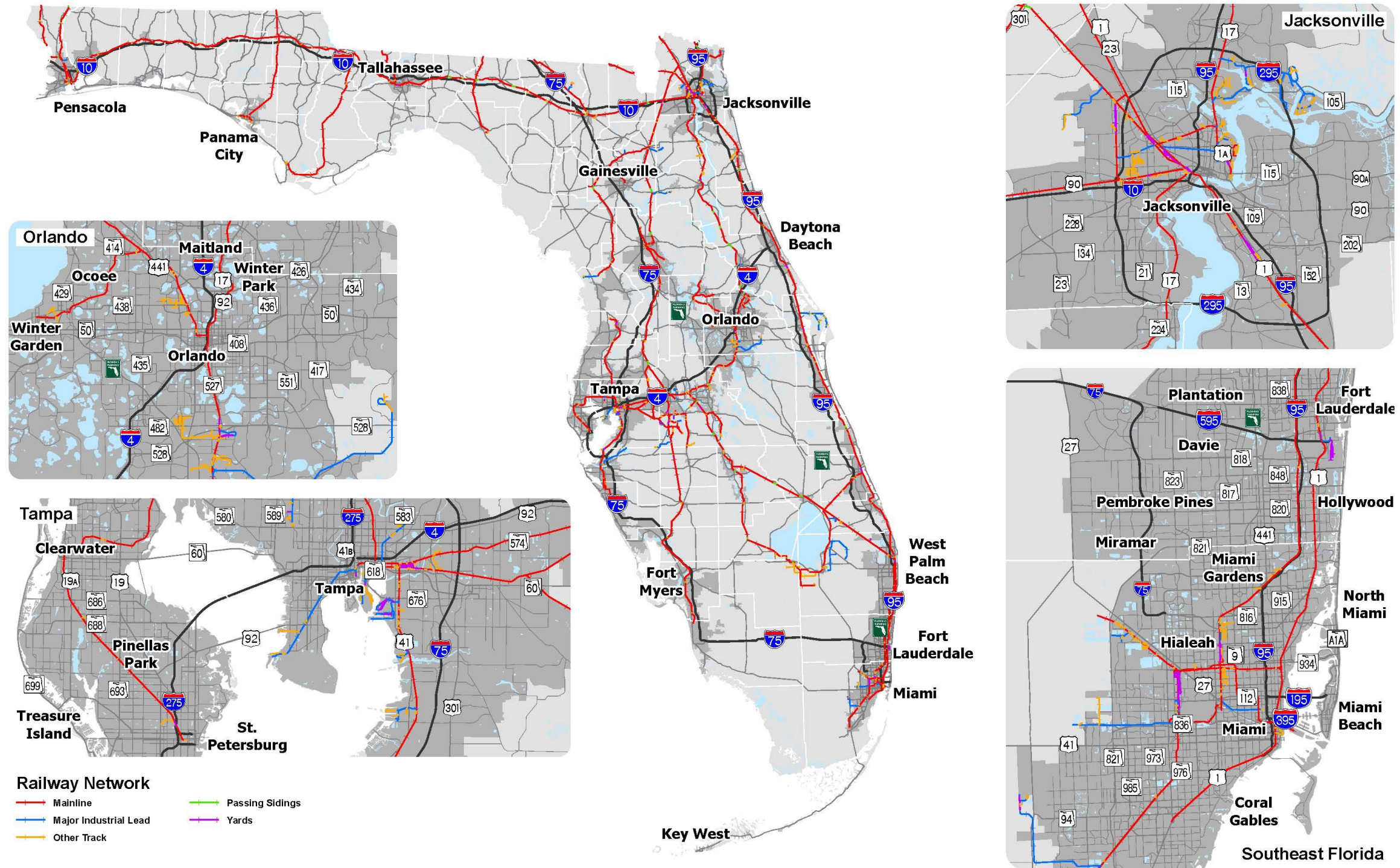


Figure 9 | Statewide Rail Network



Intermodal Logistics Centers

Definition: According to Section 311.101(2), F.S.: the term “intermodal logistics center (ILC)” means a facility or group of facilities serving as a point of intermodal transfer of freight in a specific area physically separated from a seaport where activities relating to transport, logistics, goods distribution, consolidation, or value-added activities are carried out and whose activities and services are designed to support or be supported by conveyance or shipping through one or more seaports listed in S. 311.09, F.S.

Importance to Freight: The purpose of the ILC Infrastructure Support Program is to provide funds for roads, rail facilities, or other means for the conveyance or shipment of goods through a seaport to or from an ILC. To be considered eligible for funding under the ILC Infrastructure Support Program, a project must meet the criteria established in Section 311.101(3), F.S., and in 14-118 FAC. Past projects have included infrastructure enhancements such as road construction, rail expansion, and dock improvements. ILCs are a SIS hub designation and the criteria are part of overall SIS designations.

Currently the Central Florida Intermodal Logistics Center is designated as SIS ILC-Strategic growth.

Multimodal Critical Rural Freight Corridors and Facilities

The multimodal critical rural freight corridors and facilities are identified in multiple national and statewide designations as identified below:

- Interim National Multimodal Freight System (Figure 3)
- Strategic Intermodal System (SIS) (Figure 7)
- Multi-use Corridors of Regional Economic Significance (M-CORES)

Figure 3 and Figure 7 highlight the multimodal critical urban and critical rural freight corridors and facilities.

The Multi-use Corridors of Regional Economic Significance (M-CORES) program is intended to revitalize rural communities, encourage job creation and provide regional connectivity while leveraging technology, enhancing the quality of life and public safety, and protecting the environment and natural resources. The program was signed into law by Governor Ron DeSantis on May 17, 2019. The intended benefits include, but are not limited to, addressing issues such as:

- Hurricane evacuation
- Congestion mitigation
- Trade and logistics
- Broadband, water and sewer connectivity



- Energy distribution
- Autonomous, connected, shared and electric vehicle technology
- Other transportation modes, such as shared-use non-motorized trails, freight and passenger rail, and public transit
- Mobility as a service
- Availability of a trained workforce skilled in traditional and emerging technologies
- Protection or enhancement of wildlife corridors or environmentally sensitive areas
- Protection or enhancement of primary springs protection zones and farmland preservation areas

The three corridors as part of M-CORES (Figure 10) are as follows:

- The Suncoast Connector, extending from Citrus County to Jefferson County
- The Northern Turnpike Connector, extending from the northern terminus of Florida's Turnpike northwest to the Suncoast Parkway
- The Southwest-Central Florida Connector, extending from Collier County to Polk County



Freight *Mobility* and Trade Plan

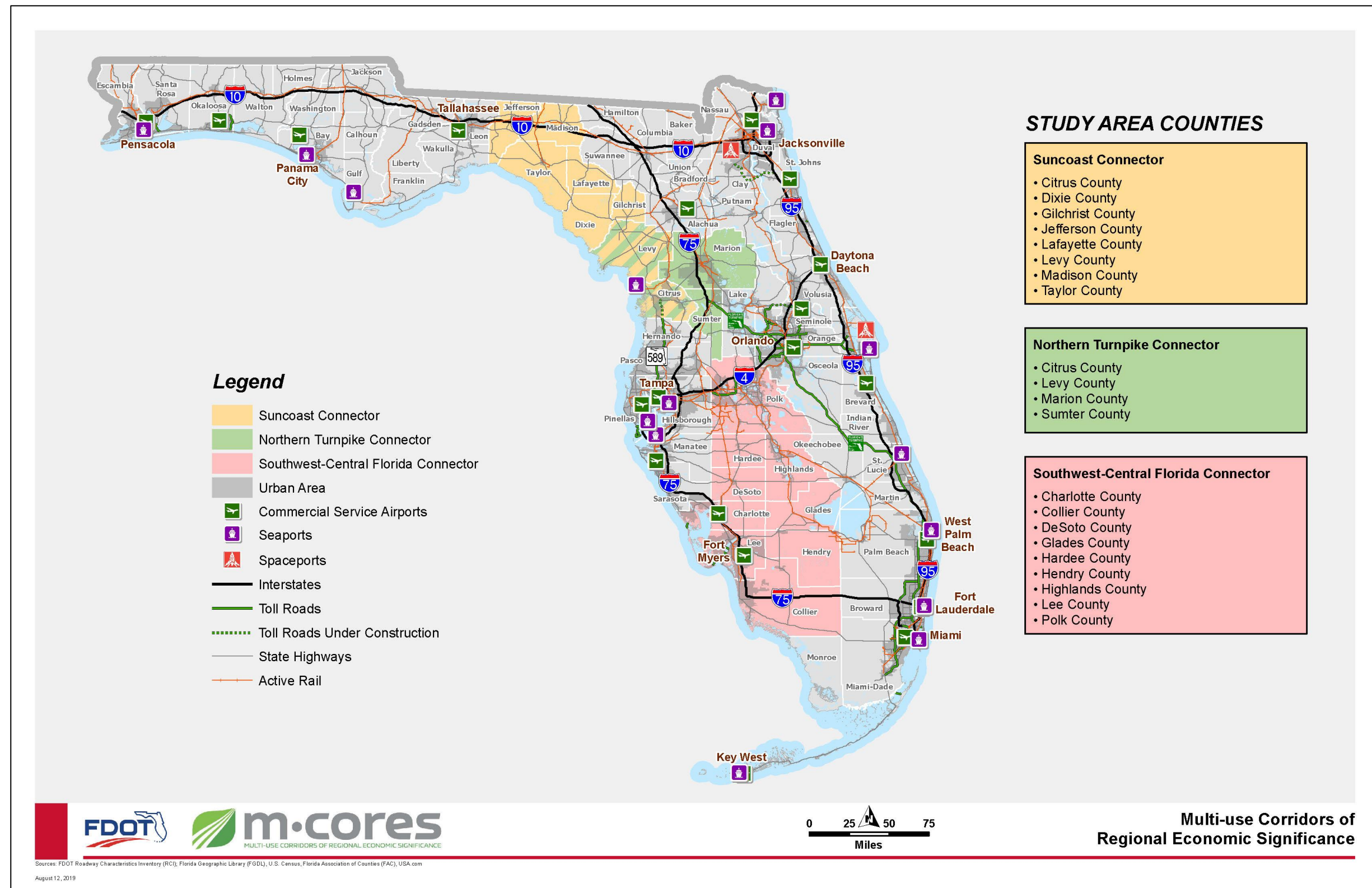


Figure 10 | Multi-Use Corridors of Regional Economic Significance

Transportation Assets

In addition to national and state designated systems, Florida has a wide array of transportation assets that enable the movement of goods and services to help stimulate and support Florida's freight economy. Investment in transportation assets is essential to building and maintaining these critical resources. The transportation assets listed below are detailed in this document:

- All public roadways
- Bridges
- Weigh In Motion (WIM) and Telemetered Traffic Monitoring Sites (TTMS) maintained by FDOT's Traffic Data and Analytics (TDA) Office, Agricultural Inspection Stations, and Motor Carrier Size and Weight Inspection Stations (MCSAW)
- Truck Parking Supply
- Transportation Hubs
- Freight Intensive Areas

All Public Roadways

The following is a summary of the existing public road mileage in Florida as required by Section 402 c of Title 23, United States Code. From 2017 to 2018 there has been an increase of 250.5 miles of public roadways across Florida. Table 11 provides a breakdown of mileages for different roadway system ownership. To date, most population centers are linked by paved roadways and virtually all economic hubs are connected by major highways. Figure 11 provides annual trends for centerline mileage, lane miles, and daily vehicle miles traveled from 1991 to 2018. Trends indicate that VMT has grown at a higher rate than the increased capacity provided by FDOT investments.

Data Source: Roadway Characteristics Inventory, 2018

Table 11 | Certified Public Roadway Mileage (2018)

Roadway System Ownership	Miles
State Highway System	12,103.4
County Road System	70,372.1
City Street System	38,339.3
Bureau of Indian Affairs Roads	183.6
Indian Nation Roads	28.9
USDA Forest Service Roads	1,244.4
National Park Service Roads	189.0
US Army Corps of Engineers Roads	32.2
US Army Roads (other)	6.5
US Department of Defense Roads (Excluding Army)	415.0
US Fish and Wildlife Service Roads	124.5
National Aeronautics and Space Administration Roads	60.0
Total Mileage	123,098.9

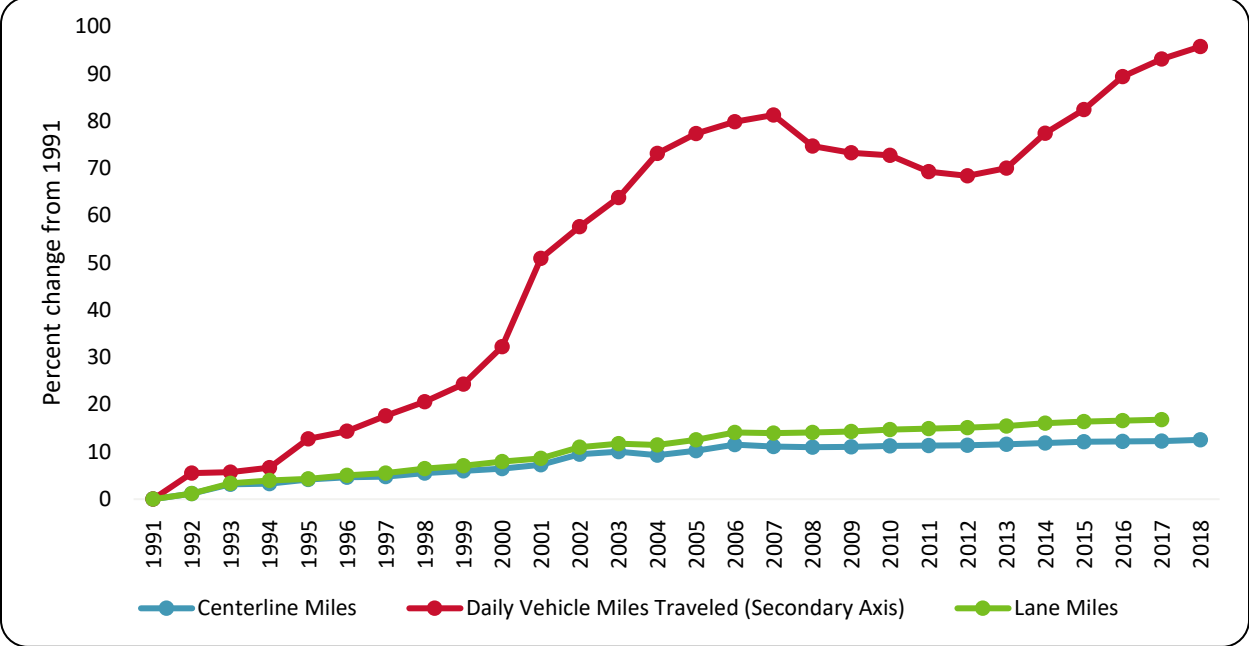


Figure 11 | Percent Change in Center Line Miles, Lane Miles and Daily Vehicle Miles Traveled (Base Year: 1991)

Bridges

Bridges are a key component of Florida’s transportation assets. Maintaining their integrity is critical for the safe and efficient travel of freight across transportation networks. As per the 2019 Florida Bridge Information report⁶, there are more than 12,000 bridges in the state of Florida. Table 12 provides the number of bridges owned by different entities/agencies.

⁶ [Florida Bridge Information, 2019 3rd Quarter](#)

Table 12 | Number of Bridges by Ownership

Owner	Number of Bridges
State Highway Agency	5659
County Highway Agency	3904
City or Municipal Highway Agency	1219
Turnpike	758
State Toll Authority	560
State Park, Forest or Reservation	123
Other Local Agency	81
Other State Agency	43
Private	38
Town/Township	33
Local Toll Authority	18
Indian Tribal	4
Local Park	1
Total	12,441

Weigh in Motion, Telemetered Traffic Monitoring Sites, Agricultural Inspection Sites, and Motor Carrier Size and Weigh Stations

Information on the truck traffic volume, truck weight, and truck cargo that traverses Florida's transportation system is essential to understanding existing travel conditions and maintaining the safe passage of trucks and cargo across Florida's roadways. Florida coordinates truck volume data collection via a number of state and local entities tasked with monitoring the flow of traffic along essential public roadways. The state oversees the protection of Florida's agricultural commerce by inspecting trucks carrying agricultural products. Additionally, the state maintains the safe condition of highways and bridges by ensuring truck weight and dimension compliance.

The Transportation Data and Analytics (TDA) office coordinates the collection of traffic data on all state highways and many highways not on the State Highway System.⁷ Depending on location, traffic data may include daily counts, vehicle classification, speeds, weight, and direction. The TDA office operates a network of around 300 continuous traffic monitoring sites for daily transmittal of data. The TDA office also coordinates the collection of short-duration traffic studies at thousands of sites by FDOT District personnel. Figure 12 depicts the coverage of TDA continuous traffic monitoring sites (WIM and TTMS) across the state of Florida.

⁷ [Traffic Monitoring Procedure\(525-030-150-d\), 2013](#)



Freight *Mobility* and Trade Plan

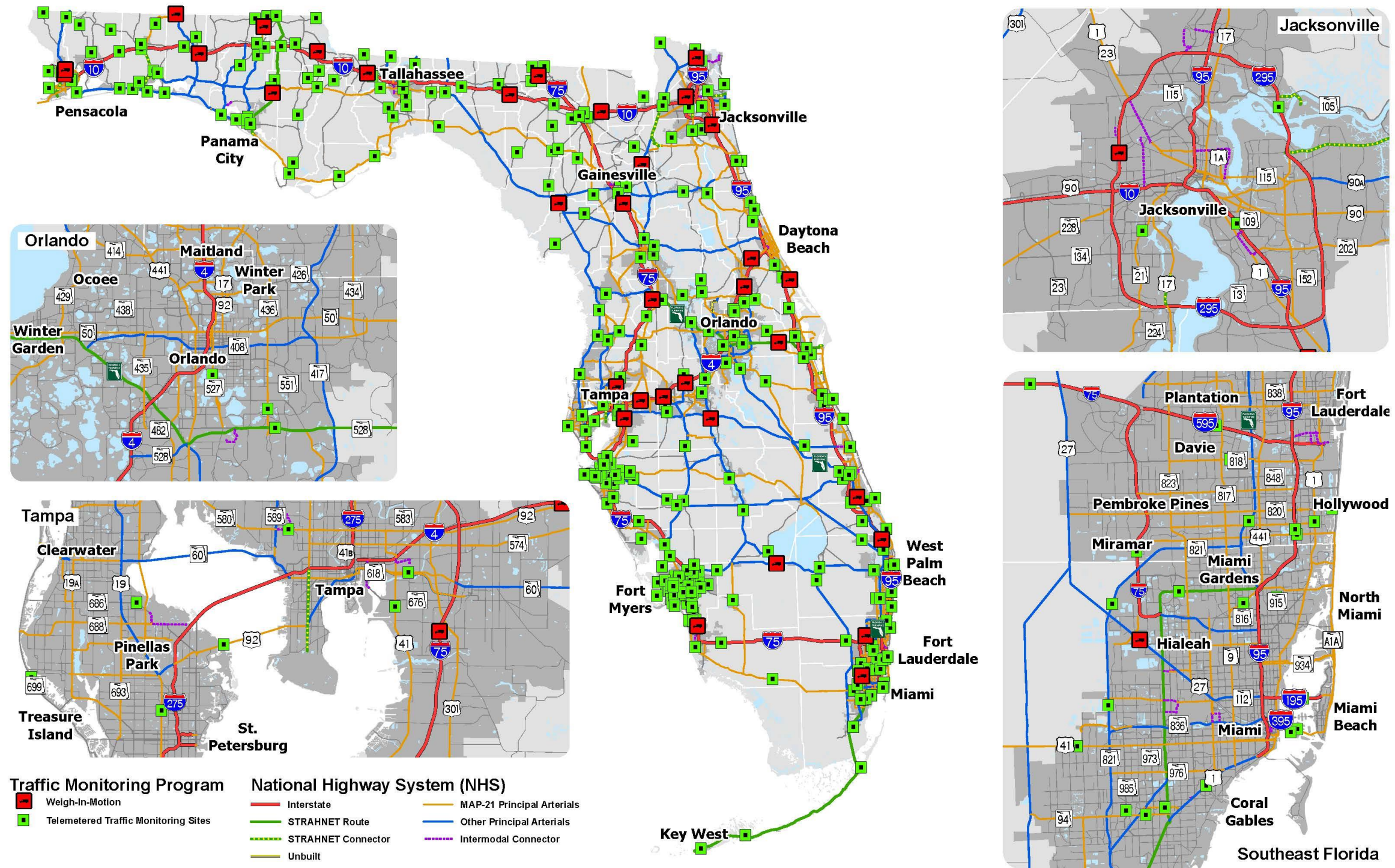


Figure 12 | TDA WIM and TTMS Sites

The Florida Department of Agriculture and Consumer Services' Office of Agricultural Law Enforcement operates 23 agricultural inspection stations⁸ to protect Florida's agriculture and ensure a safe food supply. An agricultural inspection station is located on every paved highway going in and out of the state. These stations are operated 24 hours a day, 365 days a year and are expected to monitor all agricultural commerce traversing via truck in and out of Florida. They are staffed by law enforcement officers whose main duty is to prevent plant and animal pests, diseases, and unsafe food from entering Florida. Trucks, rental trucks, vans, trailers, and any vehicles carrying agricultural, horticultural, or livestock products must stop at an inspection station. FDOT's Motor Carrier Size and Weight (MCSAW) stations fulfill their mission of providing a safe transportation system by performing commercial vehicle size and weight enforcement. The primary purpose of the MCSAW weight enforcement program is to protect Florida's highway system and bridges from being damaged by overweight vehicles. Vehicles are weighed at the 20 fixed weigh station⁹ locations, and targeted enforcement is possible with portable scales statewide.

Truck Parking Supply

According to a study conducted by the TDA office,¹⁰ a total of 298 truck parking locations exist across the state – a third of these locations are publicly-owned facilities (98) and the remaining facilities are privately-owned (200). Out of a total of 10,093 truck parking spaces estimated in the state, around 30% of these spaces are located at publicly-owned facilities (3,028) and the remaining 70% are privately-owned facilities (7,065). These truck parking supply statistics indicate that privately-owned facilities are responsible for the majority of the truck parking supply in Florida. It is important to note that the ratio of public to private parking spaces in Florida is higher than the majority of states (Vermont, New Hampshire, and Connecticut are the only exceptions) as per the Jason's Law Survey (2015).¹¹ Table 13 shows the supply information for every District. Figure 13 provides a statewide coverage of all truck parking locations identified in the study.

⁸ [Florida Department of Agriculture and Consumer Services, September 6-2019](#)

⁹ [Florida Department of Transportation, MCSAW, September 6-2019](#)

¹⁰ [Statewide Truck GPS Data Analysis, 2019](#)

¹¹ [Jason's Law Truck Parking Survey Results and Comparative Analysis, 2015](#)



Table 13 | Truck Parking Supply by District

FDOT District	Facility Type	Number of Locations	Number of Spaces	FDOT District	Facility Type	Number of Locations	Number of Spaces
1	Private	47	1,104	5	Private	26	1,288
	Public	8	225		Public	14	531
2	Private	52	1,665	6	Private	10	240
	Public	31	655		Public	2	38
3	Private	24	864	7	Private	19	431
	Public	19	635		Public	8	200
4	Private	22	1,473	Turnpike	Public	8	344
	Public	8	400	Statewide	Total	298	10,093



Freight *Mobility* and Trade Plan

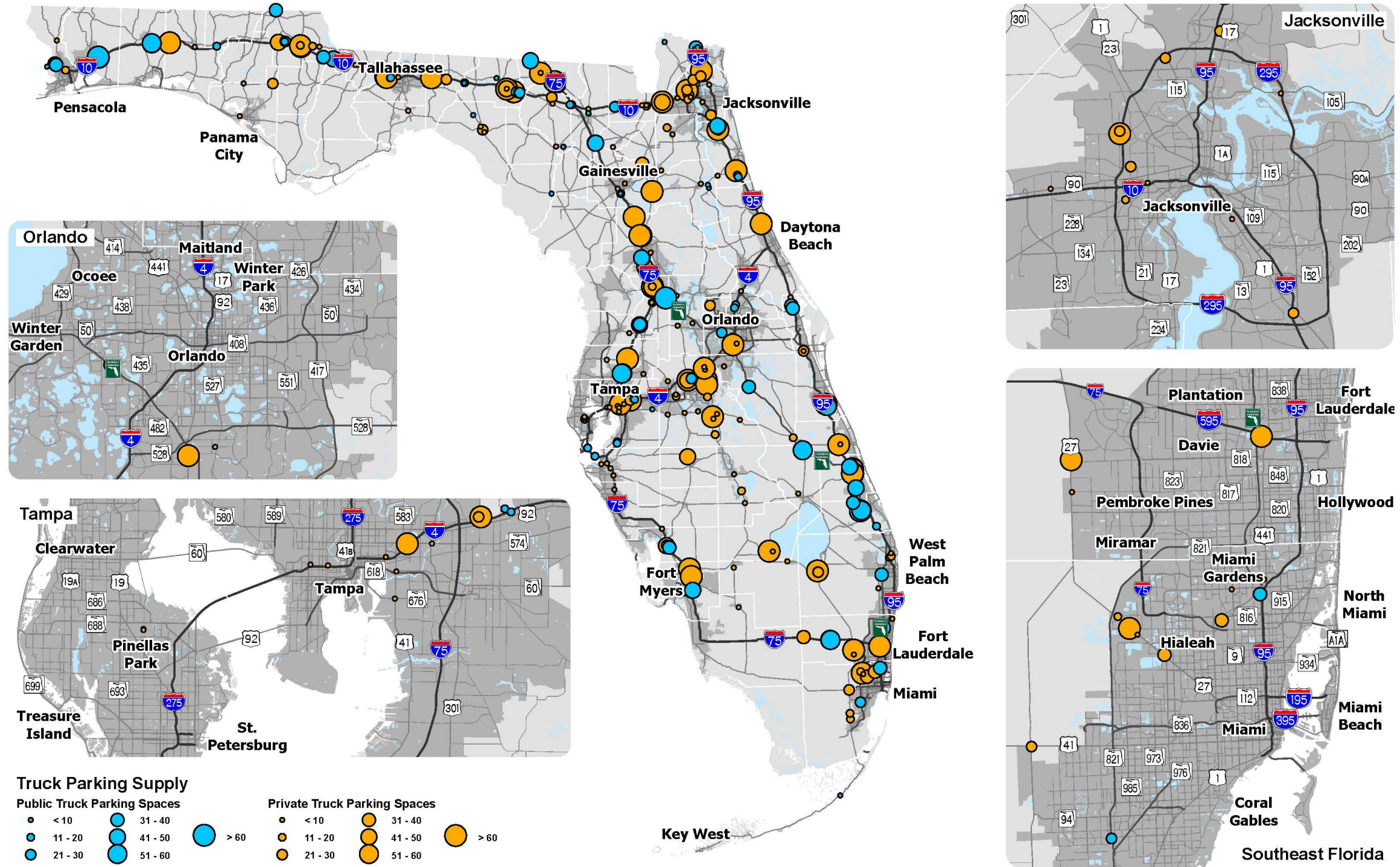


Figure 13 | Statewide Truck Parking Supply Locations

Transportation Hubs

According to the American Society of Civil Engineers (ASCE), Florida's infrastructure is ranked #1 in the U.S. with an expansive roadway and rail system as well as 15 major seaports, 20 commercial service airports and 2 spaceports. This section focuses on seaports, airports and spaceports.

Transportation Hubs - Seaports

Florida's proximity to east-west trade lanes that enter and leave the western hemisphere and the north-south shipping corridor supplying the Americas places it squarely in the center of international commerce. 15 deep-water seaports (Figure 14) are strategically positioned along the state's coastlines, Table 14 provides a list of major seaports in the state of Florida as per SIS and Florida Ports Council.

Table 14 | Major Seaports

Name of Port	Major Cargo Gateway	Major Cruise Port	SIS Designated Port	SIS Strategic Growth Component	Interim NMFN Designated Port
Port Canaveral	Y	Y	Y		Y
Port Citrus					
Port Everglades	Y	Y	Y		Y
Port of Fernandina	Y			Y	
Port of Fort Pierce	Y			Y	
Port of Jacksonville	Y	Y	Y		Y
Port of Key West		Y			
Port Manatee	Y		Y		
Port Miami	Y	Y	Y		Y
Port of Palm Beach	Y	Y	Y		Y
Port Panama City	Y	Y	Y		Y
Port of Pensacola	Y			Y	
Port of Port St. Joe				Y	
Port of St. Petersburg					
Port Tampa Bay	Y	Y	Y		Y



Freight *Mobility* and Trade Plan

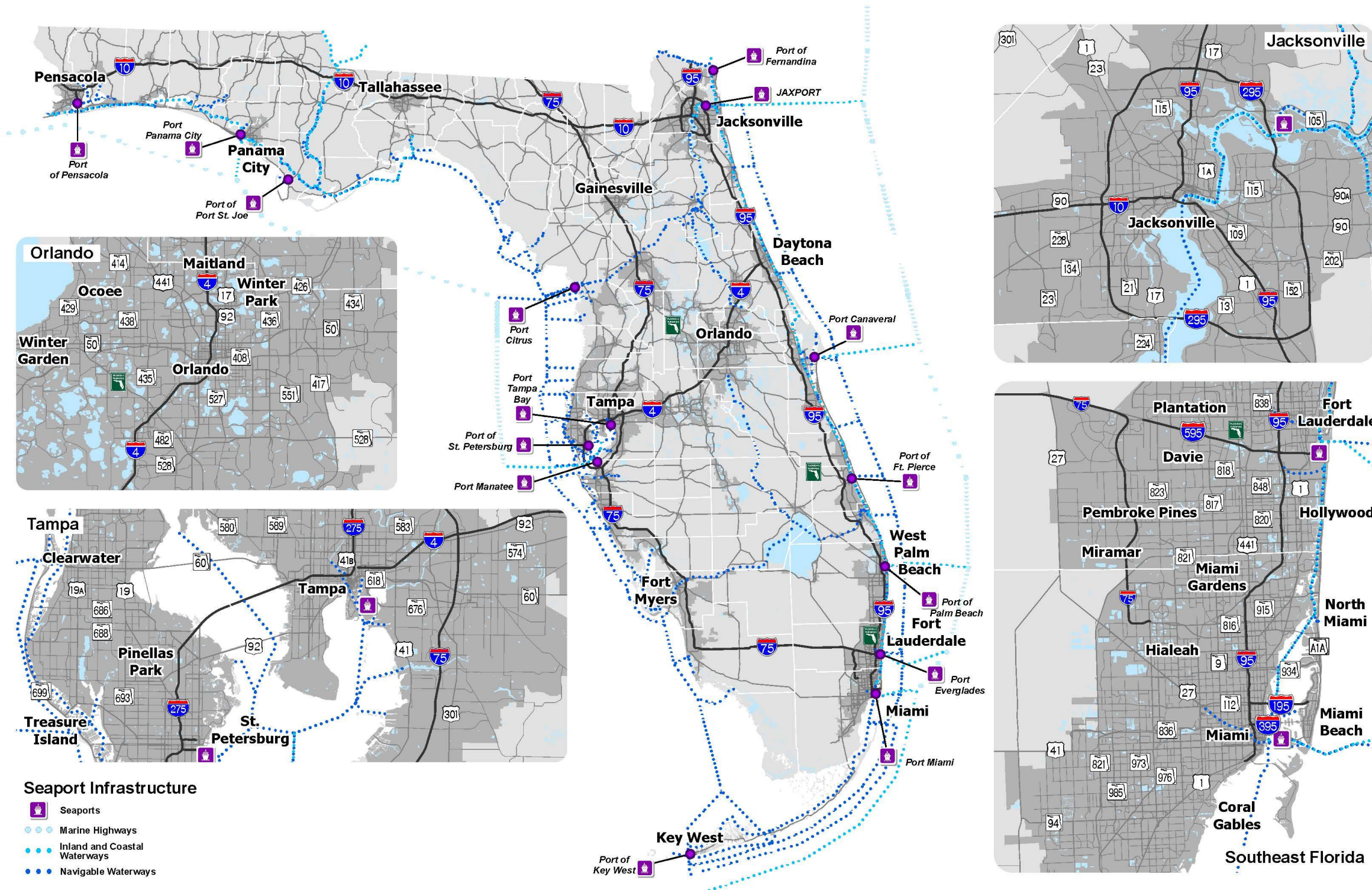


Figure 14 | Seaport Infrastructure



Transportation Hubs - Airports

Florida's 129 public-use commercial service (shown in Figure 16) and general aviation airports are a cornerstone of the state's economy. Figure 15 provides the number of aviation facilities in Florida. While many airports are capable of accommodating air cargo activity, 14 of the 20 commercial service airports in Florida had scheduled air cargo activity on dedicated freighter or widebody passenger aircraft in 2016.

Data Source: Florida Aviation System Plan, 2035

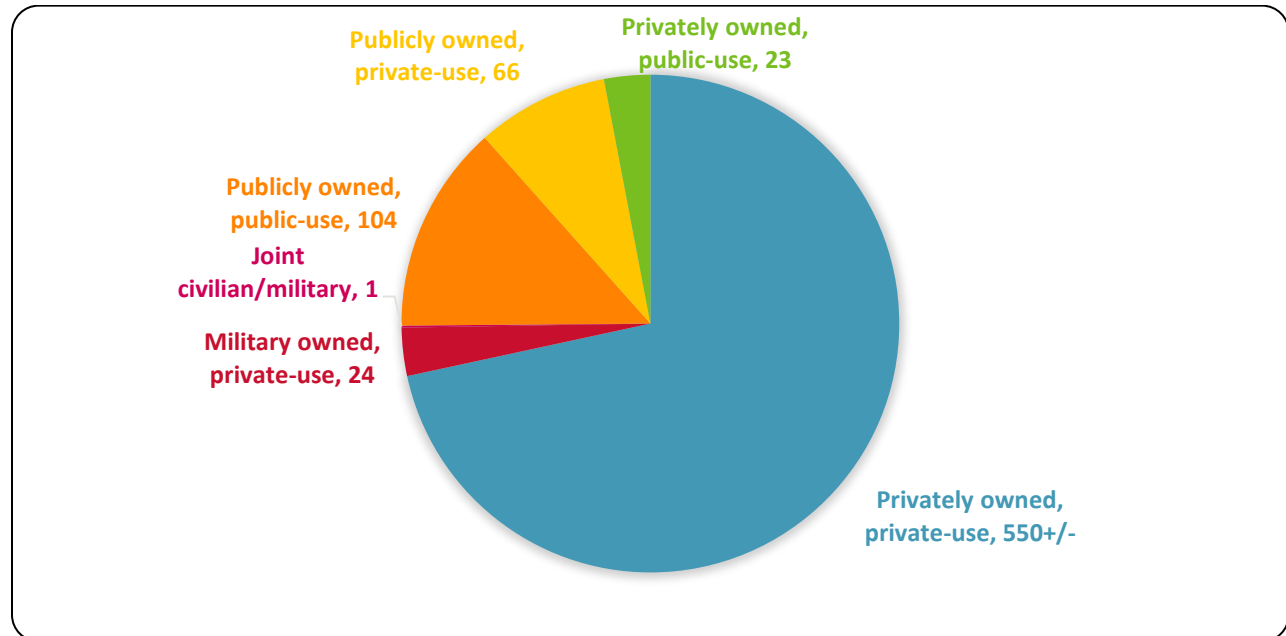


Figure 15 | Florida Aviation Facilities

As per F.S. Chapter 332, the "Florida Airport System" includes all existing public-use airports that are owned and operated within the state and those public-use airports which will be developed and made operational in the future. The public-use airports, account for approximately 15% of all aviation facilities in the state. Primary airports are defined as public airports with scheduled air carrier service that generate 10,000 enplanements or more per year. Primary airports (Table 15) are further classified (National Plan of Integrated Airport Systems (NPIAS) standards) by their share of U.S. enplanements as follows:

- **Large Hub Airport:** Account for one percent or more of all passenger enplanements within the U.S.
- **Medium Hub Airport:** Account for between .25 percent and one percent of all passenger enplanements within the U.S.

- **Small Hub Airport:** Account for .05 percent to .25 percent of all passenger enplanements within the U.S.
- **Non-Hub Airports:** Enplane less than .05 percent of all commercial passenger enplanements but have at least 10,000 annual enplanements.

Data Source: National Plan of Integrated Airport Systems (NPIAS) 2019 – 2023

Table 15 | Primary Airports

Name of Port	FAA ID	NPIAS Classification	Scheduled Cargo Activity	SIS	SIS Strategic Growth	Interim MNFN
Daytona Beach International	DAB	Non-hub			Y	
Destin-Fort Walton Beach	VPS	Small-hub			Y	
Fort Lauderdale/Hollywood International	FLL	Large-hub	Y	Y		Y
Gainesville International	GNV	Non-hub	Y		Y	
Jacksonville International	JAX	Medium-hub	Y	Y		
Key West International	EYW	Non-hub	Y			
Melbourne International	MLB	Non-hub			Y	
Miami International	MIA	Large-hub	Y	Y		Y
Northeast Florida Regional	SGJ	Non-hub				
Northwest Florida Beaches International	ECP	Small-hub	Y		Y	
Orlando International	MCO	Large-hub	Y	Y		Y
Orlando Sanford International	SFB	Small-hub	Y		Y	
Palm Beach International	PBI	Medium-hub	Y	Y		
Pensacola International	PNS	Small-hub	Y		Y	
Punta Gorda	PGD	Small-hub			Y	
Sarasota/Bradenton International	SRQ	Small-hub			Y	
Southwest Florida International	RSW	Medium-hub	Y	Y		
St. Pete-Clearwater International	PIE	Small-hub	Y		Y	
Tallahassee International	TLH	Non-hub	Y		Y	
Tampa International	TPA	Large-hub	Y	Y		Y



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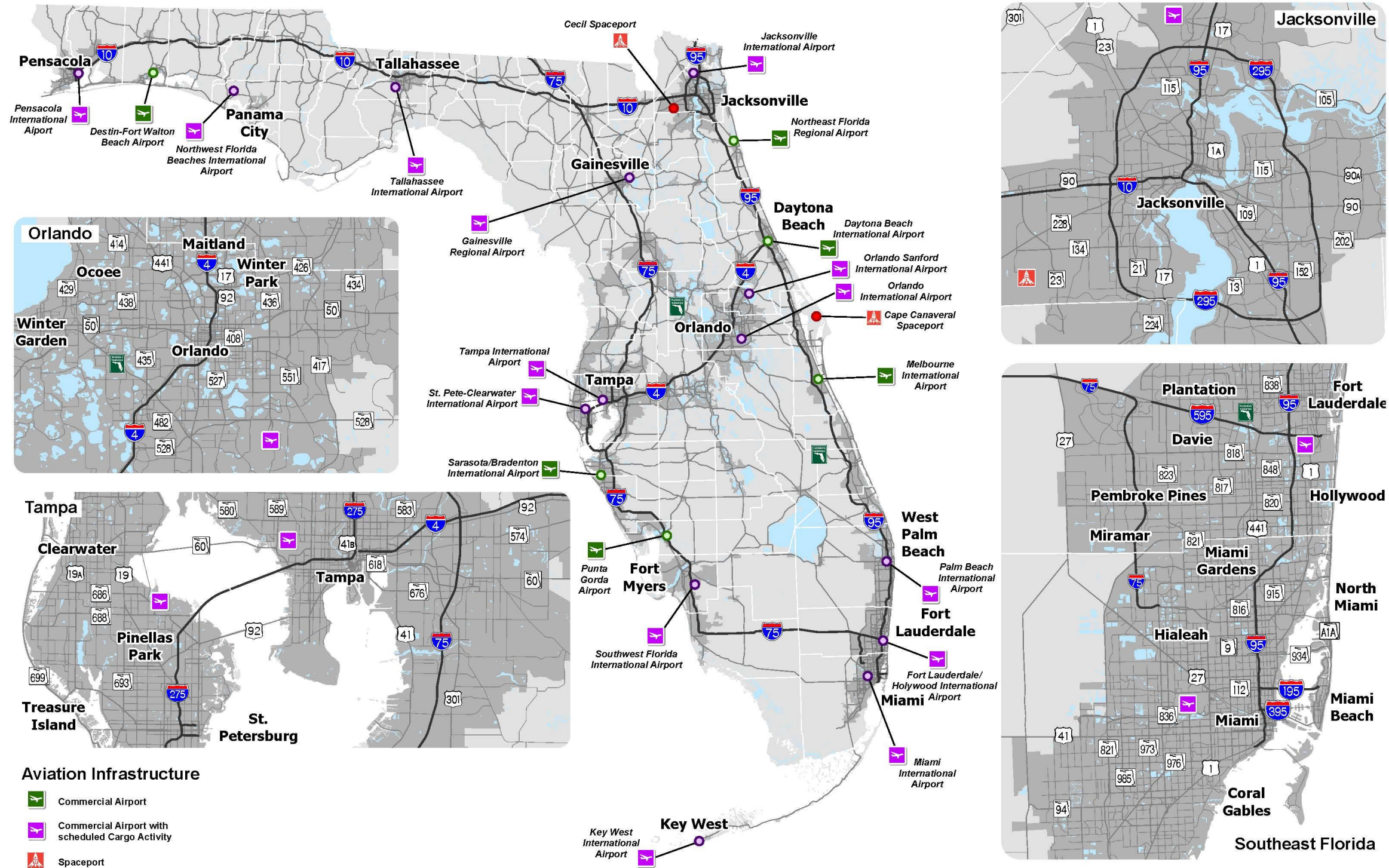


Figure 16 | Aviation Infrastructure

Air Cargo Operations

Air cargo operations can be categorized into two types: air cargo lift (air cargo carried on aircrafts) and road feeder service (air cargo carried between airports via truck). Figure 17 provides air cargo lift capacity for major airports in the state. Statewide, average daily air cargo lift capacity increased from nearly 13.59 million pounds in 2012 to over 13.67 million pounds in 2016,¹² representing an increase of 0.6 percent. In terms of total capacity, Miami International Airport (MIA) remains the state's capacity leader. MIA's over 9.6 million pounds of daily lift capacity accounts for 70% of the statewide total; Orlando International (MCO) has the second largest share of available air cargo capacity in Florida with 12%; Tampa International (TPA) and Ft. Lauderdale/Hollywood International (FLL) rank third and fourth, with 6% and 5%, respectively.

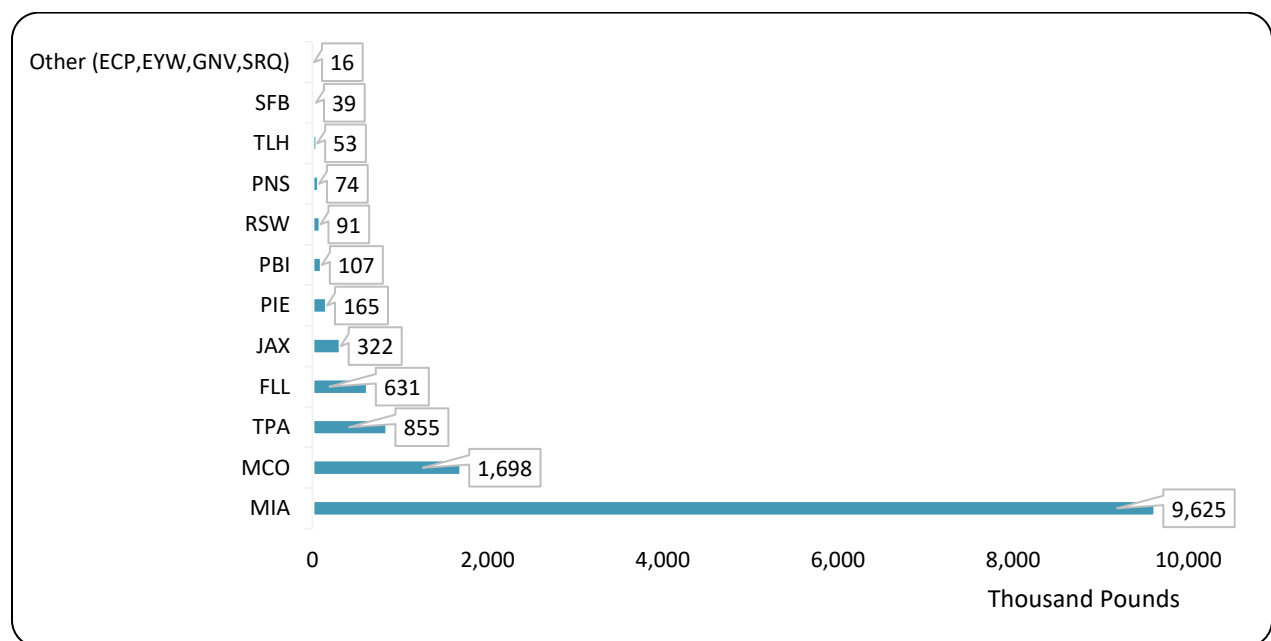


Figure 17 | Average Daily Air Cargo Lift Capacity at Florida Airports 2016 ('000 Pounds)

Scheduled road feeder service is typically offered by a trucking operator on behalf of an airline, to move air cargo between airports via truck. Road feeder services link major air cargo import or export hubs with smaller airports and allow shippers and receivers near the smaller airports access to major airline networks. Many road feeder services are allocated an airline flight number for a truck route connecting two airports. According to Official Airline Guide (OAG) road feeder service schedules, seven of Florida's commercial service airports currently have scheduled road feeder service. On average, Florida airports offer more than 24.36 million pounds of scheduled road feeder service cargo capacity each week. This represents a 36% increase over Florida's 2012 weekly road feeder service capacity. Strong growth in road feeder service is

¹² [2016 Florida Air Cargo Study](#)



directly tied to a combination of factors including increases in air carrier fuel costs experienced earlier in this decade; increased security costs and processing for cargo carried on passenger aircraft; and, smaller aircraft, with limited or no cargo carrying capacity, being used on domestic routes. Figure 18 represents the weekly road feeder service capacity at Florida airports during 2016. As shown in the tables, MIA averages over 11 million pounds of available weekly road feeder service capacity, comprising 45% of the statewide total. This represents an increase of 3.6 million pounds or 48% over 2012. MCO ranks second in weekly road feeder service capacity with over 6.1 million pounds, or 25% of the statewide total. TPA, Jacksonville International (JAX), and Pensacola International (PNS) follow with 14%, 9%, and 5% of the statewide total, respectively. PNS has experienced the largest percentage change, growing by 159% since 2012.

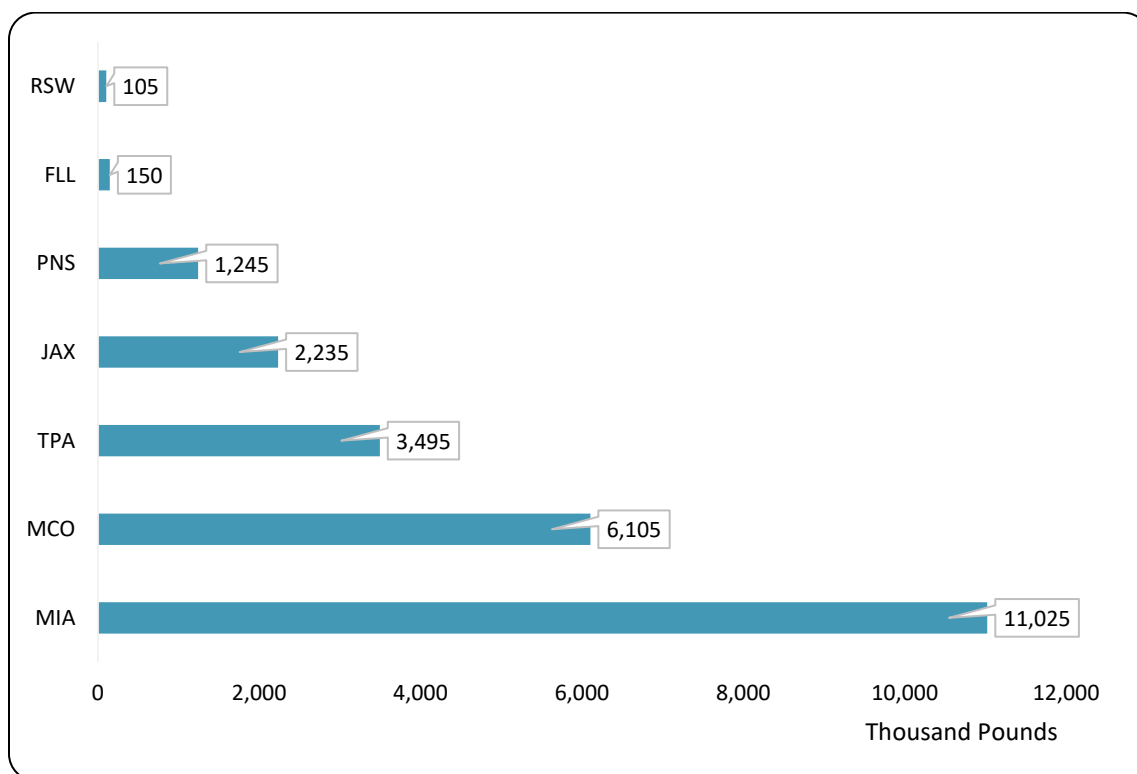


Figure 18 | Weekly Road Feeder Service Cargo Capacity at Florida Airports 2016 ('000 Pounds)

Transportation Hubs – Spaceports

There are two major spaceports in Florida – Cape Canaveral and Cecil. Figure 7 illustrates these locations. Cape Canaveral is the primary launch head of the US Eastern Range with three launch pads currently active. Cecil is a public joint civil-military airport and spaceport. Recently, the Jacksonville Aviation Authority received a \$1.8 million matching grant from Space Florida to fund the design and construction of a space operations center payload preparation facility and rocket motor test facility at Cecil Spaceport.

Freight Intensive Areas

Consistent with the Florida Transportation Plan (FTP), the Florida Department of Transportation (FDOT) explored ways to identify major freight intensive areas. This statewide project was conducted by the FDOT Systems Implementation Office in coordination with the FDOT Transportation Data and Analytics Office. A freight intensive area is a cluster or group of freight facilities that generates, distributes, or attracts large amounts of freight activities and has a significant impact on Florida's transportation system and economy. The analysis used Florida Department of Revenue (DOR) parcel data and Florida Department of Economic Opportunity (DEO) employment data to locate freight activity areas.¹³ Table 16 provides summary statistics for the freight parcel floor area in the state. Figure 19 depicts a freight activity hot spot map.

Table 16 | Statewide Summary Statistics for Freight Parcel Floor Area

DOR Land Use Code	Total Living Area (Square Feet)	Number of Parcels
029-Wholesale	12,823,056	565
041-Light Manufacturing	278,105,527	10,994
042-Heavy Industrial	52,072,508	633
043-Lumber/Sawmill	12,905,655	474
044-Food Packing Plants	18,052,685	466
045-Canneries, Bottlers, etc.	11,980,958	115
046-Other Food Processing	15,688,924	326
047-Mineral Processing, gravel, etc.	11,407,696	1,043
048-Warehouse, DC, etc.	946,695,398	43,333
049-Open Storage	11,115,200	4,228
068-Dairies, Feed Lots	17,313,353	4,484
091-Utilities	34,958,565	10,381
092-Mining	2,061,950	1,408
096-Sewage, Solid Waste	359,598	19,535
Total	1,425,123,585	97,985

¹³ Final study report is not published yet.



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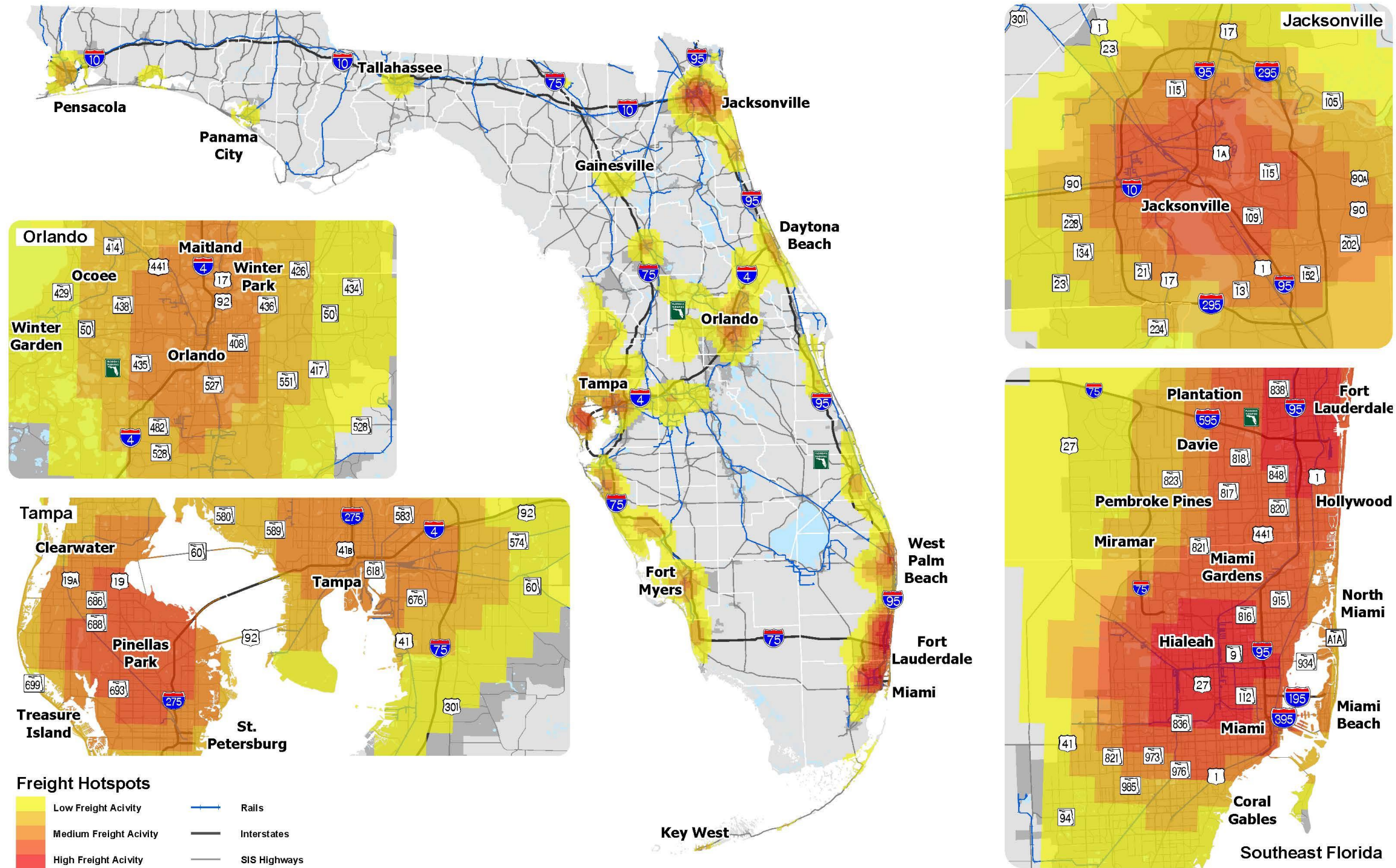


Figure 19 | Freight Intensive Areas in Florida

Major Freight and Freight Related Industries

Major freight and freight related industries have been analyzed in this section by looking at their contribution to the state's Gross Domestic Product (GDP), the number of freight related establishments, and number of employees. Florida ranks fourth in the nation's GDP. Table 17 provides the GDP % shares of different industry types for Quarter 1 2019. Freight related industries including construction, manufacturing, wholesale and retail trade, transportation warehousing, and waste management services have significant contributions to the state's GDP. The high share of trade related GDP further emphasizes that Florida is a consumer state.

Data Source: Bureau of Economic Analysis

Table 17 | GDP % Shares of Industry Types

Industry types	2019-Quarter 1 (% Share)
Real estate and rental and leasing	16.61
Government and government enterprises	10.7
Health care and social assistance	8.61
Professional, scientific, and technical services	7.45
Retail trade	7.21
Wholesale trade	7.11
Finance and insurance	5.82
Construction	5.46
Accommodation and food services	4.53
Information	4.31
Administrative and support and waste management and remediation services	4.24
Transportation and warehousing	3.44
Durable goods manufacturing	3.3
Other services (except government and government enterprises)	2.6
Nondurable goods manufacturing	2.06
Utilities	1.65
Arts, entertainment, and recreation	1.63
Management of companies and enterprises	1.54
Educational services	1.04
Agriculture, forestry, fishing and hunting	0.58
Mining, quarrying, and oil and gas extraction	0.11
All industry total (Million Dollars)	1,072,672

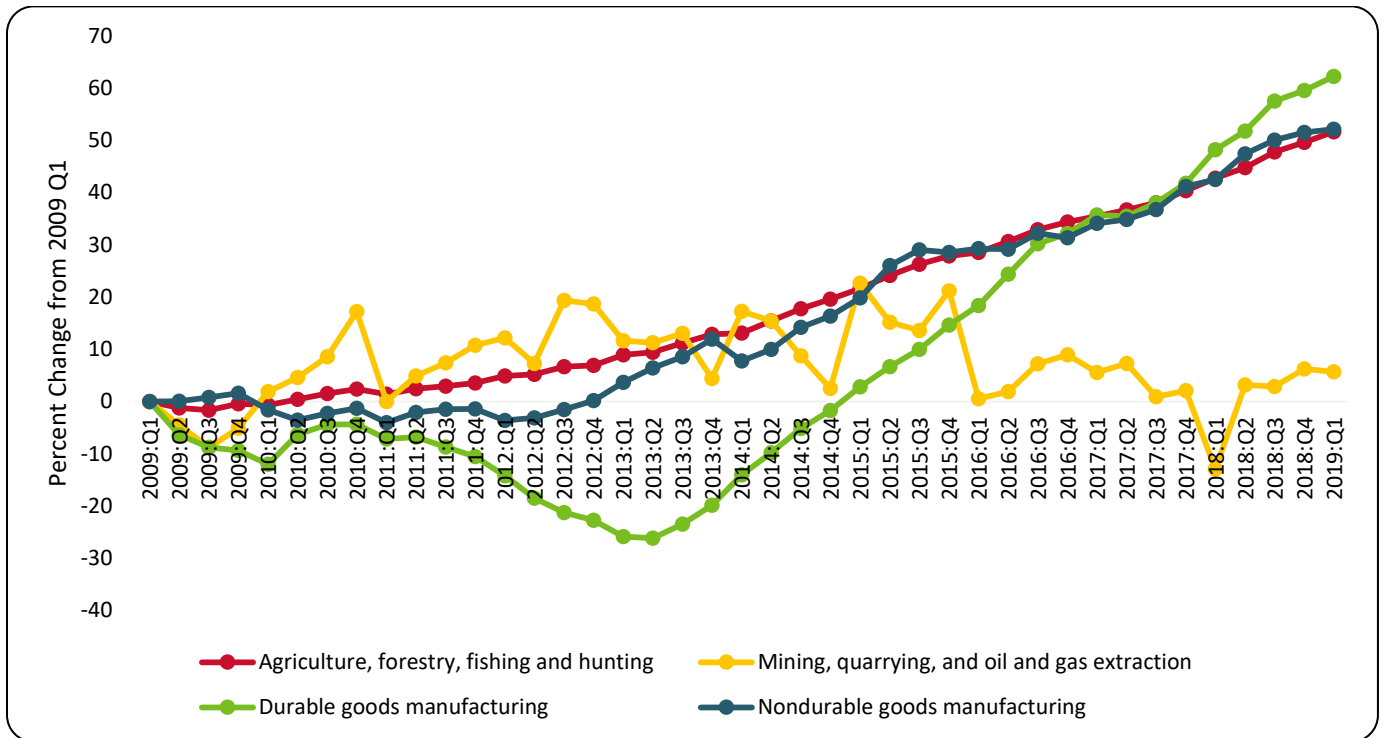


Figure 20 | Percent Change in GDP of Producer Industry Types (Base Quarter: 2009 Q1)

Data Source: Bureau of Economic Analysis

Figure 20 above depicts the percent change in GDP of producer industries. Goods manufacturing industries have seen tremendous growth with 50% growth for non-durable goods manufacturing and 60% growth for durable goods manufacturing industries between 2009 and 2019. Agriculture, forestry, fishing and hunting industry types have seen a 50% growth between 2009 and 2019. Mining, quarrying, and oil and gas extraction has seen no growth in the last decade. Figure 21 below depicts the percentage change in GDP of wholesale trade, retail trade, and transportation and warehousing industries. The trade sector has seen a 40% increase in wholesale trade and 80% in retail trade industries from 2009 to 2019. Transportation and warehousing industries have seen a 60% growth between the same years.

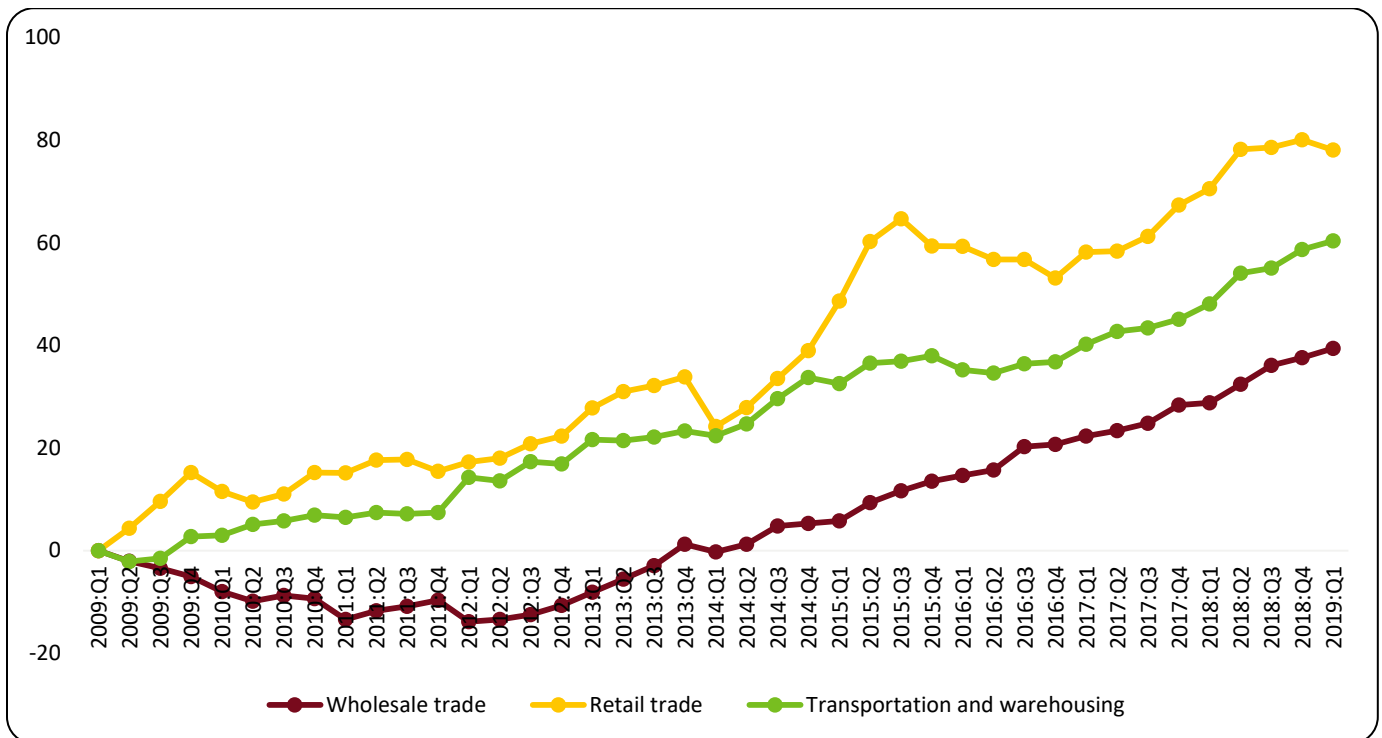


Figure 21 | Percent Change in GDP of Trade, Transportation and Warehousing Industries (Base Quarter: 2009 Q1)

Table 18 provides the percentage of establishments and percentage of employees in the state of Florida for different industries (NAICS 2 digit code) respectively.

Data Source: Bureau of Labor Statistics

Table 18 | Establishments and Employment by Different Freight and Freight Related Industries

Industries	Establishments		Employment	
	Percent Share (2018)	Percent change (2014-2018)	Percent Share (2018)	Percent change (2014-2018)
Agriculture, Forestry, Fishing and Hunting	0.72%	-1.70%	0.79%	-12.31%
Mining, Quarrying, and Oil and Gas Extraction	0.06%	-6.51%	0.05%	0.73%
Utilities	0.15%	11.32%	0.34%	5.30%
Construction	10.25%	18.90%	6.22%	36.27%
Wholesale Trade	5.79%	-4.85%	3.98%	5.47%
Administrative and Support and Waste Management and Remediation Services	7.63%	19.49%	7.91%	17.34%
Arts, Entertainment, and Recreation	1.57%	8.36%	2.77%	11.78%
Accommodation and Food Services	6.64%	4.49%	11.52%	13.38%
Manufacturing	2.97%	6.74%	4.27%	12.22%
Retail Trade	11.77%	-2.95%	13.02%	8.26%
Transportation and Warehousing	2.60%	11.26%	3.65%	18.93%
All Industries (2018)	Total Establishments = 691,780		Total Employment = 8,693,632	

Figures 22, 23 and 24 highlight the three major industry sectors in Florida with a statewide map identifying the major establishments in their respective sectors. The three major industry sectors include logistics and distribution centers, manufacturing, and aviation-spaceports. These maps, created by Enterprise Florida, highlight the emergence of strong freight activities. Some other important highlights of the freight and freight related industries are indicated below:

- Florida is rated as 2nd best state for Business by Chief Executive.
- Florida has the 3rd largest cluster of logistics and distribution centers in the U.S.
- It is a premier aerospace and space state and has aerospace manufacturing attractiveness. More than 470 industry companies excel in areas from aircraft parts and assembly, to intelligence, surveillance, and reconnaissance, to missiles.
- Florida is home to more than 260 biotech companies and world renowned R&D institutes specializing in therapeutics, diagnostics, industrial/ag biotech and other areas.

- Florida is 2nd among states for FDA registered medical device manufacturing facilities with more than 19,000 Floridians working in this industry, with a majority of companies located along the I-4 Corridor in Central Florida, the Jacksonville area, and in South Florida.
- More than 220 pharmaceutical and medicine manufacturing companies specialize in the development and manufacture of novel treatments, generics, pharmaceuticals and OTC drugs in the state. They employ nearly 4,500 researchers, engineers, technicians and workers.

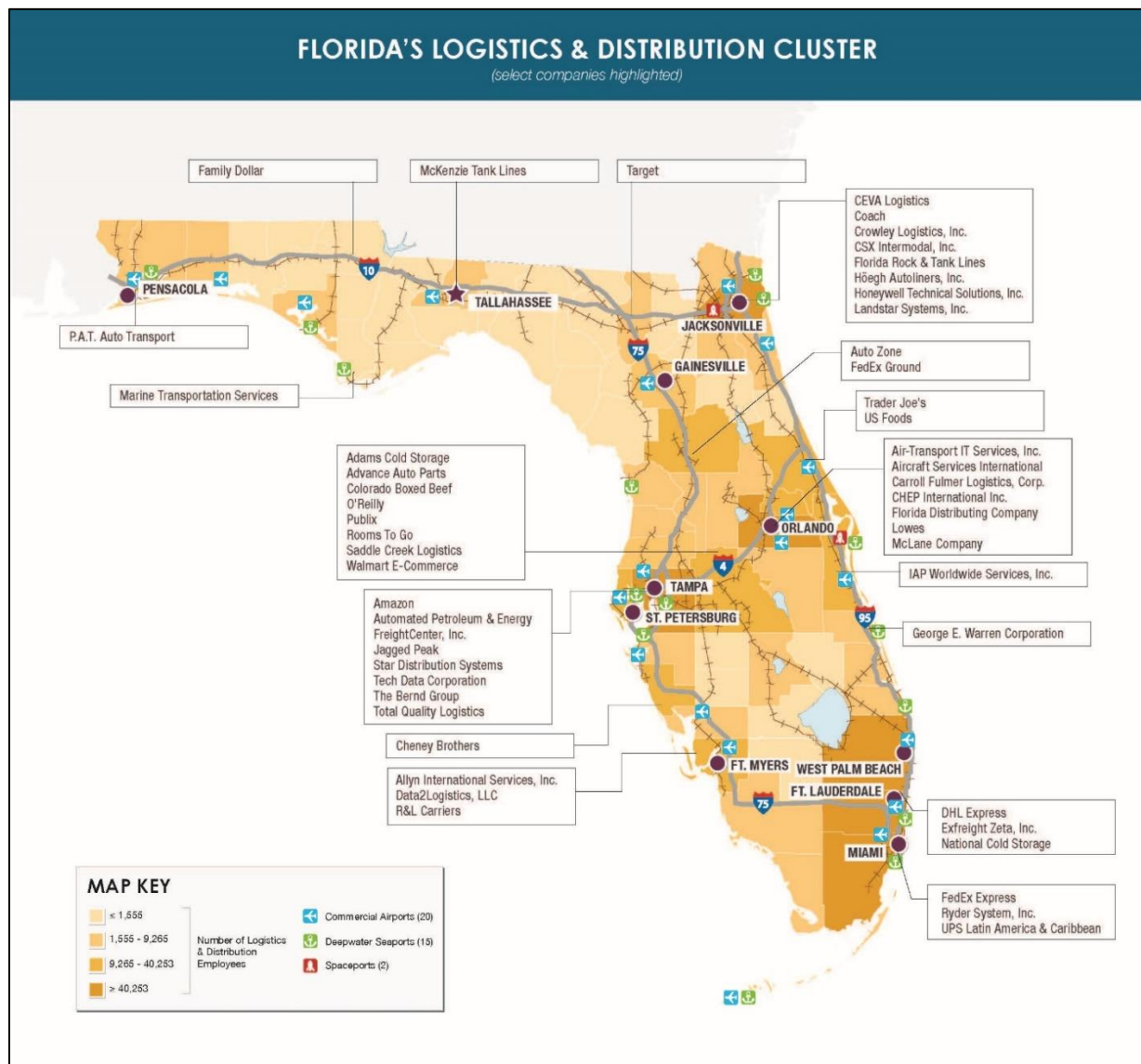


Figure 22 | Florida's Logistics and Distribution Clusters¹⁴

¹⁴ Enterprise Florida, 2019

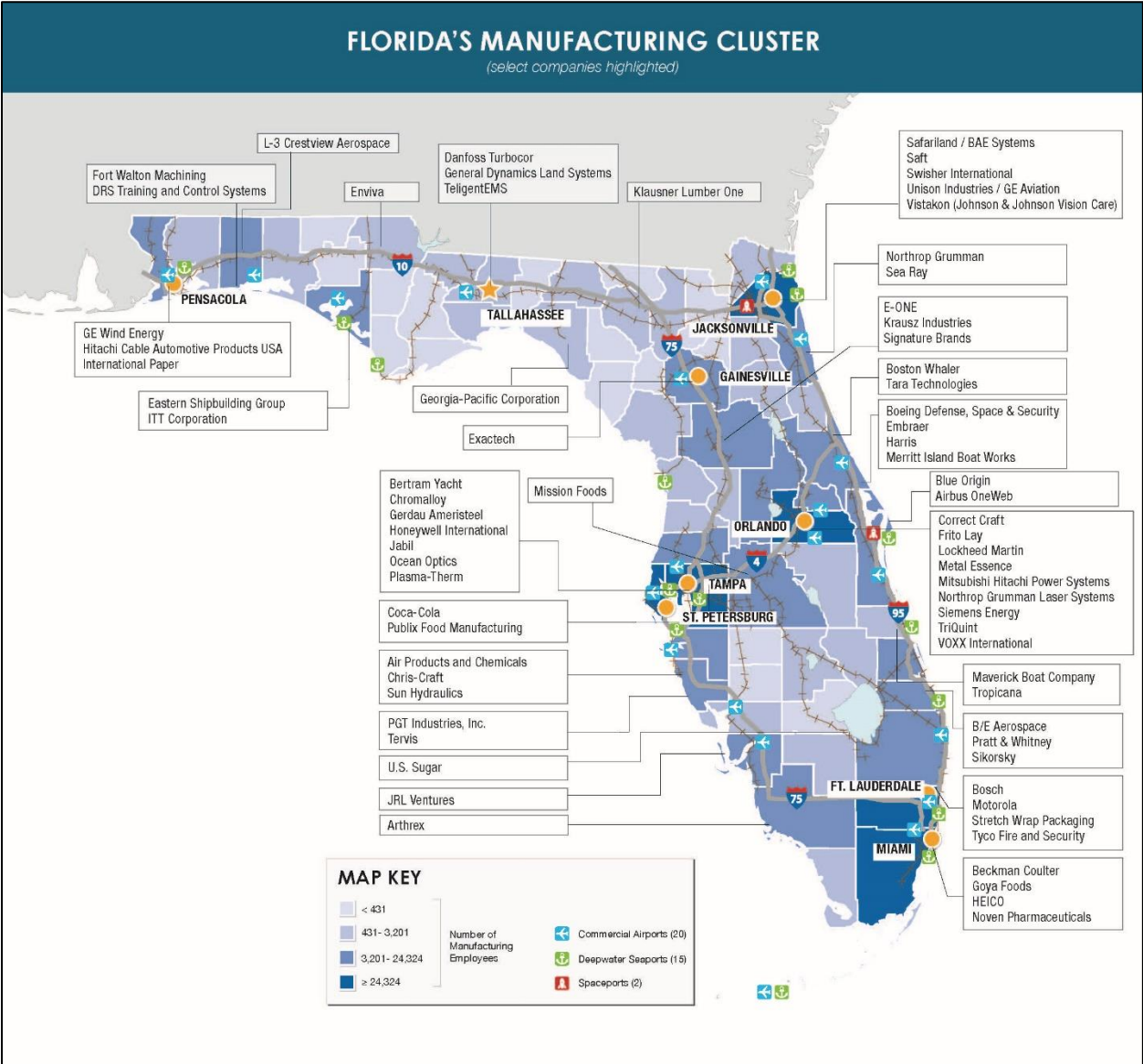


Figure 23 | Florida’s Manufacturing Clusters¹⁵

¹⁵ Enterprise Florida, 2019

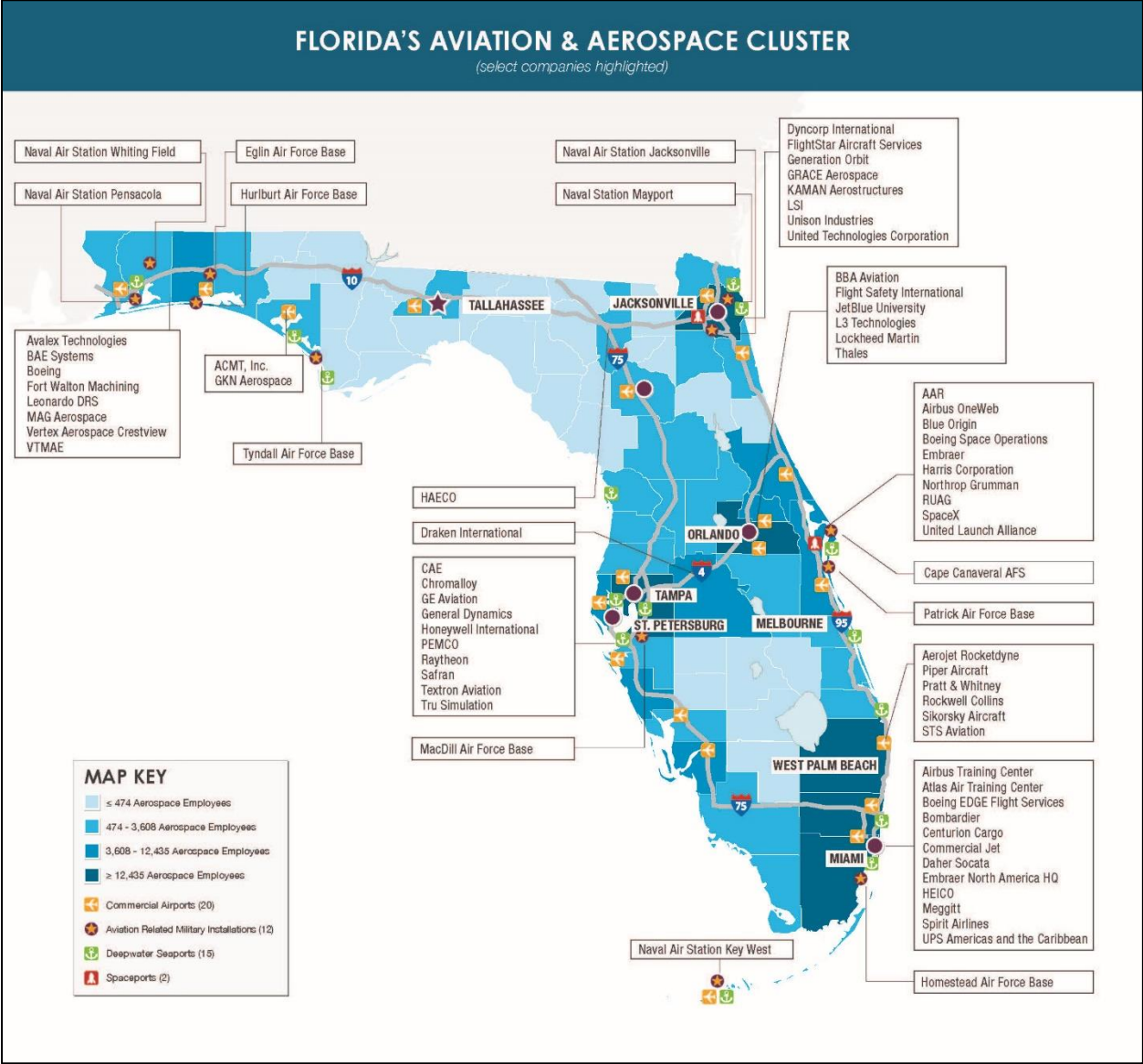


Figure 24 | Florida’s Aviation and Aerospace Cluster¹⁶

¹⁶ Enterprise Florida, 2019



Appendix A - National Highway Freight Network Designation

The FAST Act establishes the National Highway Freight Program (NHFP) to improve the efficient movement of freight on the NHFN and support several goals, including:

- Investing in infrastructure and operational improvements that strengthen economic competitiveness, reduce congestion, reduce the cost of freight transportation, improve reliability, and increase productivity;
- Improving the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas;
- Improving the state of good repair of the NHFN;
- Using innovation and advanced technology to improve NHFN safety, efficiency, and reliability;
- Improving the efficiency and productivity of the NHFN;
- Improving State flexibility to support multi-State corridor planning and address highway freight connectivity; and
- Reducing the environmental impacts of freight movement on the NHFN. [23 U.S.C. 167 (a), (b)]

The Fixing America's Surface Transportation Act (FAST Act) repealed both the Primary Freight Network and National Freight Network from Moving Ahead for Progress in the 21st Century Act (MAP-21), and directed the FHWA to establish a National Highway Freight Network (NHFN) to strategically direct Federal resources and policies toward improved performance of highway portions of the U.S. freight transportation system.

The NHFN includes the following subsystems of roadways:

- **Primary Highway Freight System (PHFS):** This is a network of highways identified as the most critical highway portions of the U.S. freight transportation system determined by measurable and objective national data.
- **Other Interstate portions not on the PHFS:** These highways consist of the remaining portion of Interstate roads not included in the PHFS. These routes provide important continuity and access to freight transportation facilities.
- **Critical Rural Freight Corridors (CRFCs):** These are public roads not in an urbanized area which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities.
- **Critical Urban Freight Corridors (CUFCs):** These are public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities.



States and in certain cases, Metropolitan Planning Organizations (MPOs), are responsible for designating public roads for the CRFCs and CUFCs in accordance with section 1116 of the FAST Act. State designation of the CRFCs is limited to a maximum of 150 miles of highway or 20 percent of the PHFS mileage in the State, whichever is greater. State and MPO designation of the CUFC is limited to a maximum of 75 miles of highway or 10 percent of the PHFS mileage in the State, whichever is greater. Guidance in accordance with the FAST Act section 1116 will be developed to provide information on the identification, designation, and certification of these corridors

Designation/Re-Designation of the Primary Highway Freight System (PHFS)

The initial designation of the Primary Highway Freight System (PHFS) was set by the FAST Act as the 41,518 mile network identified during the designation process for the MAP-21 highway-only primary freight network (PFN) under 23 U.S.C. 167(d). The FHWA Administrator is required to re-designate the PHFS every 5 years to reflect changes in freight flows, including emerging freight corridors and critical commerce corridors.

The FAST Act requires FHWA to re-designate the PHFS every 5 years. Each re-designation is limited to a maximum 3 percent increase in the total mileage. The FHWA Office of Operations will develop a process for re-designation that, in accordance 23 U.S.C. 167(d), uses measurable data, fully considers the factors outlined in 23 U.S.C. 167(d)(2)(E), and provides an opportunity to State freight advisory committees to provide input. The process for re-designating the PHFS will include data that FHWA currently collects as well as new tools and data such those developed in accordance with 49 U.S.C. 70203, Transportation investment data and planning tools. To the maximum extent practicable, FHWA is required to use measurable data to assess the significance of goods movement, including consideration of points of origin, destinations, and linking components of the United States global and domestic supply chains.

Data sources currently available or under development include the Freight Analysis Framework (FAF), truck weigh-in-motion data, truck flow data, HPMS data, and the National Performance Management Research Data Set (NPRMDS). States with PHFS mileage greater than or equal to 2 percent of the total PHFS mileage in all States may only obligate funds for projects on the PHFS, the CRFC, and the CUFC.

Critical Rural Freight Corridors (CRFC)

These are public roads not in an urbanized area which provide access and connection to the PHFS and the Interstate with other important ports, public transportation facilities, or other intermodal freight facilities. States are responsible for designating public roads in their State as CRFCs. In accordance with 23 U.S.C. 167(e), a State may designate a public road within the borders of the State as a CRFC if the public road is not in an urbanized area, and meets one or more of the following seven elements:



1. is a rural principal arterial roadway and has a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks (FHWA vehicle class 8 to 13);
2. provides access to energy exploration, development, installation, or production areas;
3. connects the PHFS or the Interstate System to facilities that handle more than—
 - 50,000 20-foot equivalent units per year; or
 - 500,000 tons per year of bulk commodities;
4. provides access to—
 - a grain elevator;
 - an agricultural facility;
 - a mining facility;
 - a forestry facility; or
 - an intermodal facility;
5. connects to an international port of entry;
6. provides access to significant air, rail, water, or other freight facilities in the State; or
7. is determined by the State to be vital to improving the efficient movement of freight of importance to the economy of the State.

The designation of the CRFC is limited to a maximum of 150 miles of highway or 20 percent of the PHFS mileage in the State, whichever is greater.

Table below lists CRFC Critical Rural Freight Corridor Routes and Connectors.



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CRFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
SR 20	SR 79	County Road 83 Alternate	10.37	B	Provides access to energy Exploration, development, installation, or production areas.	Required link to complete connection from key freight facility to NHFN	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
SR 20	US 231	SR 79	1.17	A	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
SR 20	US 231	SR 79	16.68	C	Corridor that is vital to improving the efficient movement of freight of importance to the economy of the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity
SR 331	US 301	County Road 225 Alternate	1.87	A	Corridor that is vital to improving the efficient movement of freight of importance to the economy of the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CRFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
SR 528	SR 417	I-95	37.00	G	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Connects key freight facilities to NHFN	Multimodal freight connection route to create seamless freight mobility operations	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances import/export of connected key freight facility
US 231	I-10	Bayou George Drive	26.76	A	Corridor that is vital to improving the efficient movement of freight of importance to the economy of the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 231	I-10	Bayou George Drive	42.34	D	Corridor that is vital to improving the efficient movement of freight of importance to the economy of the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	E Palm Beach Road	I 75	6.17	A	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CRFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 27	Fort Meade Road	Highlands County Line	0.43	G	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	Highlands County Line	SR 80	6.12	A	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	Lake Josephine Drive	County Road 17N	1.00	G	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	Masterpiece Rd	Fort Meade Rd	9.69	G	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CRFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 27	Old US 27 Highway	E Palm Beach Road	0.84	A	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	S Sun and Lakes Blvd	Highlands County Line	3.08	A	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 27	SR 80	Lewis Blvd	3.92	A	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 301	Clay County Line	NE 193rd Street	26.88	A	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CRFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 301	NE Waldo Road	NW 77th Street	98.27	A	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 301	S Walnut Street	NE Waldo Road	17.30	A	Rural principal arterial roadway with a minimum of 25 percent of the annual average daily traffic of the road measured in passenger vehicle equivalent units from trucks.	Required link to complete connection from key freight facility to NHFN	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
		Total Mileage	309.89						



Critical Urban Freight Corridors (CUFC)

These are public roads in urbanized areas which provide access and connection to the PHFS and the Interstate with other ports, public transportation facilities, or other intermodal transportation facilities. In an urbanized area with a population of 500,000 or more, the metropolitan planning organization (MPO), in consultation with the State, is responsible for designating the CUFCs. In an urbanized area with a population of less than 500,000, the State, in consultation with the MPO, is responsible for designating the CUFCs. Regardless of population, a public road may be designated as a CUFC if it is in an urbanized area, and meets one or more of the following four elements:

1. connects an intermodal facility to;
 - the PHFS
 - the Interstate System; or
 - an intermodal freight facility;
2. is located within a corridor of a route on the PHFS and provides an alternative highway option important to goods movement;
3. serves a major freight generator, logistic center, or manufacturing and warehouse industrial land; or
4. is important to the movement of freight within the region, as determined by the MPO or the State.

The designation is limited to a maximum of 75 miles of highway or 10 percent of the PHFS mileage in the State, whichever is greater. 23 U.S.C. 167(f).

Table below lists Critical Urban Freight Corridor Routes and Connectors.



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
I- 295	I-95	Heckscher Drive	6.77	H	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
I- 295	SR 202	I- 95	8.07	H	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Connects key freight facilities to NHFN		Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
SR 105	Bount Island Road	I-295	1.22	H	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances import/export of connected key freight facility
SR 263	I-10	SR 363	6.76	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Connects key freight facilities to NHFN		Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
SR 528	McCoy Road (SR 482)	SR 417	7.44	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
SR 528	SR 417	I-95	0.18	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN		Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
SR 869	I- 95	I- 75	24.96	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances multimodal freight connectivity
US 231	Bayou George Drive	US 98	10.40	H	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Multimodal freight connection route to create seamless freight mobility operations	Enhances import/export of connected key freight facility



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 27	County Road 17N	S Sun and Lakes Blvd	7.94	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 27	E Palm Beach Road	I-75	0.15	J	Serves a major freight generator, logistic center, or manufacturing and warehouse industrial land.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 27	Highlands County Line	Lake Josephine Drive	20.67	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 27	I -4	SR 60	25.75	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 27	I-75	US 301	2.84	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 27	Lewis Blvd	Old US 27 Highway	3.13	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 27	Old US 27 Highway	E Palm Beach Road	0.07	J	Serves a major freight generator, logistic center, or manufacturing and warehouse industrial land.	Required link to complete connection from key freight facility to NHFN		Alternate freight route to reduce delay, avoid blockages and increase reliability of the network	Enhances multimodal freight connectivity
US 301	I-10	Clay County Line	7.51	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Connects key freight facilities to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 301	NE 193rd Street	S Walnut Street	4.38	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity
US 301	NW 10th Street	Silver Springs Boulevard	0.69	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity
US 301	NW 77th Street	NW 10th Street	4.89	K	Corridor that is important to the movement of freight within the region, as determined by the MPO or the State.	Required link to complete connection from key freight facility to NHFN	Ton volume is equal to or greater than the mean ton volume and the percentage change in ton volume is equal to or greater than the mean percentage change of ton volume throughout the District	Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity
US 41	S 22 ST	Big Bend Rd	11.58	H	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Required link to complete connection from key freight facility to NHFN		Multimodal freight connection route to create seamless freight mobility operations	Enhances import/export of connected key freight facility



Freight *Mobility* and Trade Plan

ROUTE No	START	END	Length (mi)	CUFC_ID	FAST_ACT	Critical Freight Connectivity	Strategic State Freight Network 1	Strategic State Freight Network 2	Supports National Significance Project Development
US 98	US 231	Sun Harbor Road	4.47	H	Connects an intermodal facility to the PHFS, the Interstate System, or an intermodal freight facility.	Connects key freight facilities to NHFN		Dispersion freight route to create redundancy of the network which offers multiple ways for freight traffic	Enhances multimodal freight connectivity
		Total Mileage	159.86						



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Freight Mobility and Trade Plan

Technical Memorandum 3
Performance and Conditions

April 2020



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Introduction

This technical memorandum evaluates and documents the condition and performance of the state's freight transportation systems and assets described in the "Systems and Assets Technical Memorandum." The performance measures included in this document are consistent with FDOT's Source Book, FDOT Transportation Asset Management Plan (TAMP), Transportation Performance Management (TPM) federal performance measures, Florida Transportation Plan (FTP) goals, Freight and Mobility Trade Plan (FMTP) objectives and the Highway Performance Monitoring System (HPMS). These measures indicate whether Florida's transportation system is achieving the objectives outlined in this plan and also show whether progress is being made towards federal and organizational goals. Measures included in this document are categorized by mode: highway, rail, seaport and aviation. Additionally, performance measures required by FHWA, such as bridge and pavement conditions are also summarized. All performance measures included in this technical memorandum are described according to the following dimensions:

- **Quantity** - How much freight is moved;
- **Quality** – How good or bad the travel experience is; and
- **Utilization** – How much of the transportation system is used/available.

A summary of each performance measure and condition is provided along with the definition, data source, supporting FDOT program or project, and outcomes. Additionally, some of the performance measures and conditions quantified here are recommended for applicability to freight project prioritization. Finally, modal issues and trends are identified through the assessment of performance measures and conditions. The issues and trends listed here are limited to those identified through analysis of the system.



Freight and Freight Related Measures Appraisal

This document is a critical objective component of the FMTP as it outlines the existing performance measures and conditions based on available data and information. The measures and outcomes included in this document have been derived from existing measures and datasets produced by multiple offices within FDOT and federal programs. Table 1 summarizes the different appraised resources.

Table 1 | Freight and Freight Related Measures Appraisal

Programs or Projects	Summary of Goals and Objectives
Highway Performance Monitoring System (HPMS)¹	<ul style="list-style-type: none">Contains system information on all public roads, and information on characteristics of arterial and collector functional systems. Limited information on travel and paved miles for the lowest functional systems is also provided in the data.The data are used extensively in the assessment of highway system condition, performance, and investment needs.
Transportation Asset Management Plan (TAMP)²	<p>The principal objectives of the Department's Transportation Asset Management Plan (TAMP) are:</p> <ol style="list-style-type: none">1. Ensure the safety and security of transportation customers;2. Minimize damage to infrastructure from vehicles;3. Achieve and maintain a state of good repair for transportation assets; and4. Reduce the vulnerability and increase the resilience of critical infrastructure to the impacts of extreme weather and events. <p>These objectives are the foundation for performance measures related to asset management for Florida Department of Transportation (FDOT).</p>
Florida Transportation Plan (FTP)³	<p>Florida Transportation Plan Vision element outlines following seven goals. FMTP goals align with these goals and the targeted performance measures in this technical memorandum are useful to satisfy these goals.</p> <ol style="list-style-type: none">1. Efficient and reliable mobility for people and freight2. Safety and Security and for residents, visitors, and businesses;3. Transportation solutions that support Florida's global Economic Competitiveness;4. Transportation solutions that support Florida's Environment and Conserve Energy;5. Agile, Resilient, Quality Transportation Infrastructure;6. More Transportation Choices for people and freight; and7. Transportation solutions that support Quality Places to live, learn, work, and play.
Transportation Performance Management (TPM)⁴	<p>FHWA defines Transportation Performance Management as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. TPM aligns with important national goals. The national goals relevant to this document are as follows:</p> <ol style="list-style-type: none">1. National goals for Federal-Aid Highway Program.2. National freight policy goals.3. Consideration of the Federal-aid highway national goals and public transportation general purposes in the scope of the performance-based planning process.4. Consideration of Federal-aid highway national goals in State Asset Management Plans.
FDOT Source Book⁵	<p>The FDOT Source Book 2018 (Source Book) describes the mobility performance of Florida's transportation system using decades of research and historic data from multiple sources including vehicle probe data, volumes, and roadway geometry. Through the Source Book, a comprehensive report is provided for all major modes of travel in Florida. Although the Source Book measures are not facility specific, they are the aggregation of measures calculated at the facility level. Some of these mobility measures are leveraged for making funding decisions when used at the segment level. The Source Book provides mobility performance measures for every segment of the State Highway System (SHS).</p>

¹ [Highway Performance Monitoring System \(HPMS\), 2018](#)

² [Transportation Asset Management Plan \(TAMP\), 2019](#)

³ [Florida Transportation Plan \(FTP\), 2018](#)

⁴ [Transportation Performance Management \(TPM\), 2018](#)

⁵ [FDOT Source Book, 2018](#)

Highway Performance

The different highway performance measures outlined in this technical memorandum are listed in Table 2 below.

Table 2 | Highway Performance Measures

Quantity	Quality	Utilization
<ul style="list-style-type: none"> Truck Miles Traveled Combination Truck Miles Traveled Combination Truck Ton Miles 	<ul style="list-style-type: none"> Combination Truck On-Time Arrival Combination Truck Planning Time Index Combination Truck Hours of Delay Truck Bottlenecks Percent of travel meeting Level of Service Highway Pavement Conditions Bridge Conditions Highway (Truck) Safety 	<ul style="list-style-type: none"> Truck Empty Backhaul Truck Parking Utilization

Truck Miles Traveled (TMT)

Definition: Truck Miles Traveled (TMT) is computed by multiplying daily Vehicle Miles Traveled (VMT) by a truck factor, also known as the heavy vehicle percentage or T Factor. The truck factor for each roadway segment is provided in the Traffic Characteristics Inventory (TCI) database.

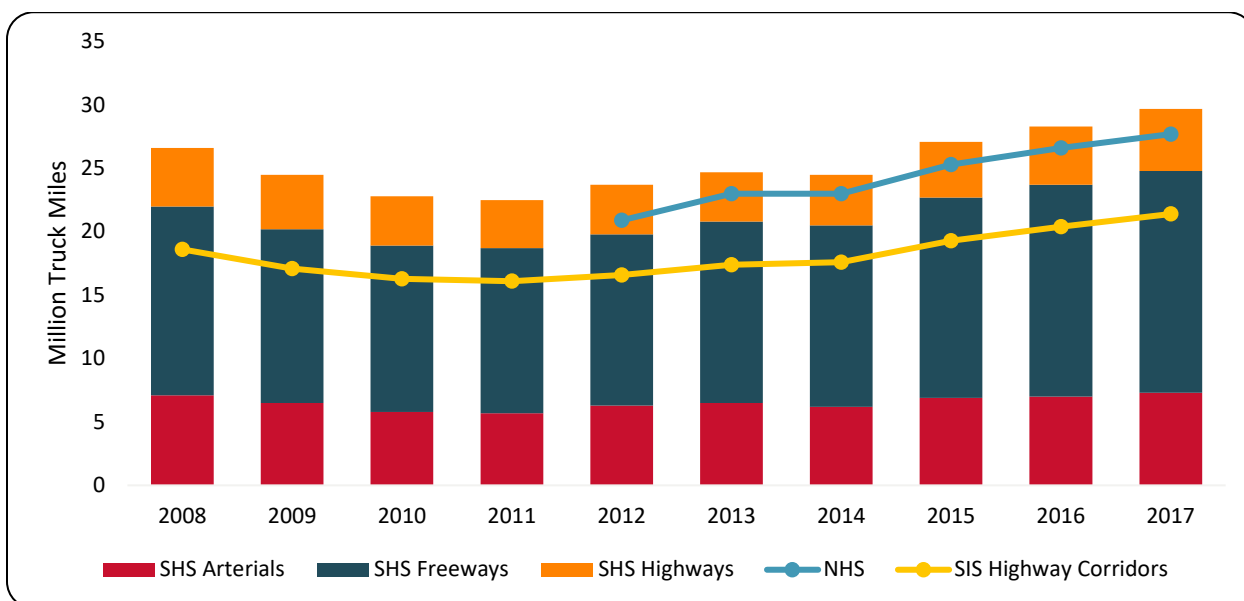
$$Truck\ Miles\ Traveled = \sum Segment\ Length \times Volume \times \%\ of\ Trucks$$

Data Source: FDOT Traffic Characteristics Inventory and FDOT Roadway Characteristics Inventory

Data Coverage: State Highway System (SHS), National Highway System (NHS), Strategic Intermodal Systems (SIS) Highways

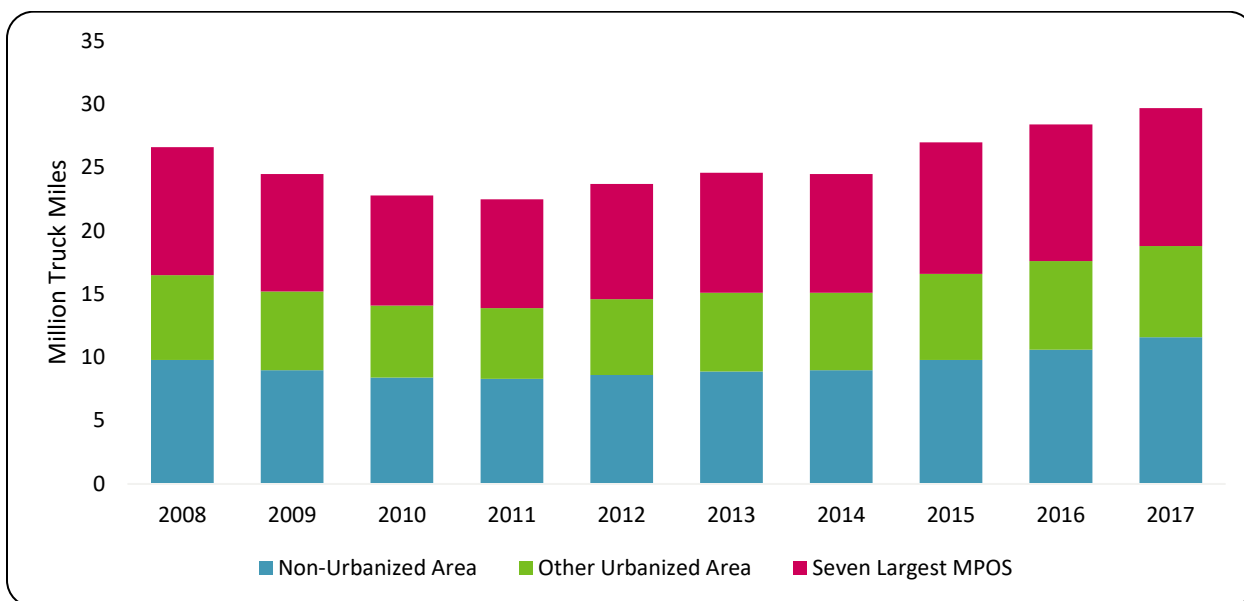
Major observations: Figure 1 and Figure 2 provide the annual trends of TMT for different facility types as well as MPOs⁶ and other areas in the state. In 2017, there were 29.6 million daily truck miles traveled on State Highway System, which is a 4% increase from 2016.

⁶ Seven (7) Largest MPOs: Broward County, Hillsborough, MetroPlan Orlando, Miami-Dade, North Florida, Palm Beach, and Forward Pinellas.



Source: FDOT Source Book, 2018

Figure 1 | Daily Truck Miles Traveled by Facility Type



Source: FDOT Source Book, 2018

Figure 2 | Daily Truck Miles Traveled on SHS by Area

Combination Truck Miles Traveled (CTMT)

Definition: A combination truck is a truck consisting of a tractor and trailer (FHWA Vehicle Category Classification 8-13).⁷ Combination Truck Miles Traveled (CTMT) is computed by multiplying VMT by the combination truck factor. The combination truck factor is provided on a county-by-county basis and represents the proportion of heavy vehicles that are combination trucks.

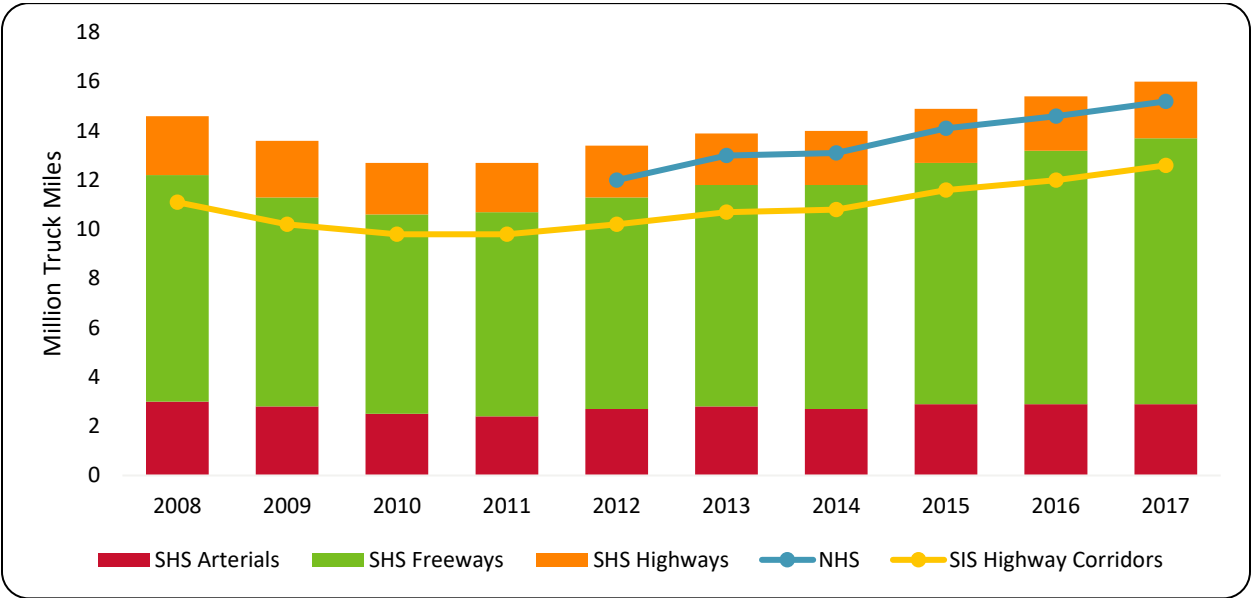
Combination Truck Miles Traveled

$$= \sum Segment\ Length \times Volume \times Combination\ Truck\ Factor$$

Data Source: FDOT Traffic Characteristics Inventory and FDOT Roadway Characteristics Inventory

Data Coverage: State Highway System (SHS), National Highway System (NHS)

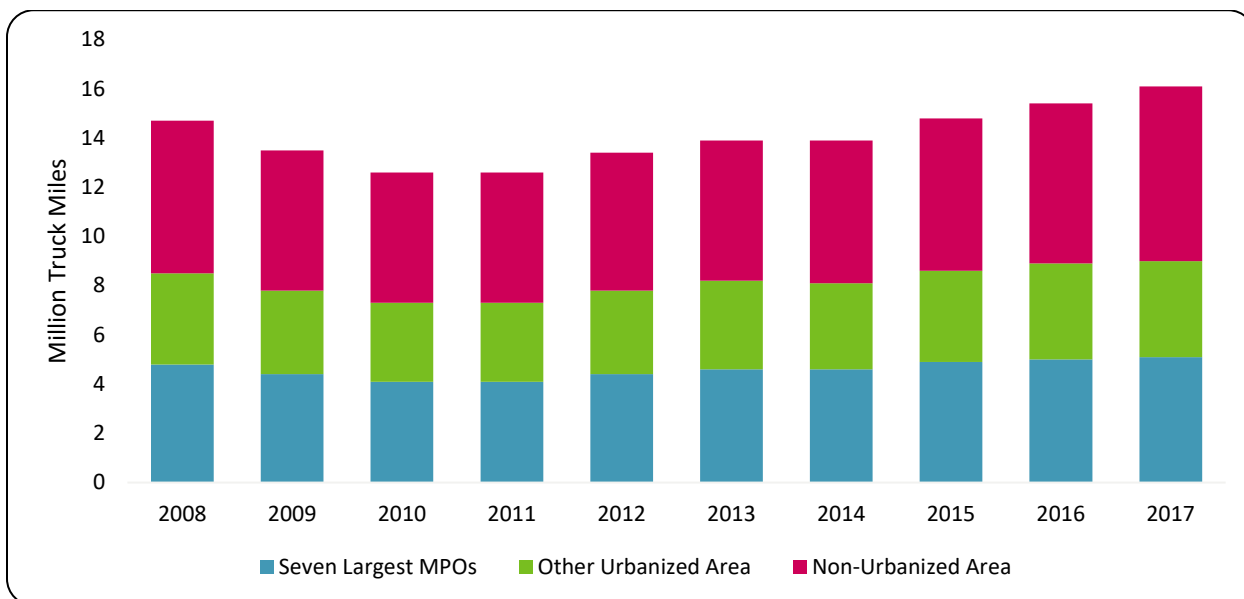
Major observations: Figure 3 and Figure 4 provide the annual trends of CTMT for different areas as well as different facility types in the state. Statewide, 16 million daily combination truck miles were traveled in 2017, which was the highest observed in the last ten years.



Source: FDOT Source Book, 2018

Figure 3 | Combination Daily Truck Miles Traveled by Facility Type (2008-2017)

⁷ Florida Department of Transportation Traffic Monitoring Handbook (2018)



Source: FDOT Source Book, 2018

Figure 4 | Combination Daily Truck Miles Traveled on SHS by Area (2008-2017)

Annual TMT and annual CTMT trends for different facility types indicate a growing truck traffic demand which necessitates identifying solutions to alleviate the increasing volume of trucks on Florida's roadways. Figure 5 and Figure 6 depict the truck AADT (2018) and % change in truck AADT (from 2013 to 2018) on the SHS respectively. The roadway segments identified with high truck traffic movement and significant percent growth in truck traffic are the potential roadway segments to be prioritized for freight and freight related projects.



Freight *Mobility* and Trade Plan

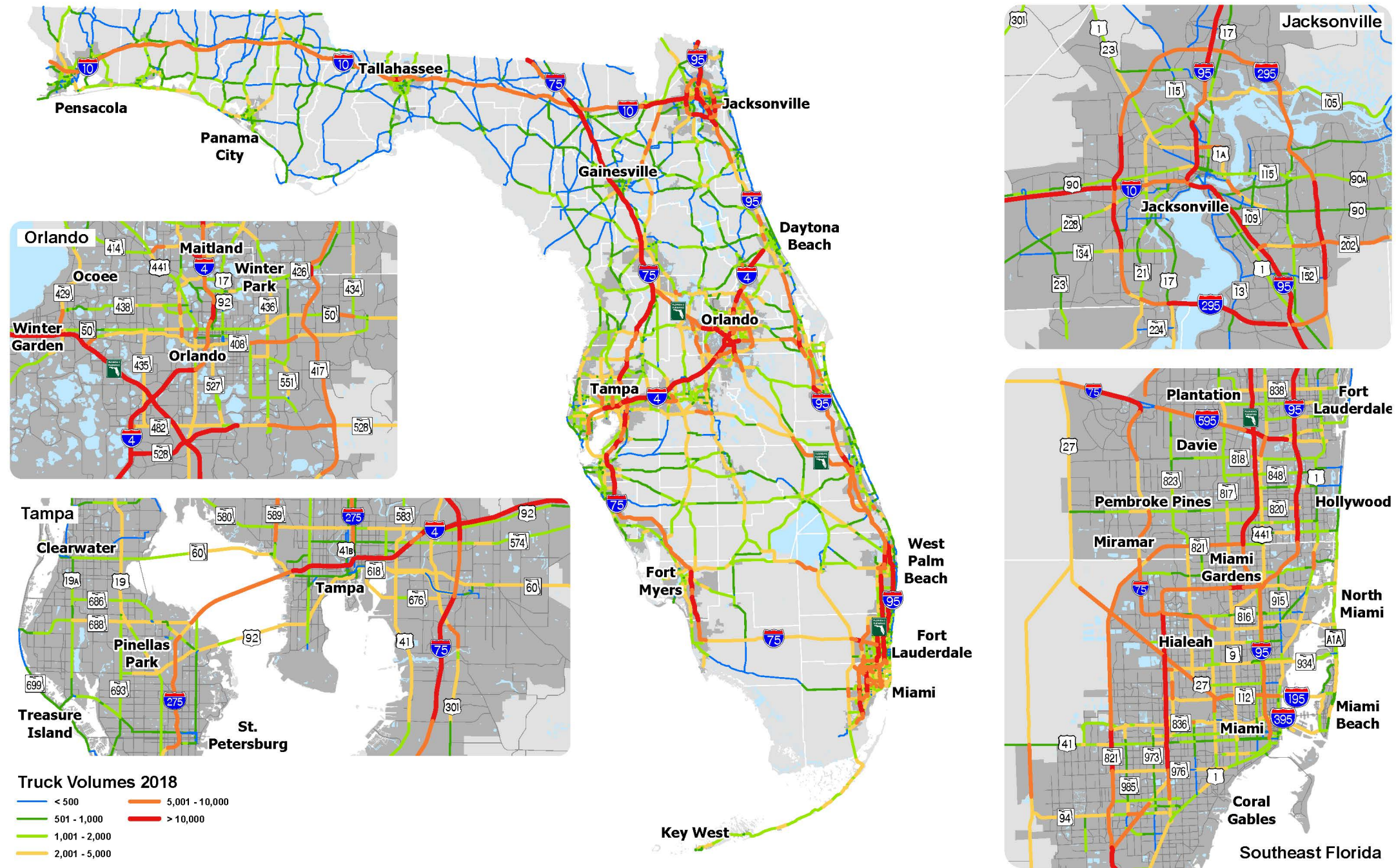


Figure 5 | Annual Average Daily Truck Traffic (2018)

Source: FDOT Transportation Data and Analytics, 2018



Freight *Mobility* and Trade Plan

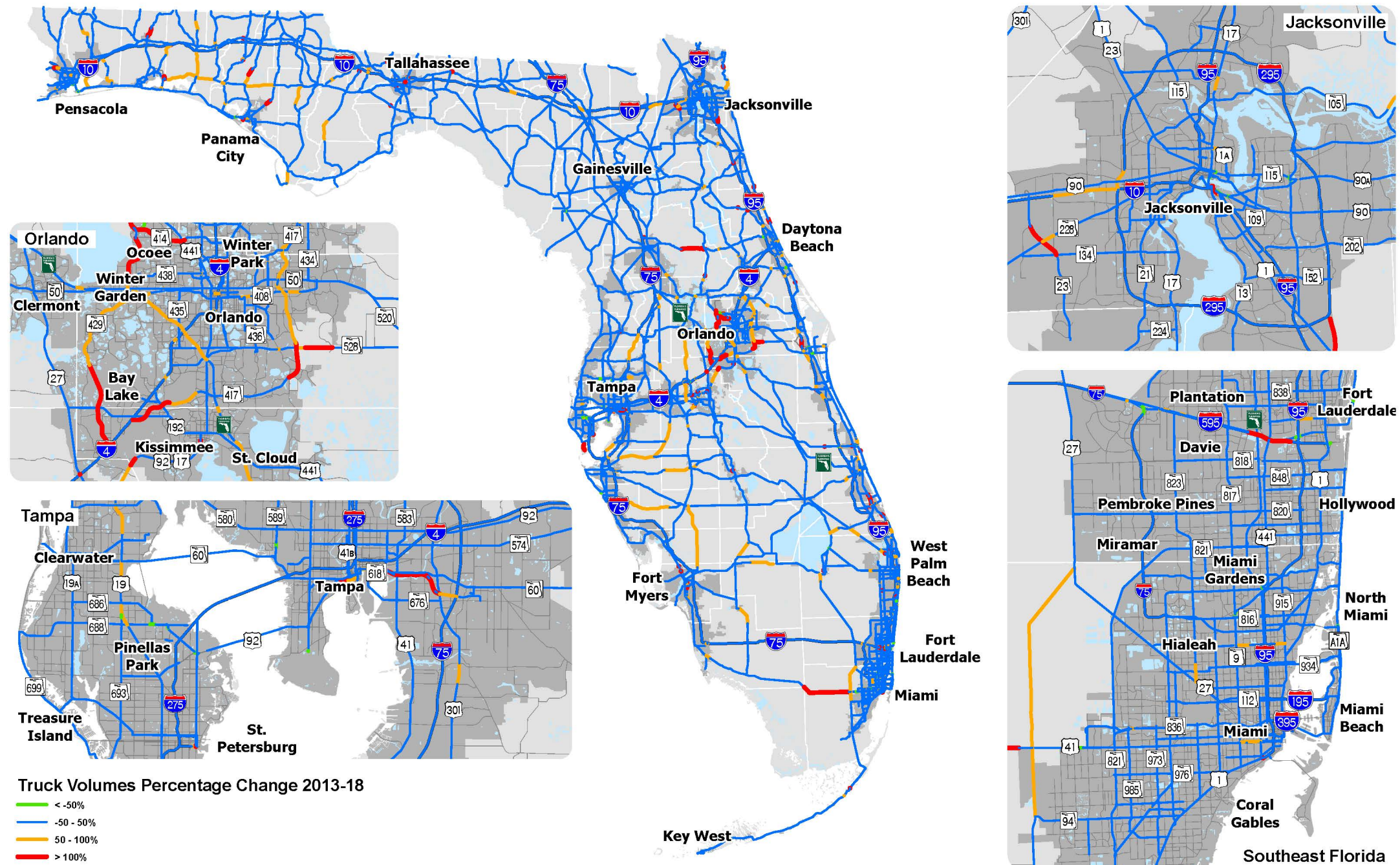


Figure 6 | Percent Change in Annual Average Daily Truck Traffic (2013-2018)

Source: FDOT Transportation Data and Analytics, 2018



Combination Truck Ton Miles (CTTMT)

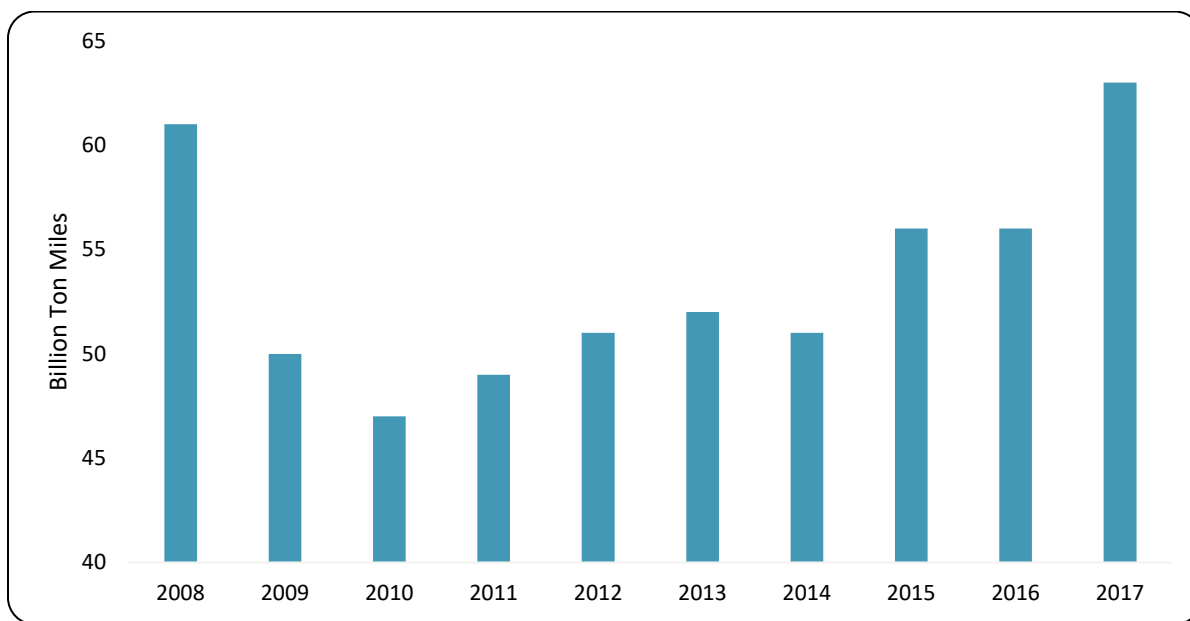
Definition: Combination truck ton miles traveled (CTTMT) is determined using combination truck miles traveled and average load of all combination trucks. This is the product of combination truck tonnage and the combination truck miles traveled.

$$\text{Combination Truck Ton Miles Traveled} = \sum \text{AvgLoadofAllCombTR} \times \text{CTMT} \times \frac{365}{1000}$$

Data Source: FDOT Weigh in Motion, FDOT Traffic Characteristics Inventory, FDOT Roadway Characteristics Inventory and Freight Analysis Framework

Data Coverage: State Highway System (SHS), National Highway System (NHS)

Major observations: Figure 7 provides the annual trends of CTTMT in the state. The CTTMT increased 12% between 2016 and 2017.



Source: FDOT Source Book, 2018

Figure 7 | Annual Combination Truck Ton Mile (2008-2017)

Figure 8 and 9 depict estimated tonnage movement on different roadways for years 2012 and 2045 respectively (Source: Freight Analysis Framework (FAF)). The roadways identified with high 2012 truck tonnage movements and 2045 (forecast) truck tonnage movements are the roadway segments that should be potentially prioritized for freight and freight related projects.



Freight *Mobility* and Trade Plan

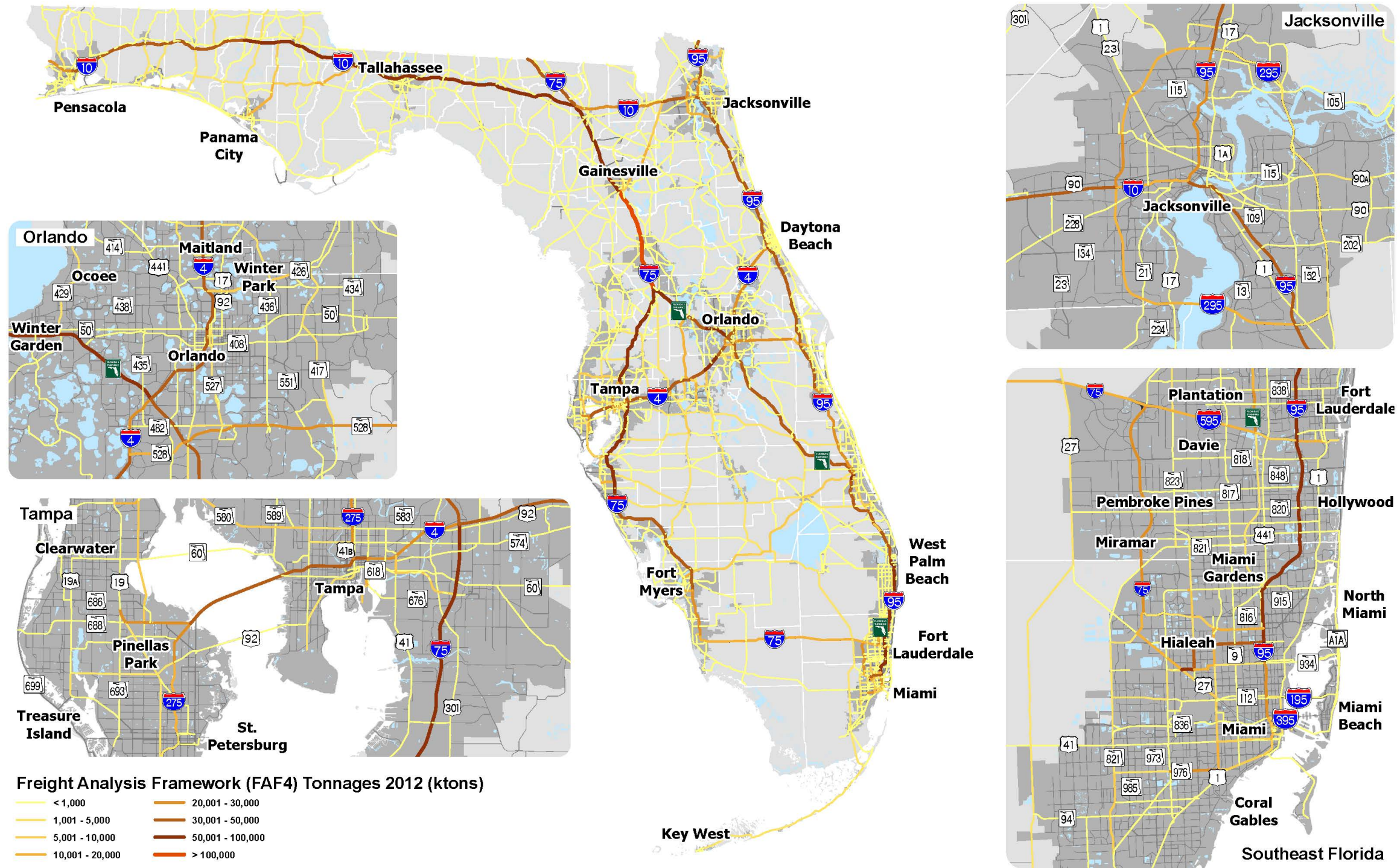


Figure 8 | Freight Analysis Framework (FAF4) Tonnage 2012 (KTons)



Freight *Mobility* and Trade Plan

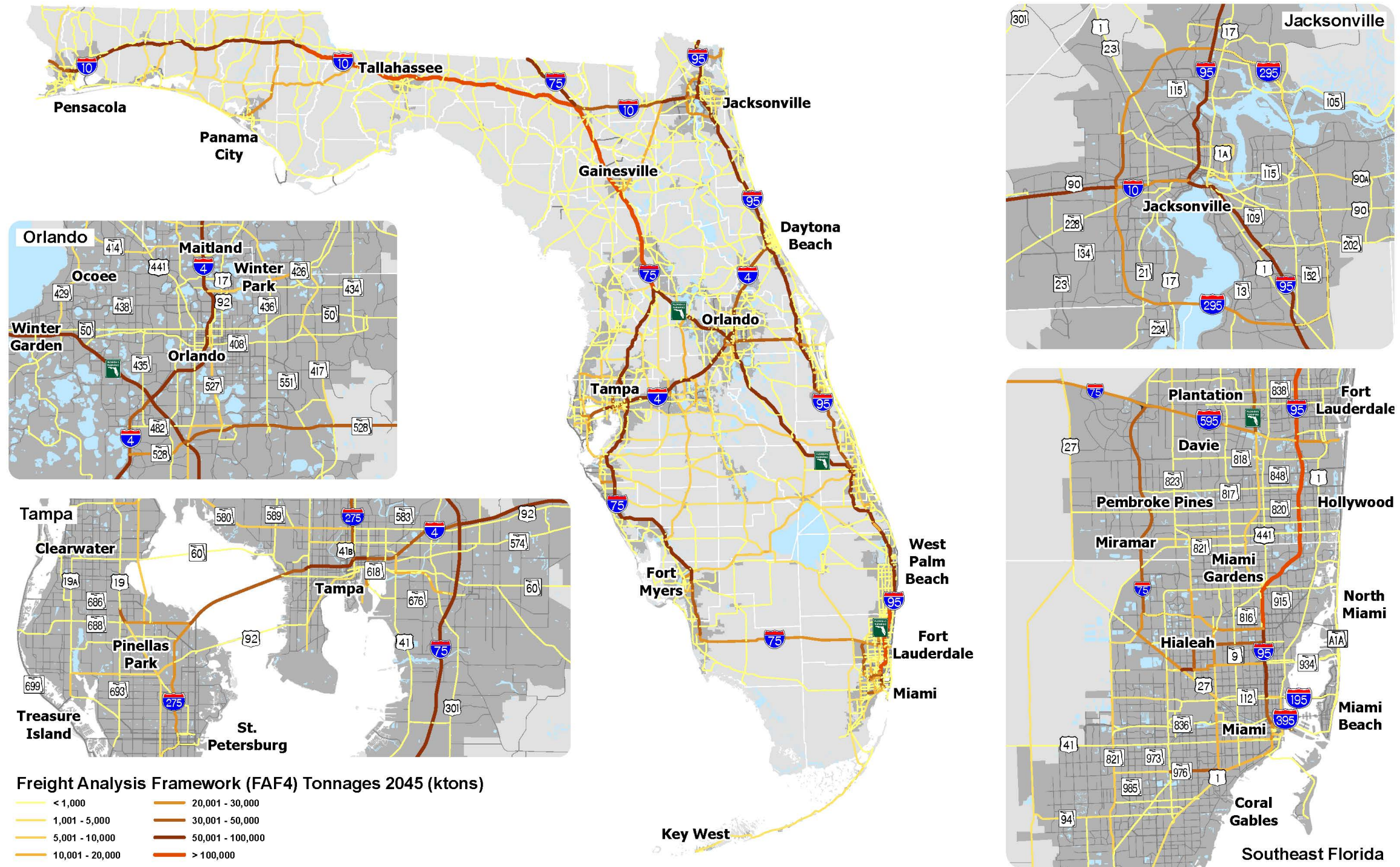


Figure 9 | Freight Analysis Framework (FAF4) Tonnage 2045 (KTons)

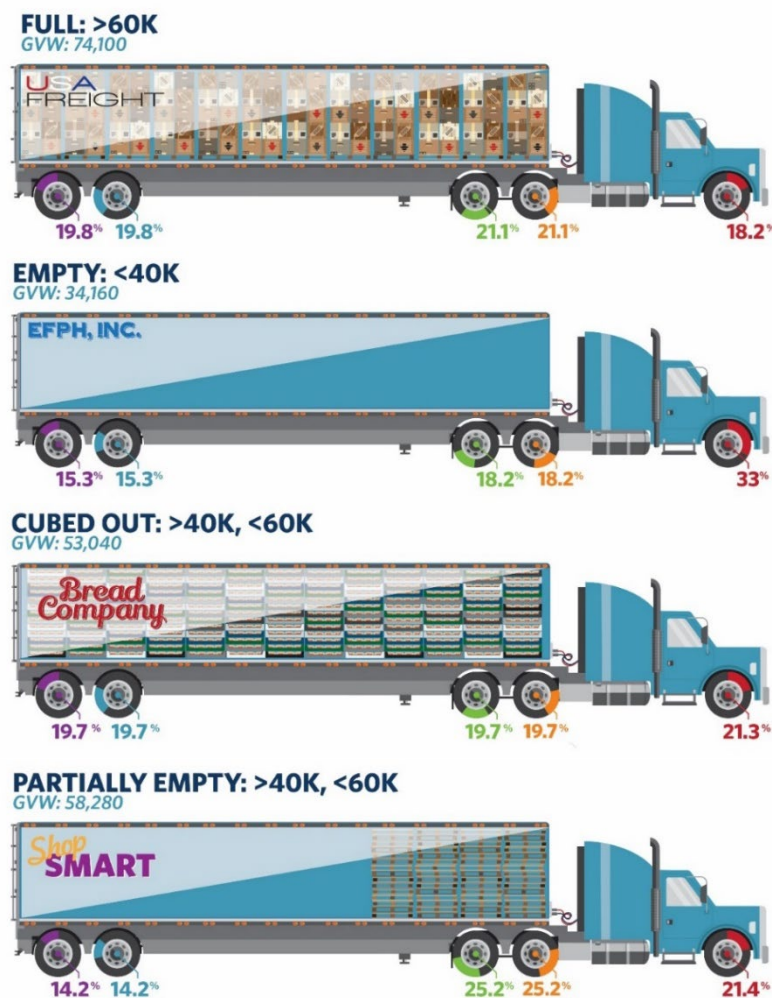


Truck Empty Backhaul

Definition: Truck empty backhaul is the return movement of a truck from its original destination to its point of origin when the truck is not hauling cargo. An imbalance of trade flows is the fundamental reason behind empty backhaul; Florida is a consumer state with a relatively small manufacturing sector and a relatively large distance from other major U.S. consumer markets.

Empty backhaul tends to increase supply chain costs, as carriers need to pass along the cost of empty backhaul to shippers and customers. It also reduces both productivity and profitability of the motor carrier industry. While it is largely an economic issue outside of FDOT's purview, addressing empty backhaul could reduce congestion/bottleneck issues, truck parking issues, costs and environmental impacts for the commercial motor vehicle industry.

The definitions of empty backhaul are illustrated in Figure 10 below.



Note: all truck weight units are in pounds.

Source: Transportation Data and Analytics Office, 2018

Figure 10 | Class 9 Truck Axle Weight Load Distribution



Definitions are explained below:

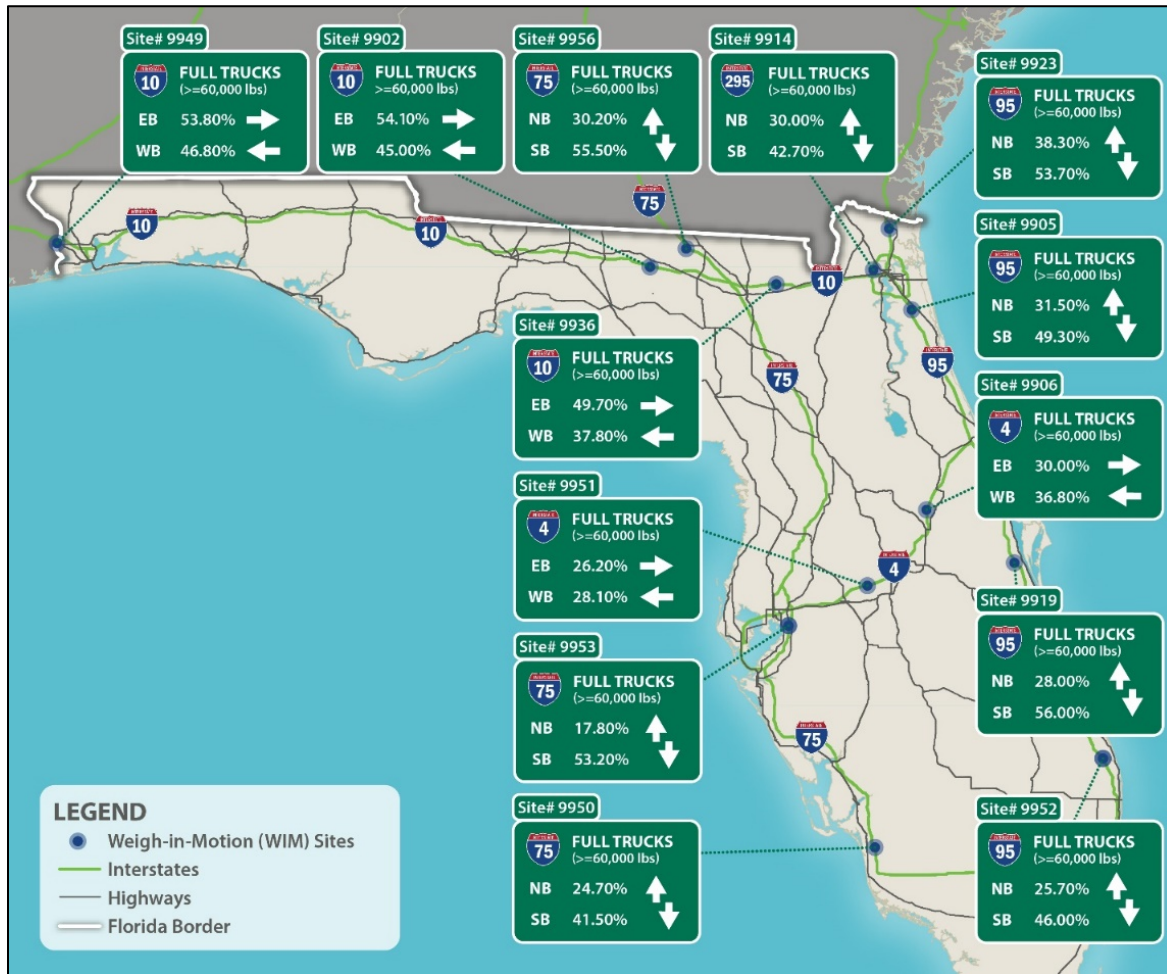
- Full Truck = Gross vehicle weight > 60,000 lbs.
- Empty Truck = Gross vehicle weight < 40,000 lbs.
- Partially Empty = Unequal Trailer Weight Distribution = If > 5% difference (between axles 3 & 4, of 5 axle vehicle) = Available capacity for additional cargo
- Cubed Out (Full) = Equal Trailer Weight Distribution = If < 5% difference (between axles 3 & 4, of 5 axle vehicle) = No available capacity

Data Source: FDOT Weigh In Motion (WIM)

Data Coverage: TDA Weigh In Motion locations

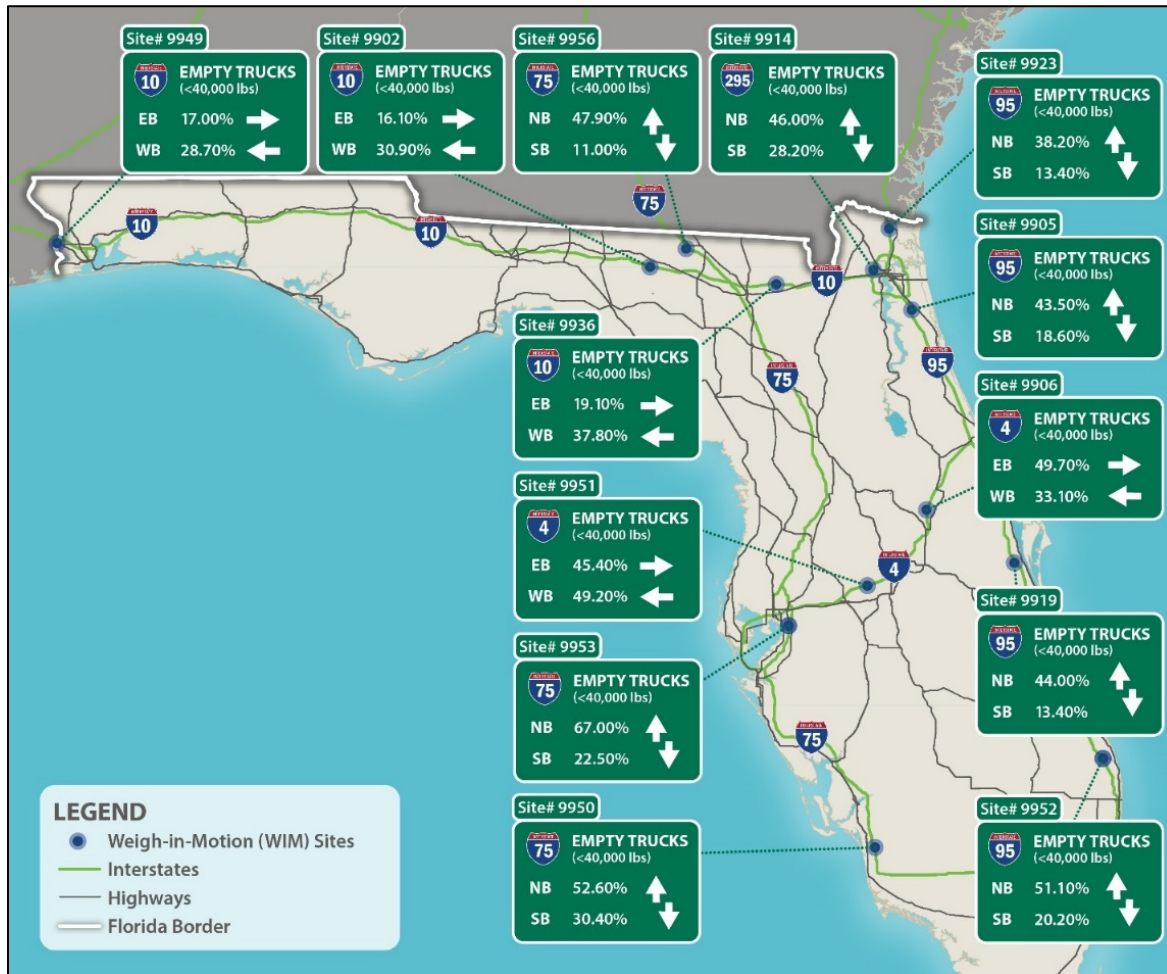
Key Observations:

Figure 11 shows that for the three sites near the state border (I-10, I-95 and I-75) there is a larger percentage of full trucks traveling into the state compared to trucks leaving the state. Similarly, Figure 12 shows the percentage of empty trucks entering and leaving. More than half of the trucks coming into the state between the years of 2015 and 2017 are full trucks in comparison to nearly 38% that left the state during the same time period. This shows the domestic trade imbalance between freight coming in and going out of the state in terms of weight.



Source: Transportation Data and Analytics Office, 2018

Figure 11 | Percentage of Full Class 9 Trucks by Direction of Travel



Source: Transportation Data and Analytics Office, 2018

Figure 12 | Percentage of Empty Class 9 Trucks by Direction of Travel



Combination Truck Travel Time Reliability

Definition: Truck Travel Time Reliability is the percent of truck miles traveled for which the travel speed is greater than or equal to 45 mph for freeways within the seven largest MPO urbanized areas and greater than or equal to five mph below the posted speed limit for freeways in all other areas.

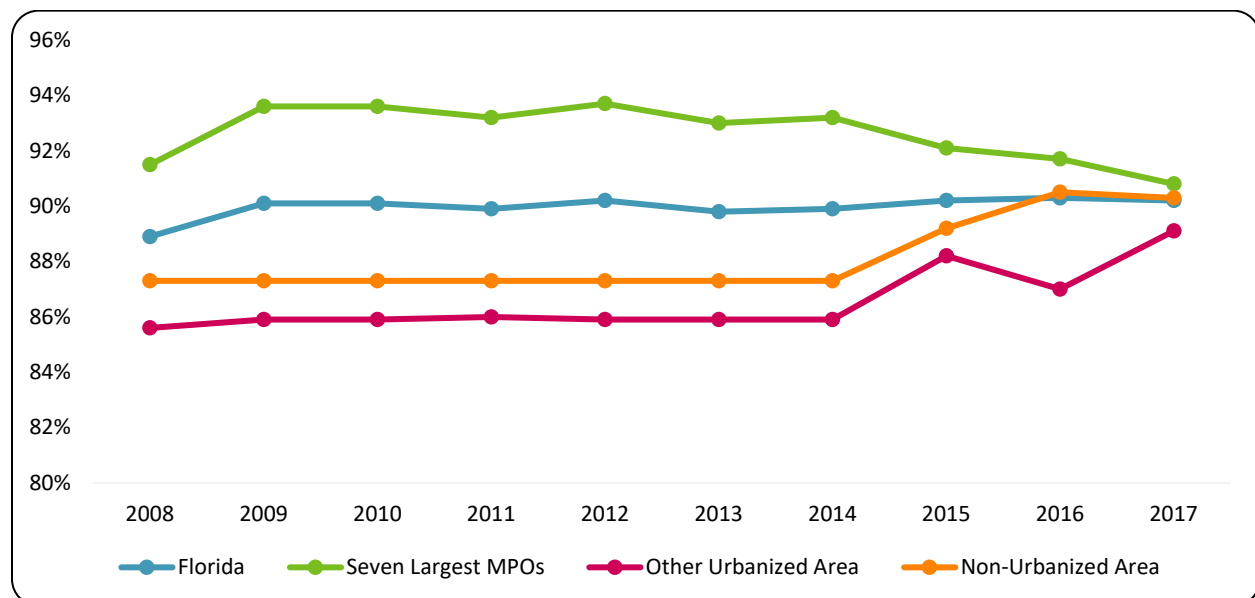
$$\text{Travel Time Reliability On Time Arrival (urbanized areas – Seven largest MPOs)} = \frac{\sum VMT | \text{Travel speed} \geq 45 \text{ mph}}{\sum VMT} \times 100$$

$$\text{Travel Time Reliability On Time Arrival (All others)} = \frac{\sum VMT | (\text{Travel speed} \geq \text{Speed Limit} - 5 \text{ mph})}{\sum VMT} \times 100$$

Data Source: FDOT Traffic Characteristics Inventory and HERE Technologies – Travel Time Data

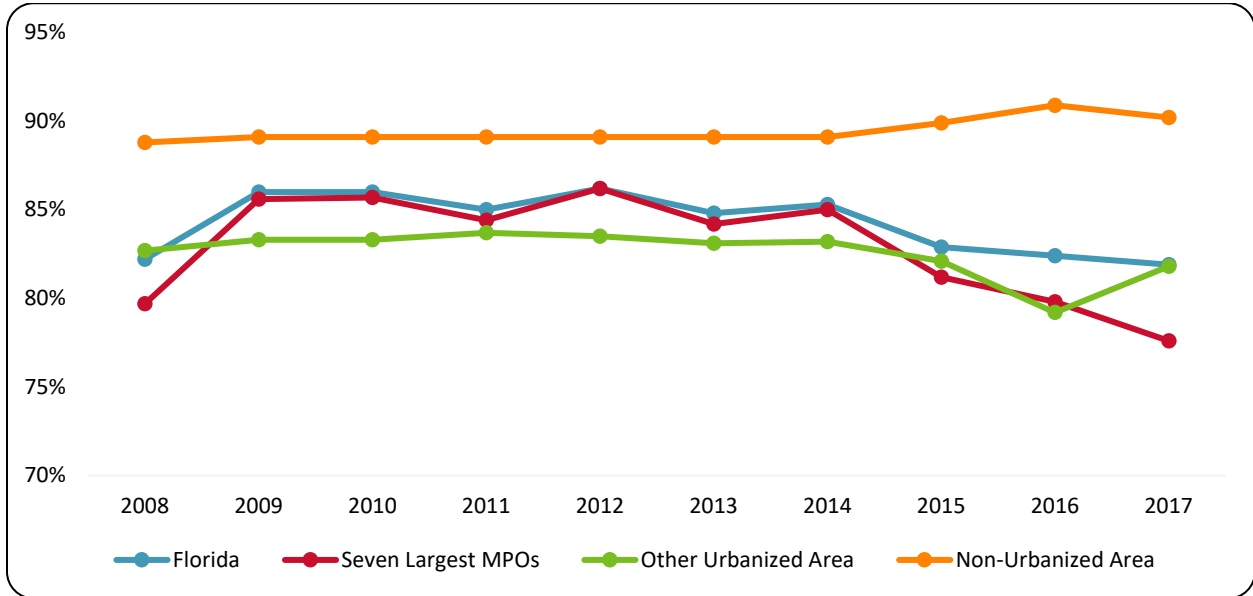
Data Coverage: National Highway System (NHS) and other major roadways

Major observations: Figure 13 and Figure 14 provide the annual trends of Combination Truck Travel Time Reliability for different areas in the state. The daily truck travel time reliability remained consistent statewide from 2013 through 2017 whereas the peak-period on-time arrival for the urbanized areas of the 7 largest metro areas saw a 3% decrease from 2016 to 2017. The drop was even larger (10%) from the best performing year of 2012 to 2017. Peak period truck travel time reliability is considerably lower when compared to daily truck travel time reliability with the seven largest metro areas contributing to the biggest drops in comparison to other areas in the state.



Source: FDOT Sourcebook, 2018

Figure 13 | Daily Percent of Combination Truck Travel Time Reliability (2008-2017)



Source: FDOT Sourcebook, 2018

Figure 14 | Peak Period Percent of Combination Truck On-Time Arrival (2008-2017)

Combination Truck Planning Time Index

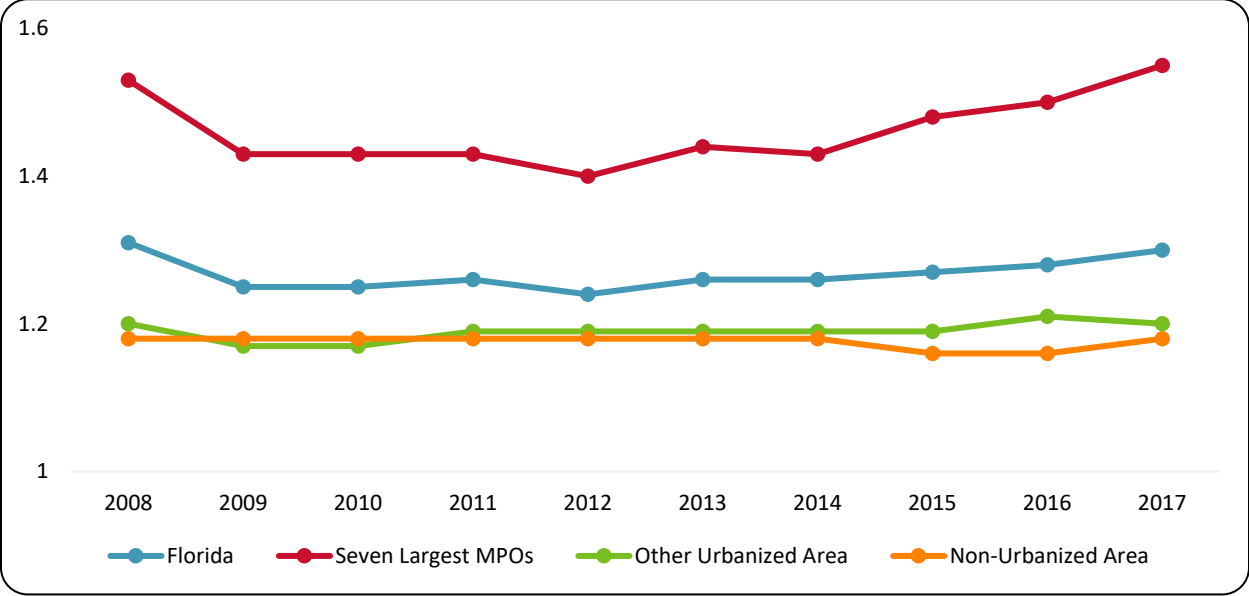
Definition: Combination Truck Planning Time Index (PTI) is defined as the ratio of the 95th percent peak period or peak hour travel time to the free flow travel time. This measure represents the additional time that a shipper should budget to ensure on-time arrival 95% of the time. The reporting period is the peak period (4:00 p.m. to 6:00 p.m.) for the urbanized areas of the seven largest metro areas and the peak hour in other urbanized areas and elsewhere.

$$PTI = \frac{Travel\ Time_{95th\ percentile}}{Travel\ Time_{free-flow}}$$

Data Source: FDOT Traffic Characteristics Inventory and HERE Technologies-Travel Time Data

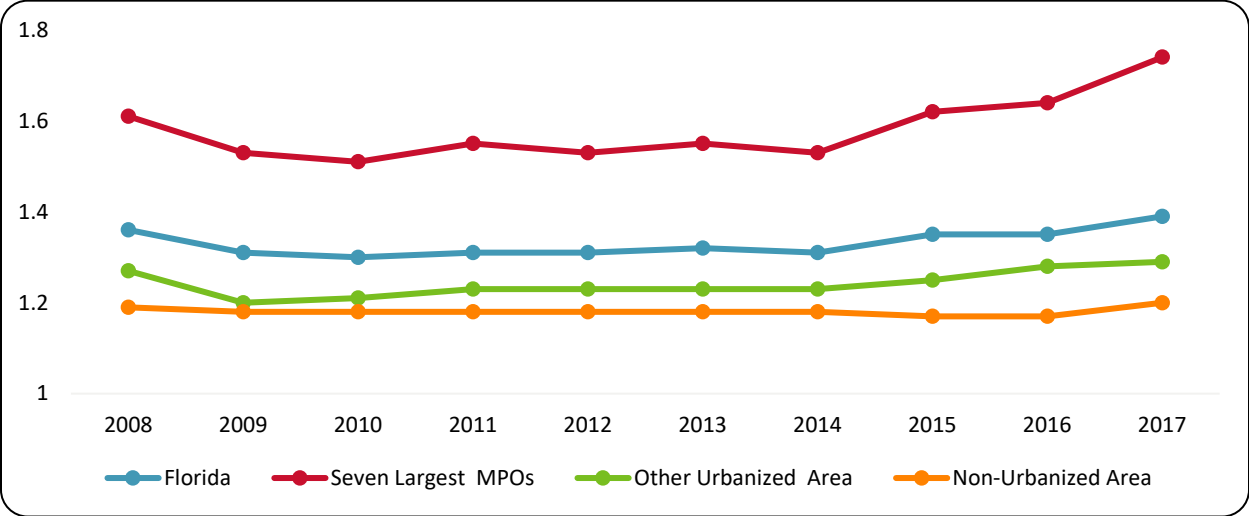
Data Coverage: National Highway System (NHS) and other major roadways

Major observations: Figure 15 and Figure 16 provide the annual trends of Combination Truck Planning Time Index for different areas in the state. Between 2016 and 2017, combination truck PTI slightly increased statewide from 1.35 in 2016 to 1.39 in 2017 for peak period conditions. For a trip that would take 10 minutes in free-flow conditions, the 95th percentile travel time is 14 minutes with a 1.39 PTI. But, in the top seven metro areas the same 10 minute trip in free-flow conditions will take 18 minutes.



Source: FDOT Sourcebook, 2018

Figure 15 | Daily Combination Truck Planning Time Index (2008-2017)



Source: FDOT Sourcebook, 2018

Figure 16 | Peak Period Combination Truck Planning Time Index (2008-2017)

Combination Truck Hours of Delay

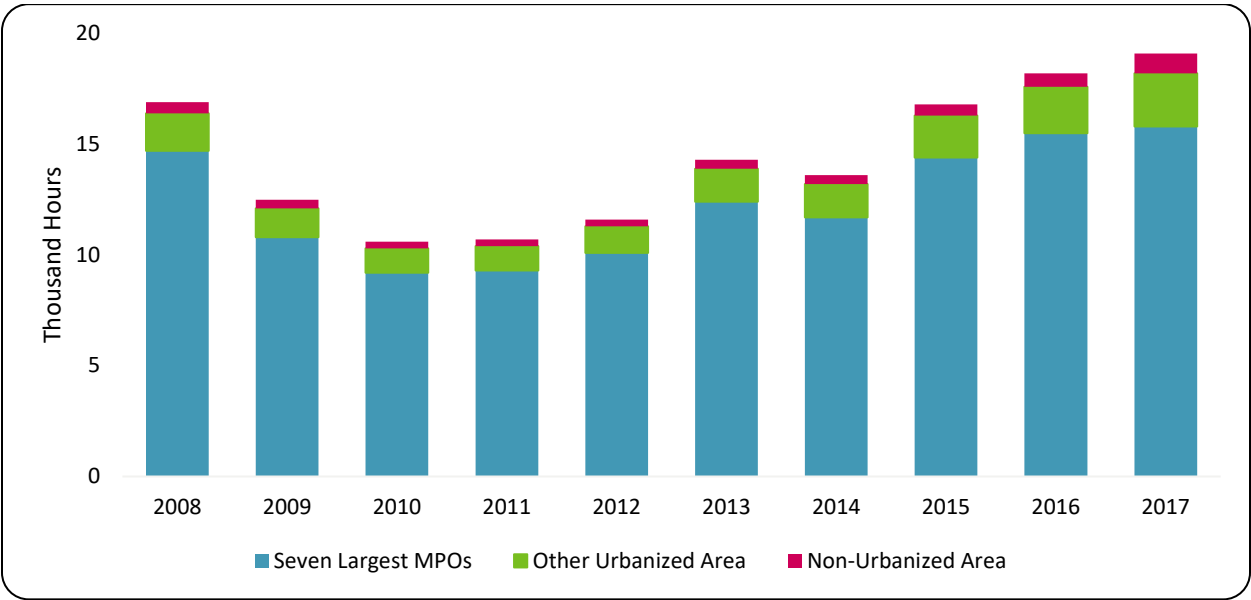
Definition: Combination Truck Hours of Delay were estimated on an hourly basis by determining the difference between delay threshold travel time and an actual travel time along a facility. Delay threshold travel time/speed is considered the additional travel time experienced by a motorist beyond what would be experienced under uncongested conditions. The definition of uncongested conditions was defined as Level of Service “B.”

$$\sum Combination\ Truck\ Volume \times (Daily\ Combination\ Truck\ Travel\ Time - Travel\ Time\ at\ LOS\ B)$$

Data Source: FDOT Traffic Characteristics Inventory and HERE Technologies – Travel Time Data

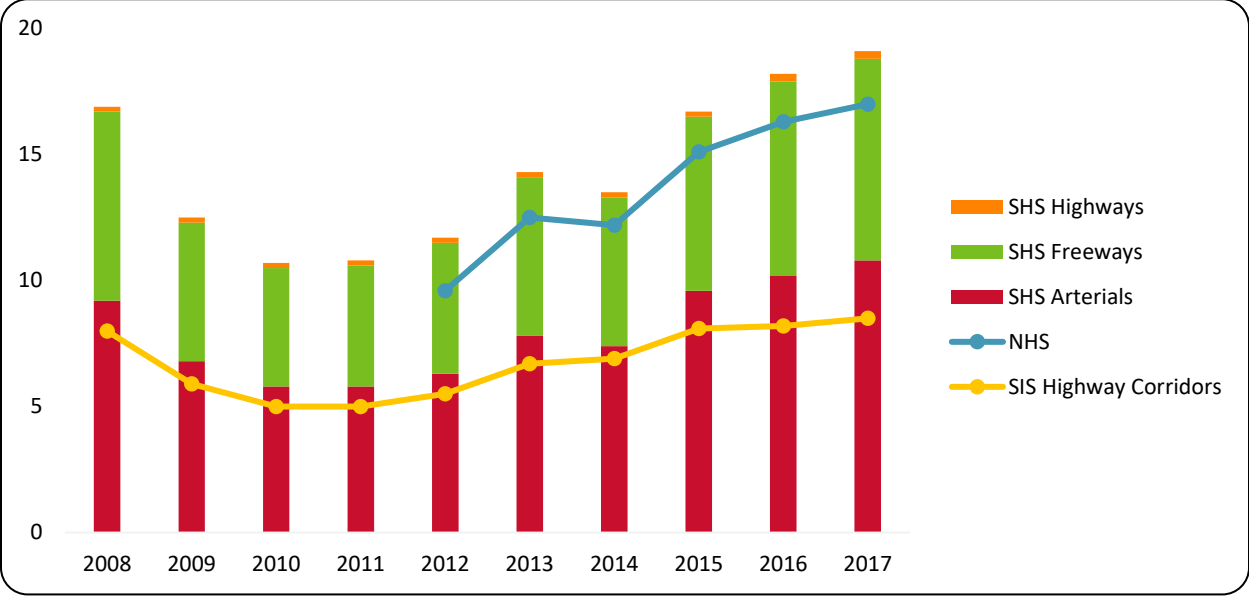
Data Coverage: National Highway System (NHS) and other major roadways

Major observations: Figure 17 and Figure 18 provide the annual trends of Combination Truck Hours of Delay for different areas and facility types in the state respectively. Between 2016 and 2017 the combination truck hours of delay increased by 4% to 19,100 daily hours of delay for combination trucks. The seven largest metro areas contribute to the majority of the hours of delay, which further emphasizes the congestion issues in major metro areas. The increase in hours of delay across different facility types is concerning and highlights the importance of exploring different solutions to alleviate the truck congestion in Florida, especially in major metro areas.



Source: FDOT Sourcebook, 2018

Figure 17 | Combination Truck Hours of Delay on SHS by Area (2008-2017)



Source: FDOT Sourcebook, 2018

Figure 18 | Combination Truck Hours of Delay by Facility Type (2008-2017)

Truck Bottlenecks

Definition: The roadway segments which rank highest in recurring congestion or in non-recurring congestion are defined as truck bottlenecks in the state of Florida.

Data Source: FHWA National Performance Measurement Research Data Set, 2018

Data Coverage: National Highway System (NHS)

Appendix A explains the methodology for identifying truck bottlenecks. The objective of the analysis was to describe the recurring and non-recurring congestion during a regular weekday. It is important to distinguish these two measures because research shows that freight users are more concerned with non-recurring congestion than recurring congestion. Motor carriers can easily schedule deliveries to consider recurring congestion, however non-recurring congestion is difficult to predict which could lead to delays and later deliveries. This not only causes disruptions for the motor carrier, but also for the receiver. One of the most important factors in modern-day supply-chains is being on-time, which becomes much more difficult with high levels of non-recurring congestion.

Major observations: Figure 19 depicts the top 10 truck bottlenecks (for recurring or non-recurring congestion) as well the top 100 truck bottlenecks (for recurring or non-recurring congestion) in the state. Table 3 provides the top 10 truck bottlenecks for recurring and non-recurring congestion.



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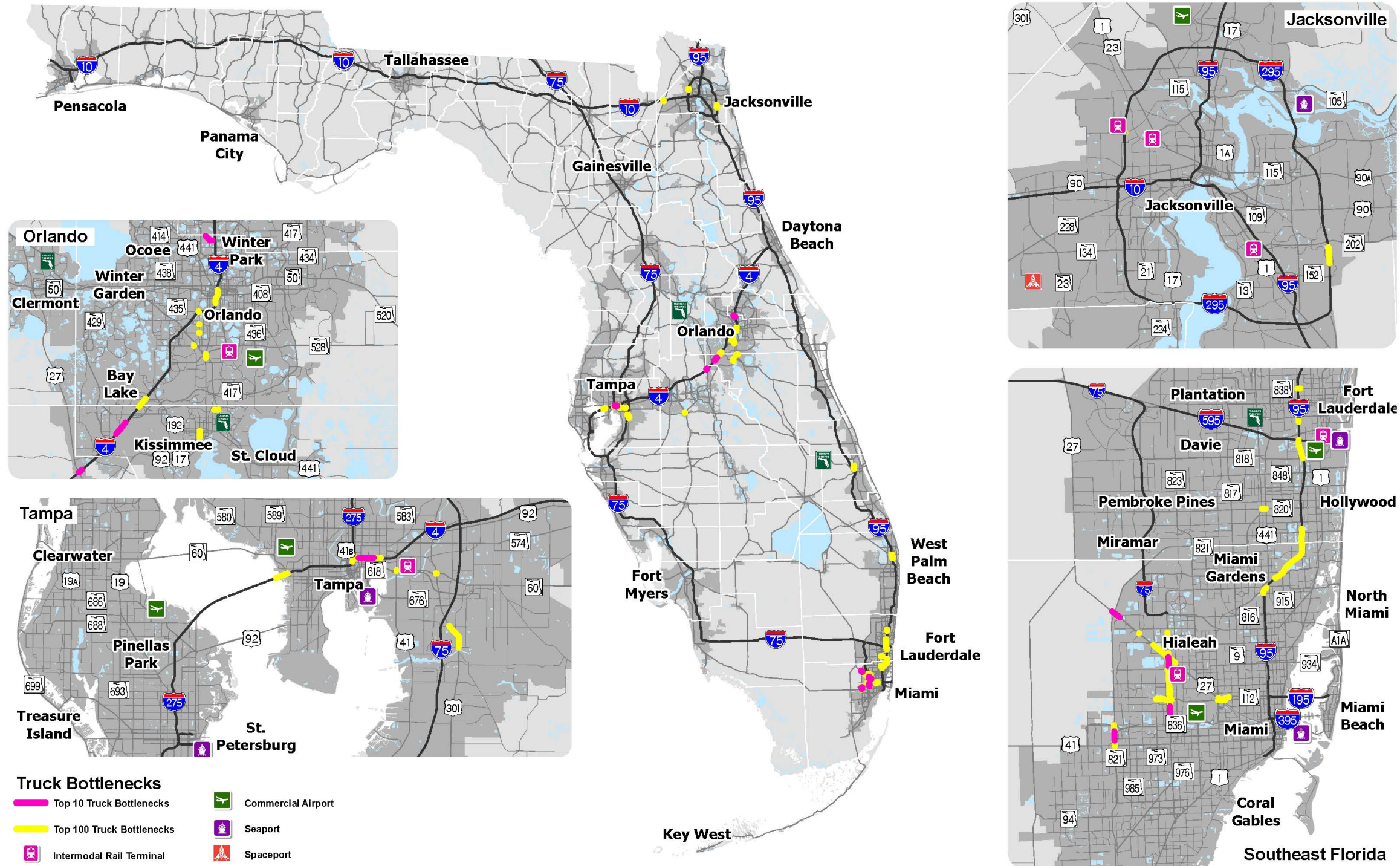


Figure 19 | Major Truck Bottlenecks (2018)



Table 3 | Top 10 Truck Bottlenecks for Recurring and Non-Recurring Congestion (2018)

Rank	Recurring Congestion		Non-Recurring Congestion	
	Road	County	Road	County
1	FL-414 eastbound between Seminole/Orange County border and I-4	Orange	FL-414 eastbound between Seminole/Orange County border and I-4	Orange
2	I-4 westbound close to Lee Roy Selmon Expressway	Hillsborough	I-4 westbound close to Lee Roy Selmon Expressway	Hillsborough
3	I-4 westbound approaching I-275	Hillsborough	I-4 eastbound approaching US 27	Polk
4	Palmetto Expressway Northbound corridor between the ramps entering and exiting NW 25 th Street	Miami-Dade	US-27 Northbound approaching FL Turnpike	Miami-Dade
5	I-4 Westbound between Daniel Webster Western Beltway and SR 417-Toll S	Osceola	US-27 Northbound between West 12 th Avenue and close to Hialeah Expressway	Miami-Dade
6	Florida Turnpike Southbound between Dolphin Expressway and US 41	Miami-Dade	Palmetto Expressway Northbound close to Miami Airport approaching Dolphin Expressway	Miami-Dade
7	Palmetto Expressway Northbound and south of Okeechobee Road	Miami-Dade	US-27 Northbound between West 12th Avenue and south of Hialeah Expressway	Miami-Dade
8	Palmetto Expressway Northbound close to NW 74 th Street	Miami-Dade	US-27 Northbound between the ramps entering and exiting FL Turnpike	Miami-Dade
9	Palmetto Expressway Northbound and north of Okeechobee Road	Miami-Dade	Palmetto Expressway Northbound corridor between the ramps entering and exiting NW 25th Street	Miami-Dade
10	US-27 Northbound approaching FL Turnpike	Miami-Dade	Palmetto Expressway Southbound and south of Okeechobee Road	Miami-Dade



The top bottleneck in the state (FL-414 approaching I-4) is the same for recurring as well as non-recurring congestion. The I-4, Central Florida, and major highways in Miami-Dade County are also among the top 10 truck bottlenecks. It is important to note that the American Transportation Research Institute (ATRI)⁸ publishes a list of the top 100 bottlenecks in the country every year. In 2019, the ATRI study identified one top 100 truck bottleneck in Florida. It is located in Tampa along I-4 and I-275. The same truck bottleneck is ranked #2 in the state as per the analysis conducted for the statewide truck bottleneck study. It should be noted that the methodology and data sources used to assess truck bottlenecks by ATRI differs from the study described here. As such, the results of each study vary. Future work should determine the causes of each truck bottleneck identified by this study.

Percent of Travel Meeting Level of Service (LOS)

Definition: The Percent of Travel Meeting LOS is determined by summing the VMT on roadways operating acceptably and then dividing by the total system VMT. "Acceptably" was defined as LOS D (two-hour peak and daily) for the 7 largest MPO urbanized areas, LOS D (one hour peak and daily) for other urbanized areas, and LOS C (one-hour peak and daily) everywhere else. The Percent of Travel Meeting LOS criteria is reported on daily and peak period basis for the 7 largest MPO urbanized areas, and on a daily and peak hour basis for all others. Peak period refers to 4:00 p.m. to 6:00 p.m. in the 7 largest MPO urbanized areas, and peak hour is defined as the hour with the highest hourly factor in other urbanized areas and elsewhere.

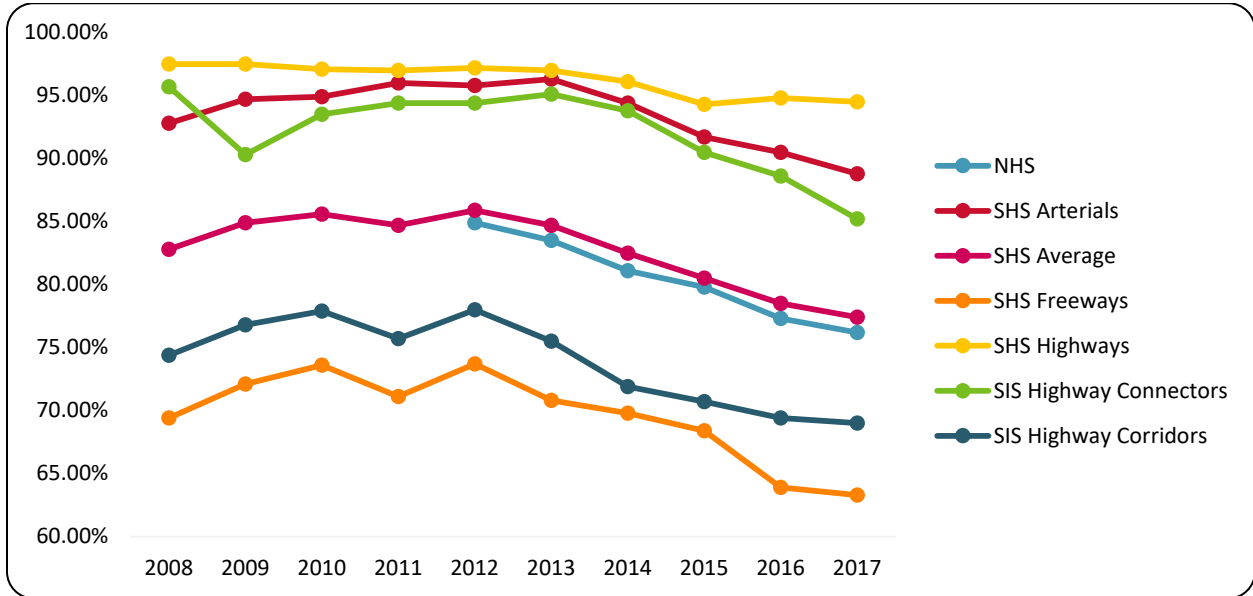
$$\frac{\sum(VMT \text{ during Peak Performance} \geq \text{Acceptable LOS Criteria Threshold})}{\sum VMT} \times 100$$

Data Source: FDOT – Traffic Characteristics Inventory, FDOT – Roadway Characteristics Inventory and HERE Technologies – Travel Time Data

Data Coverage: State Highway System (SHS); National Highway System (NHS)

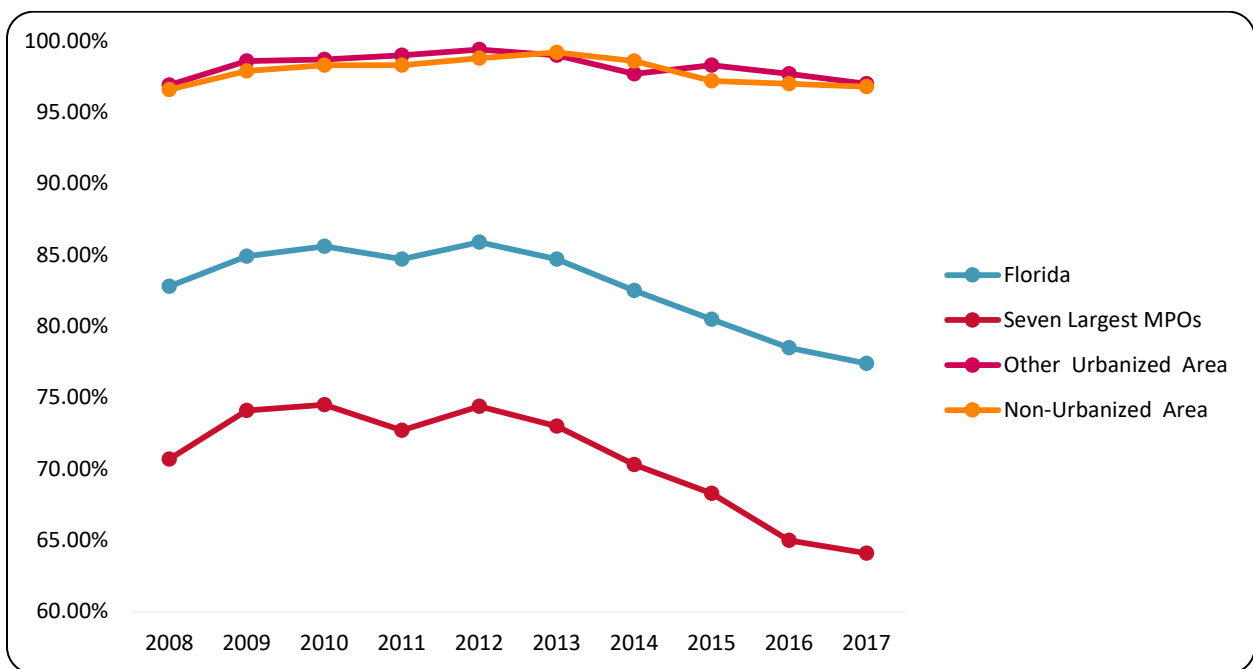
Major observations: Figures 20 through 23 provide the annual trends of Percent of Travel Meeting LOS criteria for different areas and facility types in the state. As travel on Florida's roadways has increased, the percent of travel meeting the acceptable LOS criteria during peak hour/peak period has decreased. From 2016 to 2017, it went from 78.5% to 77.4% on Florida's SHS during peak hour/peak period.

⁸ [American Transportation Research Institute –Top 100 Bottlenecks, 2019](#)



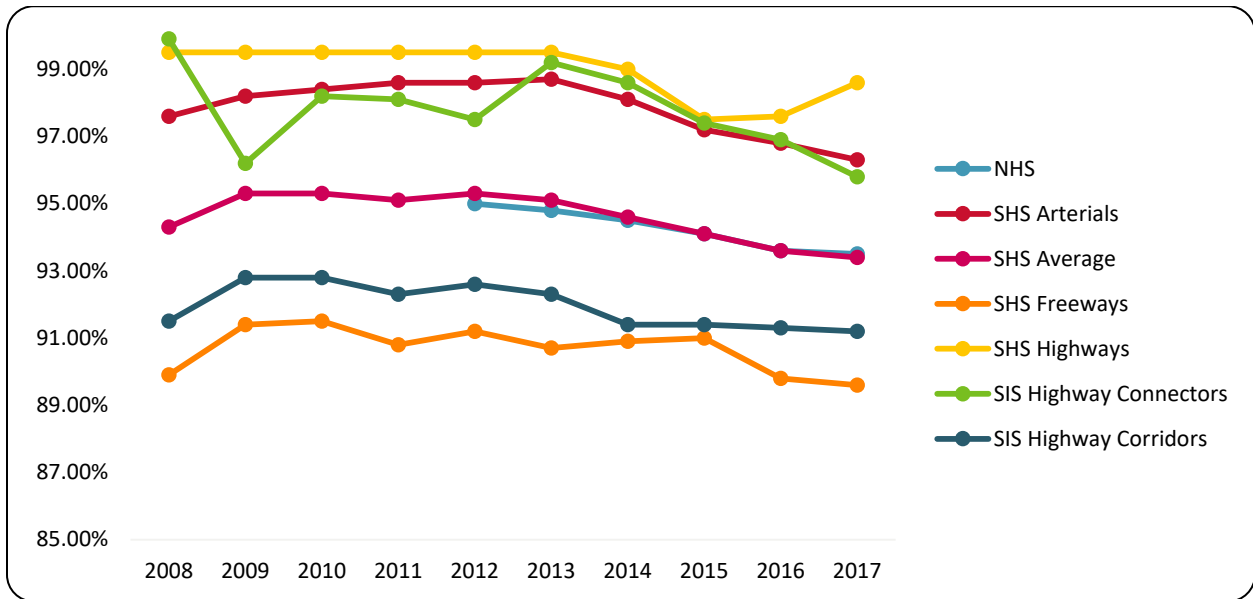
Source: FDOT Sourcebook, 2018

Figure 20 | % Travel Meeting LOS Criteria - Facility Type during Peak Period (2008-2017)



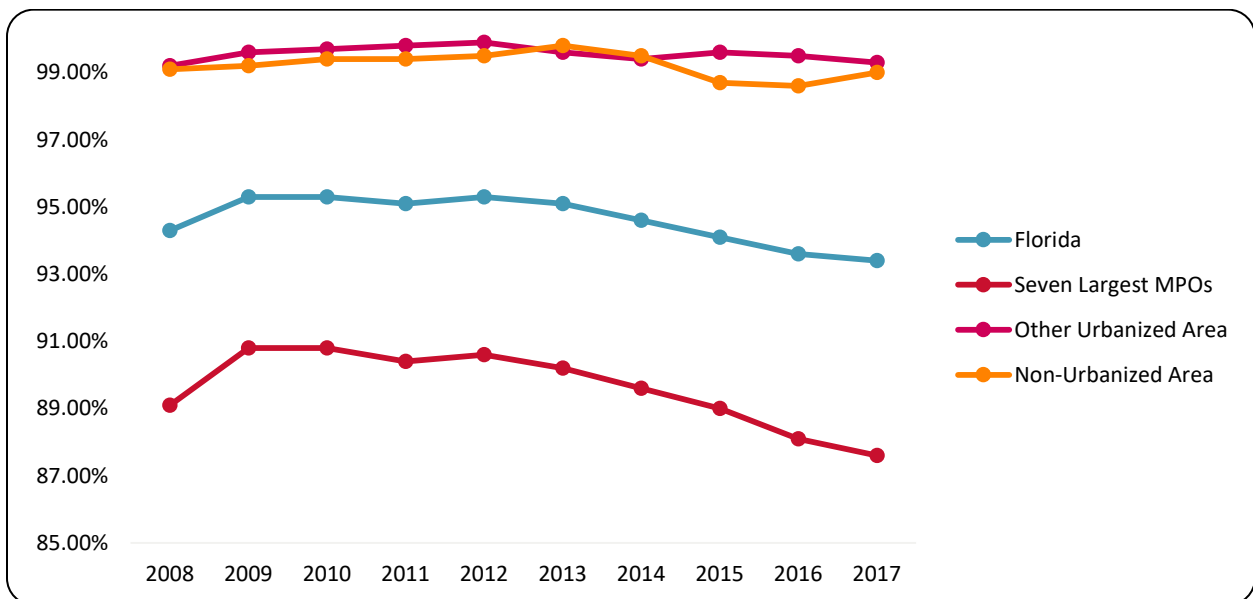
Source: FDOT Sourcebook, 2018

Figure 21 | % Travel Meeting LOS Criteria on SHS-Peak Period (2008-2017)



Source: FDOT Sourcebook, 2018

Figure 22 | % Travel Meeting LOS Criteria - Facility Type - Daily Time Period (2008-2017)



Source: FDOT Sourcebook, 2018

Figure 23 | Percent Travel Meeting LOS Criteria on SHS-Daily Period (2008-2017)

Figure 24 and Figure 25 depict existing (2016) and future (2040) Levels of Service for SHS roadways in the state. The LOS for the forecasted year indicates the worsening of travel conditions.



Freight *Mobility* and Trade Plan

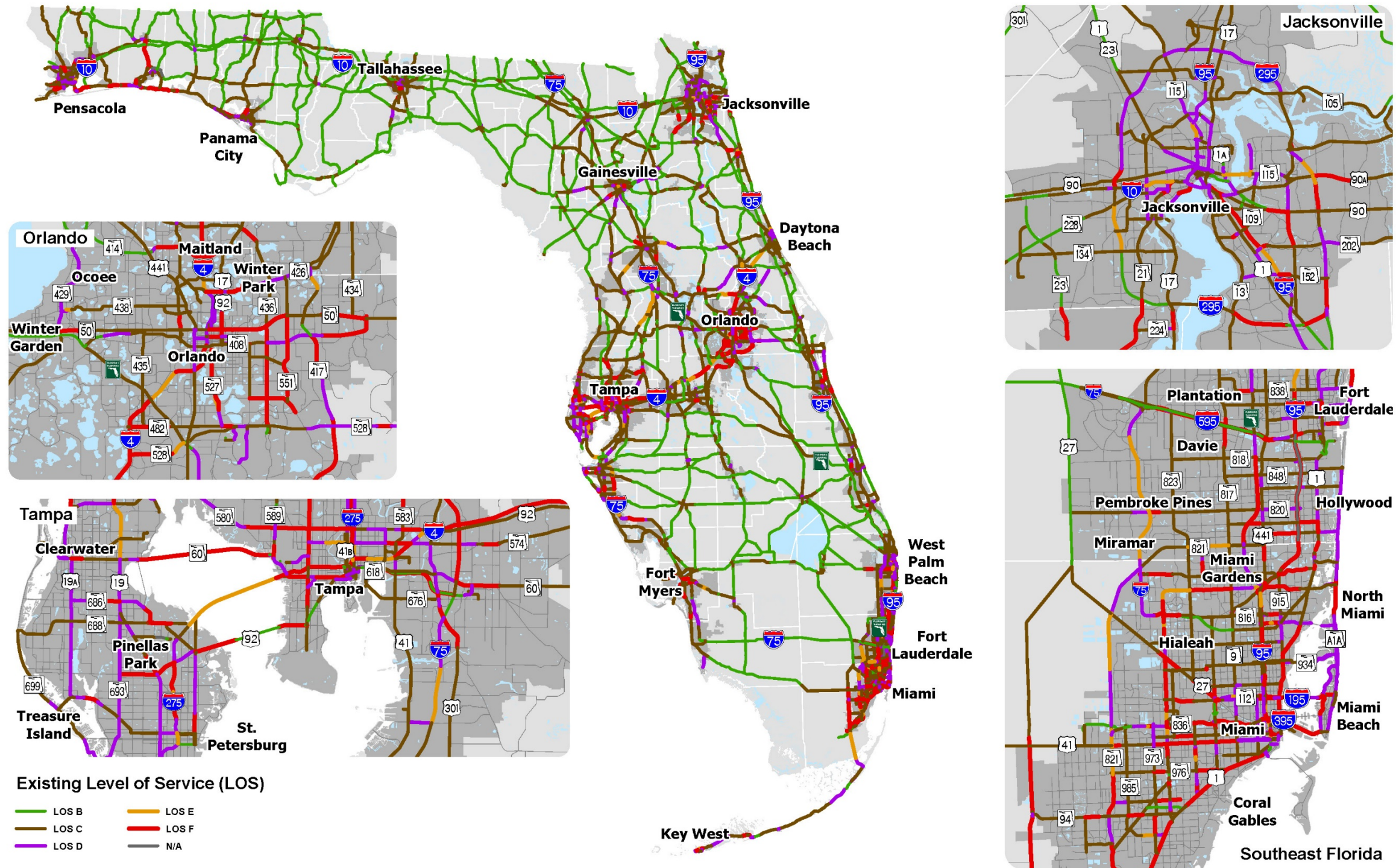


Figure 24 | Existing Level of Service (2016)



Freight *Mobility* and Trade Plan

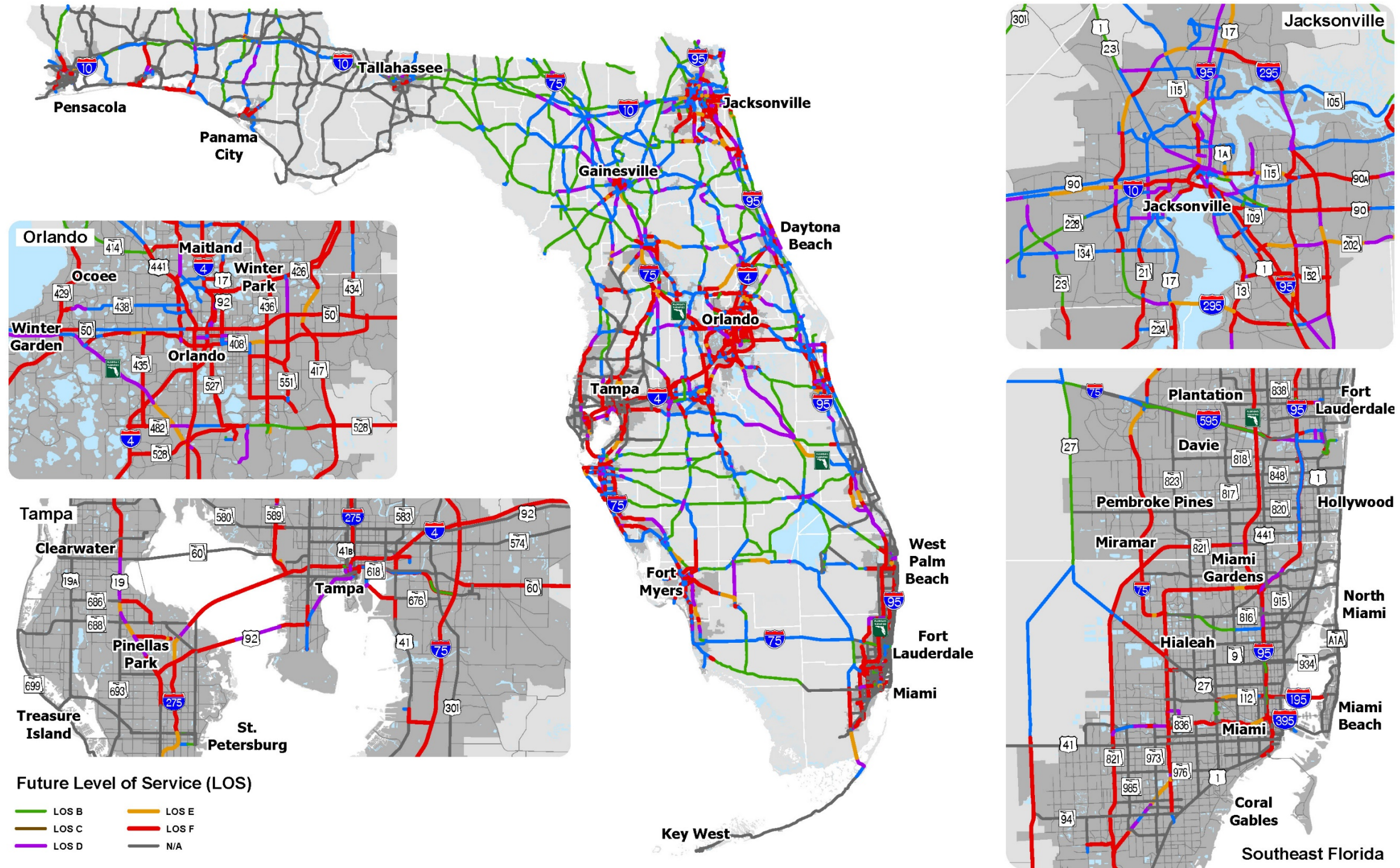


Figure 25 | Future Level of Service (2040)

Highway Pavement Conditions

Definition: Pavement conditions are rated by the FDOT and FHWA criteria as outlined below:

Data Coverage: State Highway System (SHS), National Highway System (NHS)

FDOT criteria: Ensure at least 80% of the pavement on the SHS meets the Department standard

Table 4 shows the Department's criteria for assessing pavement condition.

Table 4 | Pavement Condition Criteria (FDOT)

Rating Factors	Non-Deficient	Deficient
Ride Rating	≥ 6.5 (IRI ≤ 125 in/mile)	< 6.5 (IRI > 125)
Crack Rating	≥ 6.5	< 6.5
Rut Rating	≥ 6.5 (Rut $< 3/8$ in)	< 6.5 (Rut $> 3/8$ in)

Note: Pavement ratings are averaged along the entire segment which varies in length. The segment is considered "Deficient" if any one of the three ratings are deficient. Crack rating is a combination of lengths and severities and is not comparable to the FHWA Cracking Percent. International Roughness Index (IRI) is defined as a mathematical transform (a property) of a true profile describing surface roughness that causes vehicle vibration. A rut is a continuous longitudinal depression deviating from a surface plane defined by transverse cross slope and longitudinal profile. This depression normally occurs in the wheel paths.

Source: Transportation Asset Management Plan (TAMP), 2019

FHWA criteria: For the FHWA performance measurement reporting for pavements on the entire NHS, the Department has to ensure:

- Percentage of Interstate pavements in Good condition: $\geq 60.0\%$
- Percentage of Interstate pavements in Poor condition: $\leq 5.0\%$
- Percentage of non-Interstate NHS pavements in Good condition: $\geq 40.0\%$
- Percentage of non-Interstate NHS pavements in Poor condition: $\leq 5.0\%$

Per the FHWA Rule (23 CFR 490.315), the minimum condition for interstate pavements is that no more than 5% should be in poor condition. There are no minimum condition requirements for the non-interstate NHS pavements. Table 5 shows the FHWA's criteria for assessing pavement condition.

Table 5 | Pavement Condition Criteria (FHWA)

Rating Factors	Good	Fair	Poor
IRI (in/mile)	< 95	95-170	> 170
Cracking Percent	< 5	5-15 (Jointed plain concrete pavement: JPCP) 5-20 (Asphalt)	> 15 (JPCP) > 20 (Asphalt)
Rutting	< 0.2	0.2-0.4	> 0.4

Note: Pavement metrics are measured in 0.1-mile intervals. All three metrics must be rated "Good" for the 0.1-mile segment to be considered "Good". Two of the three metrics must be rated as Poor for the interval to be considered "Poor". Note: 5.9% of interstate and 3.2% of non-interstate lane miles not rated due to construction.

Source: Transportation Asset Management Plan (TAMP), 2019

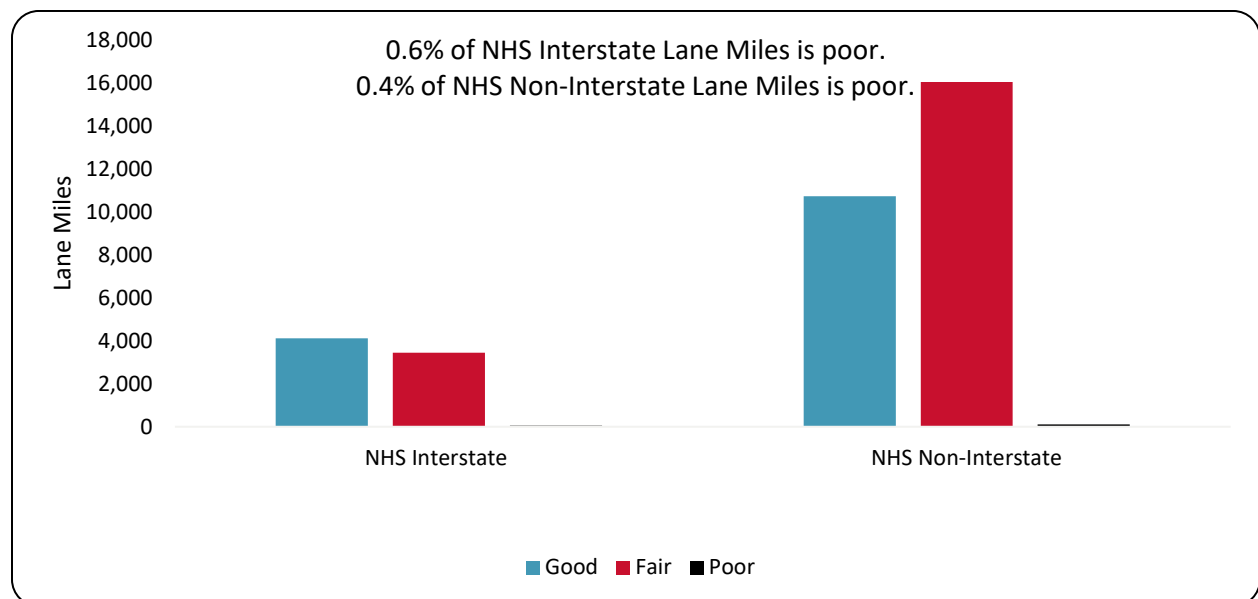
Data Source: Roadway Characteristics Inventory and State Materials Office

Data Coverage: State Highway System (SHS); National Highway System (NHS)

Major Observations:

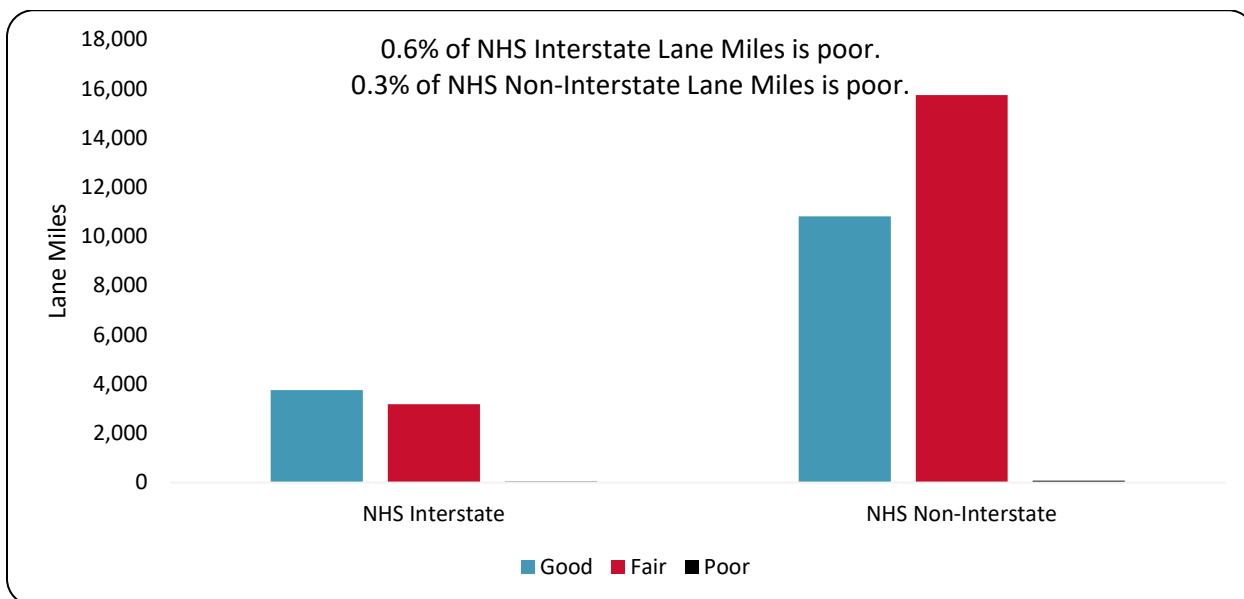
FDOT Criteria: Pavement on the SHS is in good condition. In calendar year 2018, 91.3% of the SHS pavements met Department standards which is well above FDOT target (80%). Over the past ten years, performance has improved dramatically.

FHWA Performance Measures: Figures 26 through 28 present the condition of the entire NHS pavements based on the FHWA performance measures. Overall, the pavement on the NHS is in good and fair condition with relatively few lane miles in poor condition. Figure 29 depicts a statewide map of pavement conditions for the NHS per FHWA ratings. The statistics indicate that the state is performing very well for pavement conditions with a few issue areas highlighted in the Figure 29.



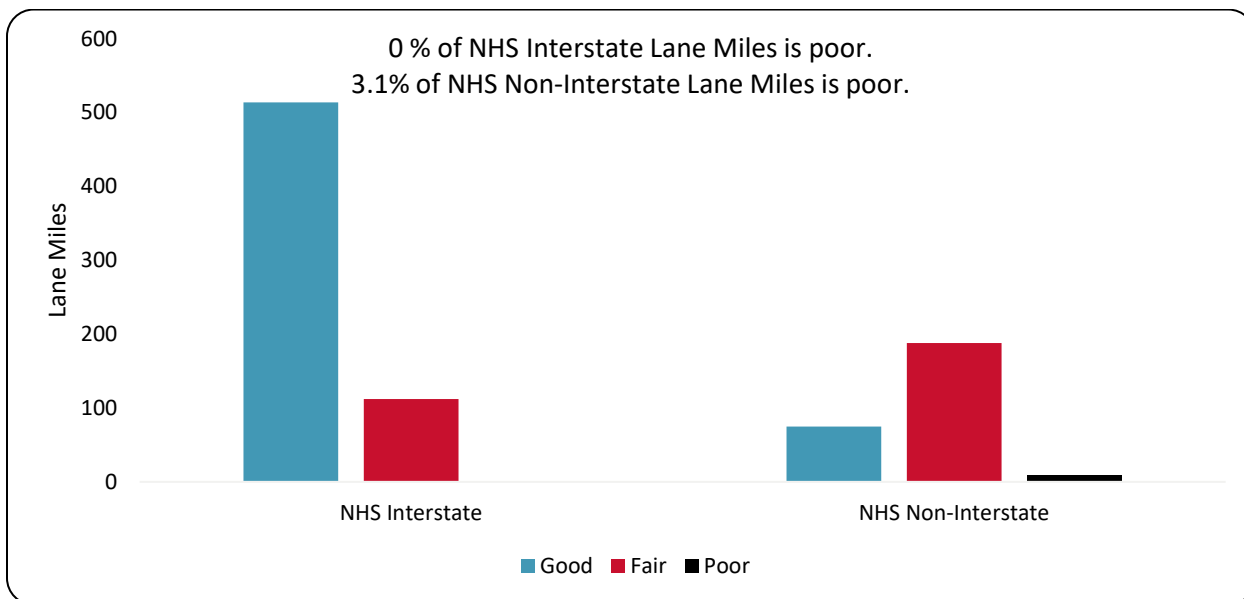
Source: Transportation Asset Management Plan (TAMP), 2019

Figure 26 | 2018 NHS Pavement Condition Based on FHWA Performance Measures (All Pavement Types)



Source: Transportation Asset Management Plan (TAMP), 2019

Figure 27 | 2018 NHS Pavement Condition Based on FHWA Performance Measures (Asphalt Pavement)



Source: Transportation Asset Management Plan (TAMP), 2019

Figure 28 | 2018 NHS Pavement Condition Based on FHWA Performance Measures (Concrete Pavement)



Freight *Mobility* and Trade Plan

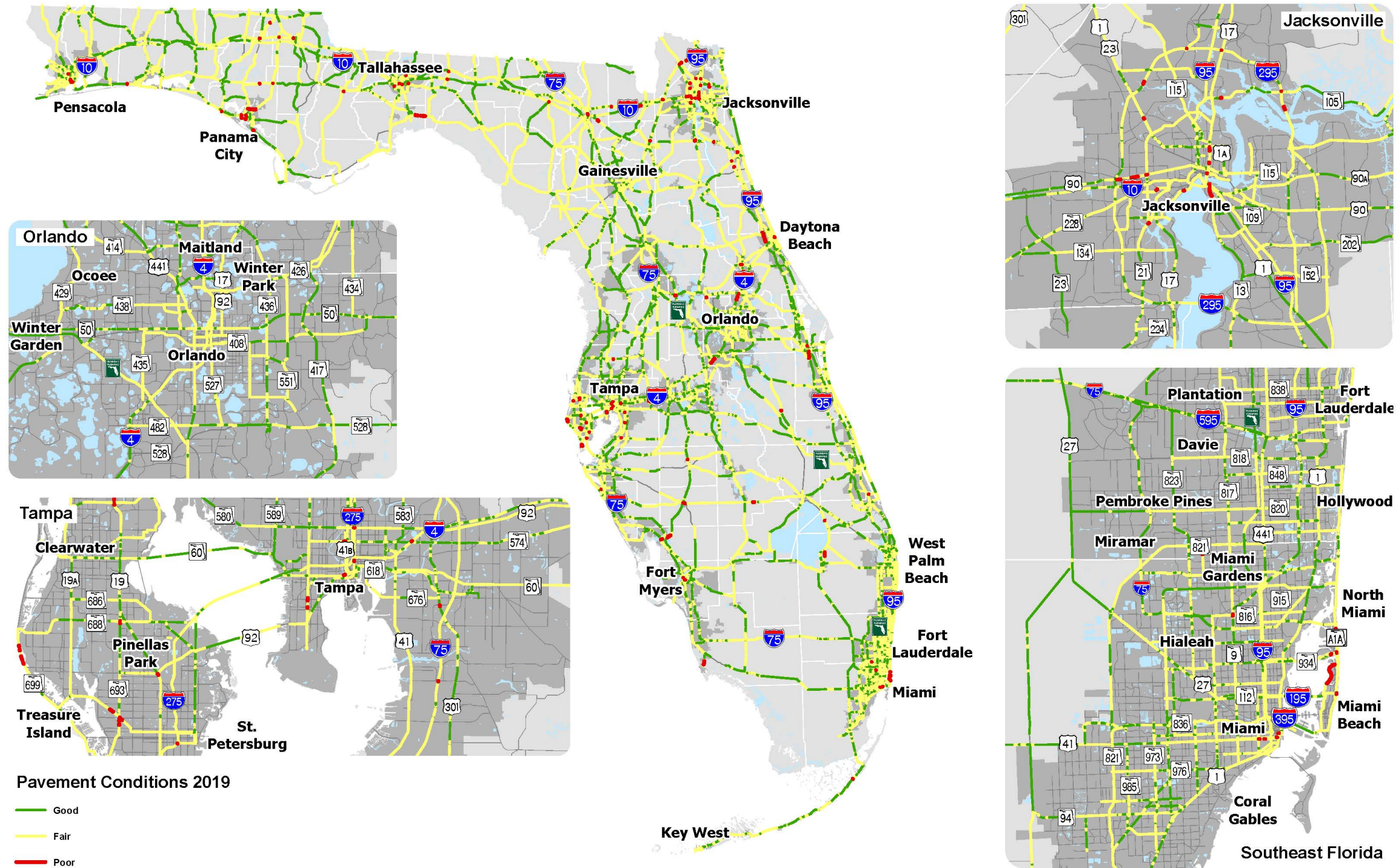


Figure 29 | Pavement Conditions (2018)

Bridge Conditions

Definition: The definitions of bridge conditions are defined below:

Functionally obsolete means that the bridge design is outdated. For example, narrow shoulders, narrow lanes, or older traffic barriers can induce the functionally obsolete classification.

Functionally obsolete bridges are scheduled for replacement or rehabilitation as budgets permit.

Structurally deficient means that a National Bridge Inspection (NBI) structural condition state is poor, or worse. NBI structural condition states are described within the FDOT Bridge Management System (BMS) Coding Guide, at keywords "DECK (58)," "SUPERSTRUCTURE (59)," "SUBSTRUCTURE (60)," and "CULVERT (62)." Structurally deficient bridges are recommended for repair, or scheduled for replacement; meanwhile, they are posted as necessary for load, or closed.

Data Source: FDOT office – Office of Maintenance

Data Coverage: All bridges in Florida

Reference studies or projects: FDOT Transportation Asset Management Plan, 2019 (TAMP), Florida Bridge Information 2019, Quarter 3⁹ and FDOT Bridge Inventory 2019 Annual Report.¹⁰

Major observations: For the past decade over 90% of the state's bridges have met the Department's performance measures and targets. This demonstrates the state's bridges are in a state of good repair and do not exhibit signs of structural deterioration. Table 6 shows the percentage of NHS bridge deck area in good and poor condition as defined by the FHWA scale. For state owned NHS bridges, 66% of the total NHS deck area is in good condition and less than 2% is in poor condition. For locally owned bridges, 69% of the total NHS deck area is in good condition and none are in poor condition.

Table 6 | Percentage of NHS Bridge Deck Area in Good and Poor Condition

	Deck Area (square feet)	Good Area (square feet)	Percentage of Area in Good Condition	Poor Area (square feet)	Percentage of Area in Poor Condition
State Owned NHS	127,238,250	84,142,970	66.1%	1,579,416	1.2%
Locally Owned NHS	4,450,844	3,081,681	69.2%	0	0%
NHS Total	131,689,094	87,224,651	66.2%	1,579,416	1.2%

Source: Transportation Asset Management Plan (TAMP), 2019

Figure 30 depicts all structurally deficient and functionally obsolete bridges in the state of Florida. As per the 2019 Bridge Inventory annual report, there are 376 structurally deficient bridges. FDOT maintaining 55 of those bridges, counties maintain 246 of those structurally deficient bridges, and cities/towns maintain 45 of those structurally deficient bridges.

⁹ [Florida Bridge Information 2019, Quarter 3](#)

¹⁰ [FDOT Bridge Inventory Report, 2019](#)



Highway (Truck) Safety

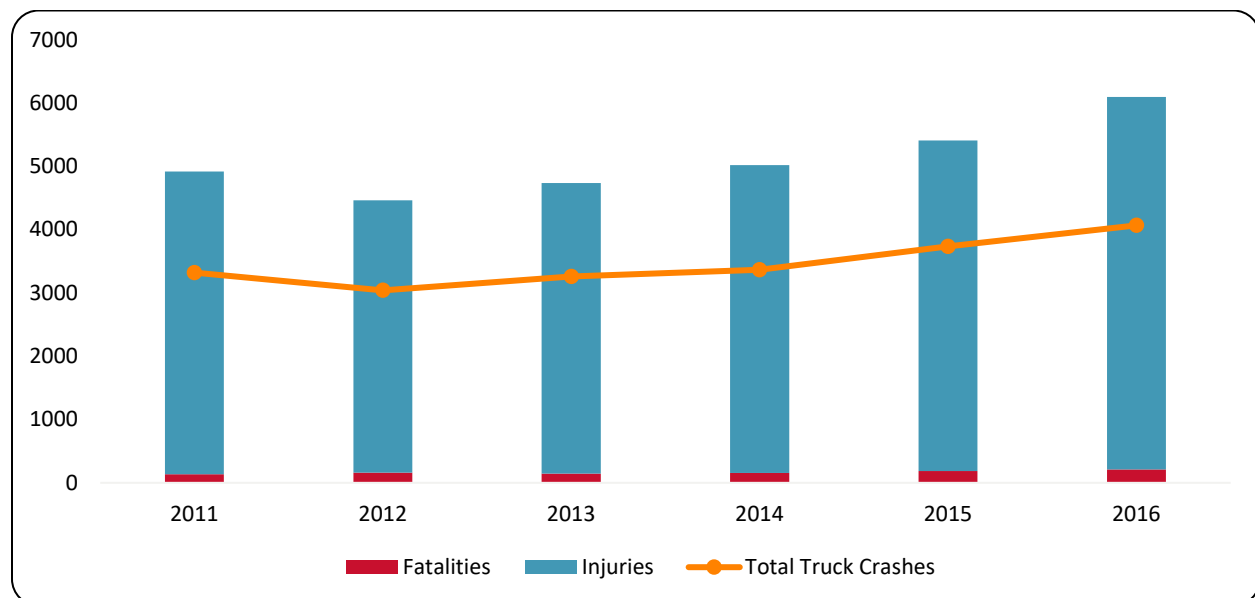
Definitions:

Number of Truck Fatalities: The total number of fatalities on Florida's roadways as a direct result of a traffic crash involving a truck within thirty days of the crash occurrence.

Number of Truck Injuries: The total number of injuries from traffic crashes involving a truck that occur on Florida's roadways.

Data Source: Truck crash data was acquired from the FDOT Safety Office for years 2011-2016. The data includes truck crashes that resulted in a fatality or injury and were locatable on the statewide road network.

Data Coverage: All truck crashes that resulted in an injury or fatality in Florida



Source: Safety Office, 2019

Figure 31 | Truck Fatalities, Injuries and Crashes (2011-2016)

From 2011 to 2016, approximately 20,794 truck crashes occurred on Florida's roadways resulting in 995 fatalities (see Figure 31). Since 2012, there has been a steady increase in the amount of traffic crashes involving a truck on Florida's roadways. In 2016, the number of truck crashes increased by 1.6%, or 332 accidents, from 2015. Truck crashes involving a fatality or injury have also increased over time with an increase of 1.3% in truck accident deaths (27 fatalities) from 2015 to 2016, and an increase of 11.2% (660) in truck accident related injuries from 2015 to 2016.



District 5 had the most truck crashes (3,930) and saw an 11.8% increase in total truck crashes from 2015 to 2016. District 3 had the fewest total truck crashes (1,540). Figure 32 showcases the areas in Florida with the highest concentration of truck crashes. Major metropolitan areas such as Tampa, Orlando, Jacksonville, and Miami have higher occurrences of truck crashes. Urban areas have more occurrences of truck crashes than rural areas. Miami-Dade had the highest share of truck crashes statewide. Orange, Duval, and Hillsborough Counties have all seen an increase of approximately 5% of their overall truck crashes from 2011 to 2016. On the contrary, Pinellas and Broward counties have seen a decrease of approximately 7% of their overall truck crashes from 2011 to 2016.



Freight *Mobility* and Trade Plan

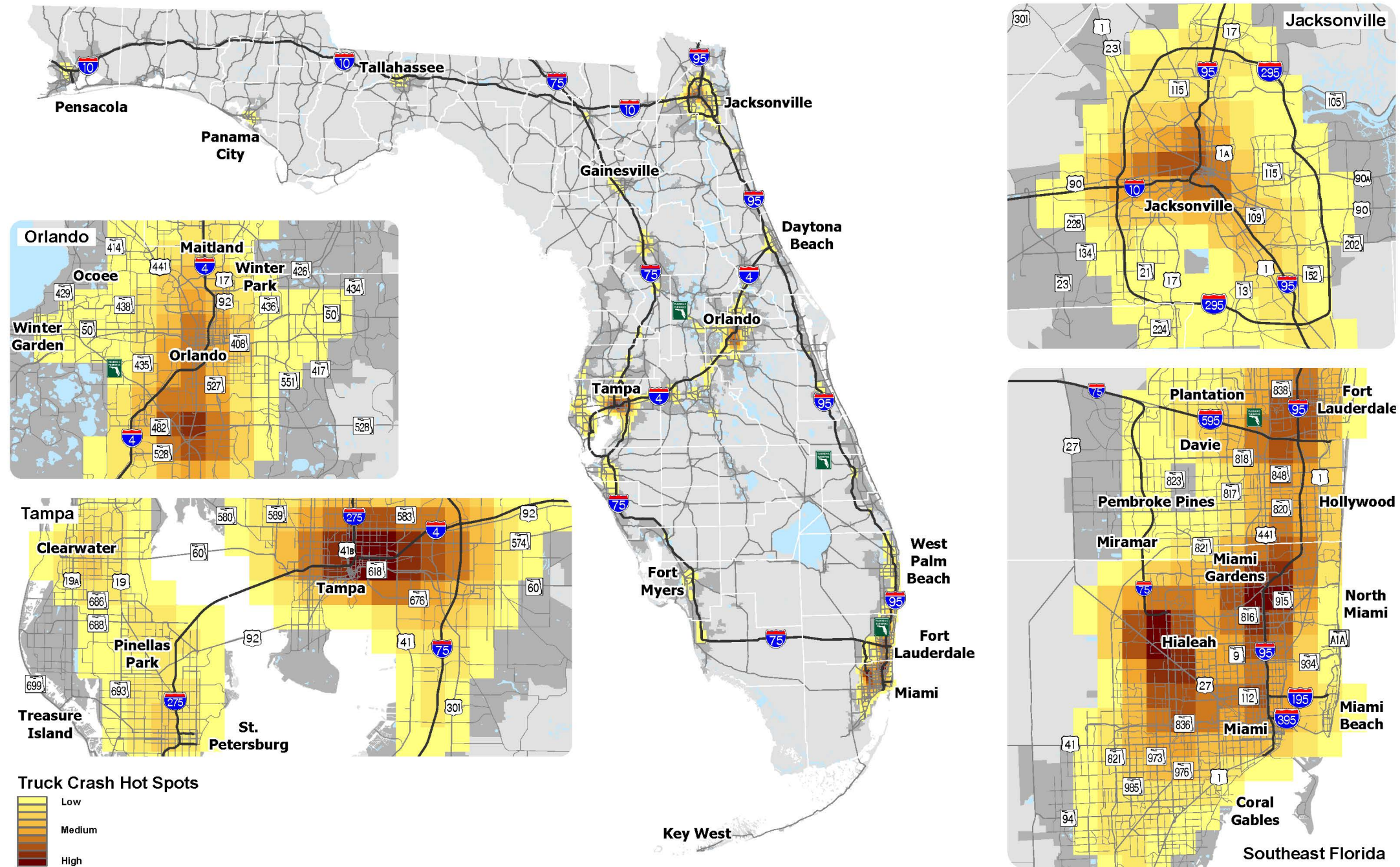


Figure 32 | Truck Crash Hot Spots (2011-2016)

Source: Safety Office, 2019

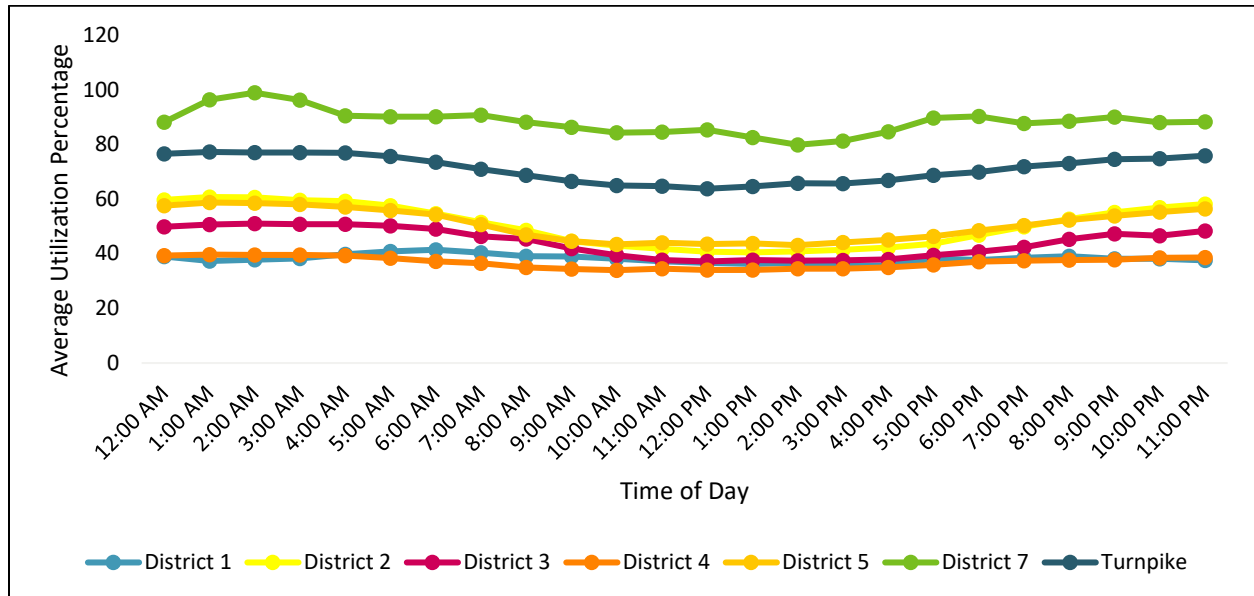


Truck Parking Utilization

Definition: Truck Parking Utilization is defined as the percent of total parked trucks at a given hour of the day to the total truck parking spaces at a given truck parking location. This will provide an indication of how truck parking activity changes by time of day for different facility types and geographic areas. Hourly utilization datasets and supply information are used to compute this measure.

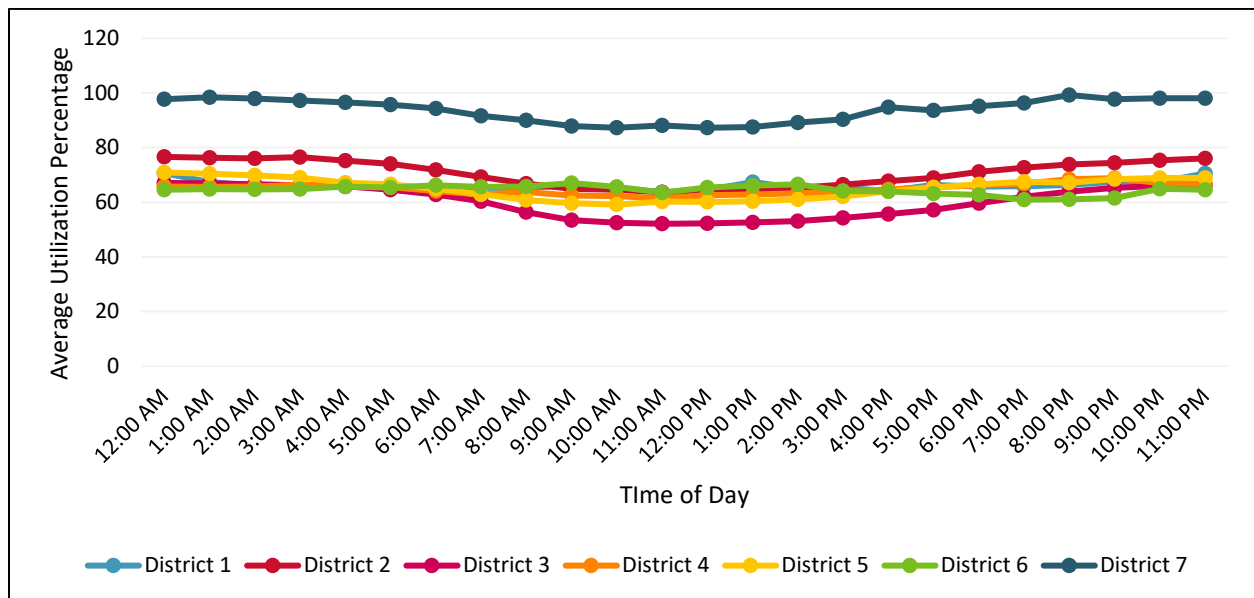
Data Coverage: All identified authorized truck parking locations in Florida

Major observations: Figure 33 and Figure 34 depict the truck parking utilization for public and private locations for different Districts. The analysis excludes locations with less than 5 parking spaces. The results clearly indicate that the private locations have higher utilization across the day when compared to public locations. Figure 35 provides the truck parking utilization for individual locations across the state. Figure 36 depicts the major areas of concern by weighing the highly utilized truck parking locations and locations with high density of unauthorized truck stops. The different figures indicate that truck parking is a major issue in the state of Florida and that there is a need for both traditional and innovative solutions to alleviate this problem.



Source: Transportation Data and Analytics, 2019

Figure 33 | Average Hourly Utilization of Public Truck Parking Locations in the State



Source: Transportation Data and Analytics, 2019

Figure 34 | Average Hourly Utilization of Private Truck Parking Locations in the State



Freight *Mobility* and Trade Plan

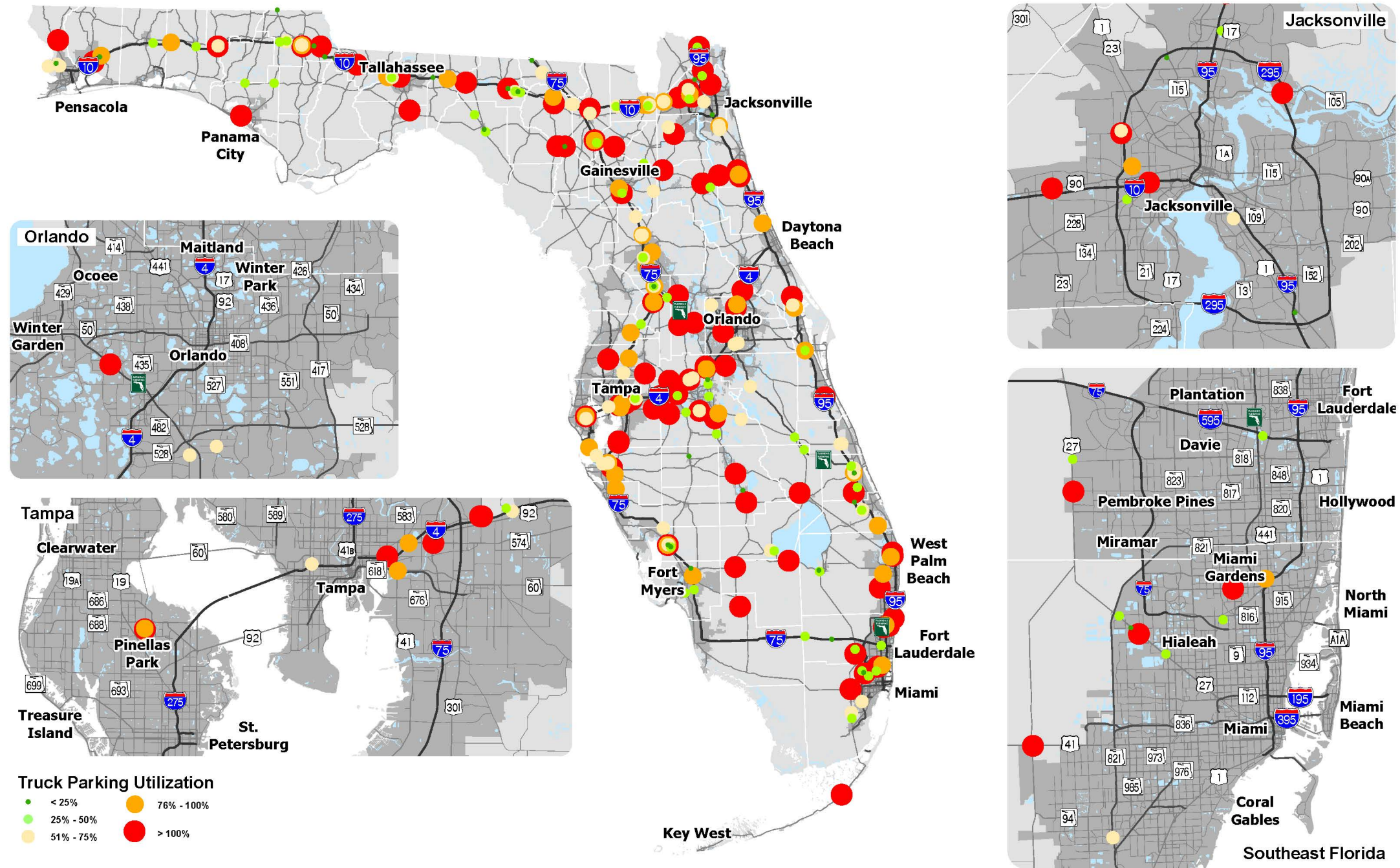


Figure 35 | Truck Parking Utilization (2017-2018)

Source: FDOT Transportation Data and Analytics, 2019



Freight *Mobility* and Trade Plan

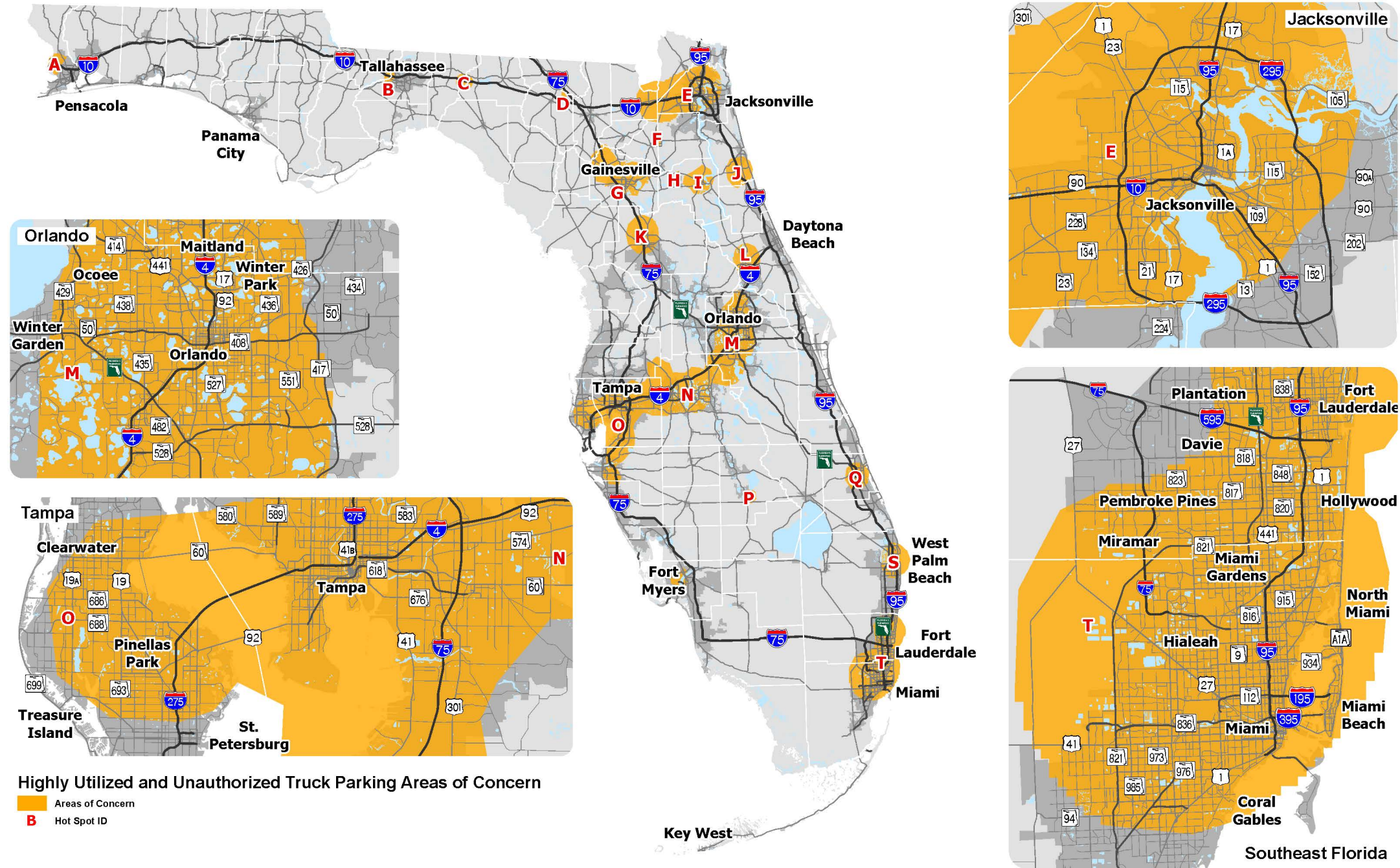


Figure 36 | Truck Parking Areas of Concern

Source: FDOT Transportation Data and Analytics, 2019



Rail Performance

Rail Tonnage

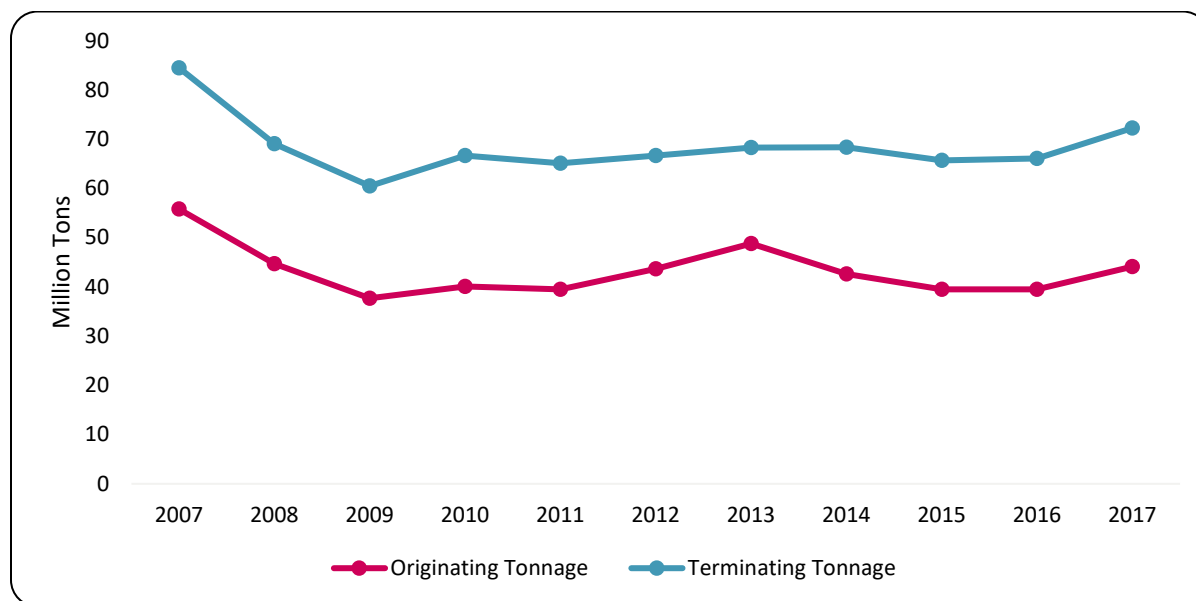
Definition: The tons of freight carried by rail originated or terminated in Florida.

$$\text{Rail Tonnage} = \sum \text{Rail Tonnage}$$

Data Source: Association of American Railroads, 2017.¹¹

Data Coverage: Statewide statistics

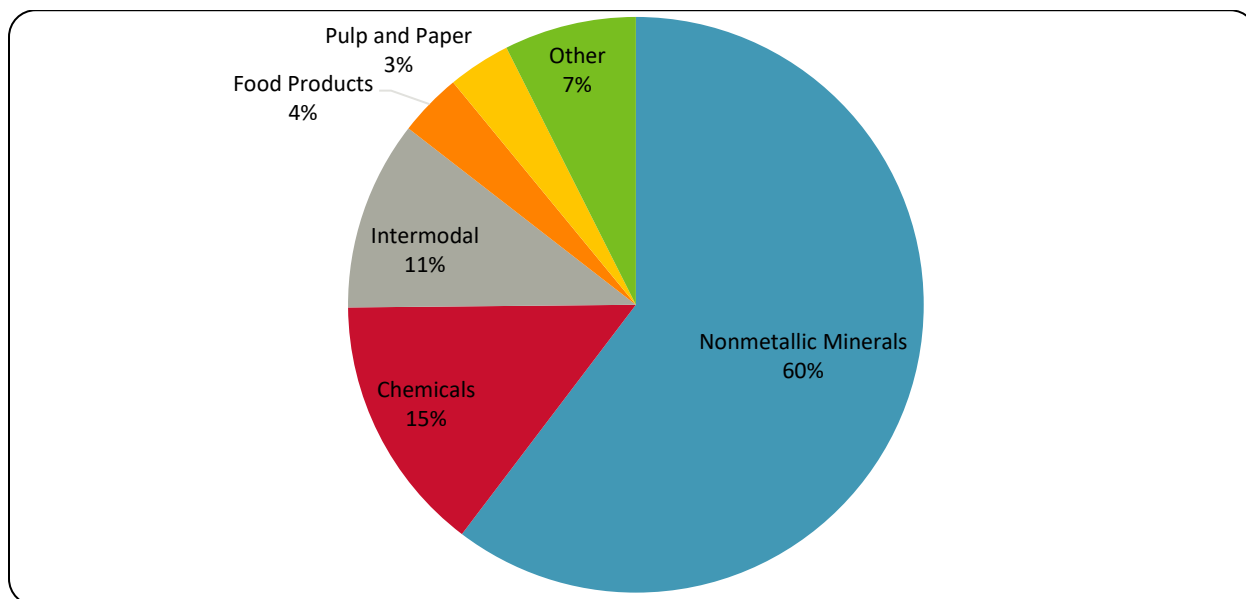
Major Observations: In 2017, Florida ranked 11th in the country with 44.1 million originated rail tons and 4th with 72.3 million terminated rail tons. Due to Florida's geography, the majority of rail traffic will either originate or terminate in the state, as opposed to pass-through rail traffic. Florida ranks 32nd in the total rail tons and rail carloads as the state carries 85.5 million tons and 1,737,200 rail carloads. The statistics emphasize the state being a consumer state (Figure 37). Figures 38 and 39 provide a breakdown of commodity shares for rail traffic originating and terminating in Florida respectively.



Source: Association of American Railroads

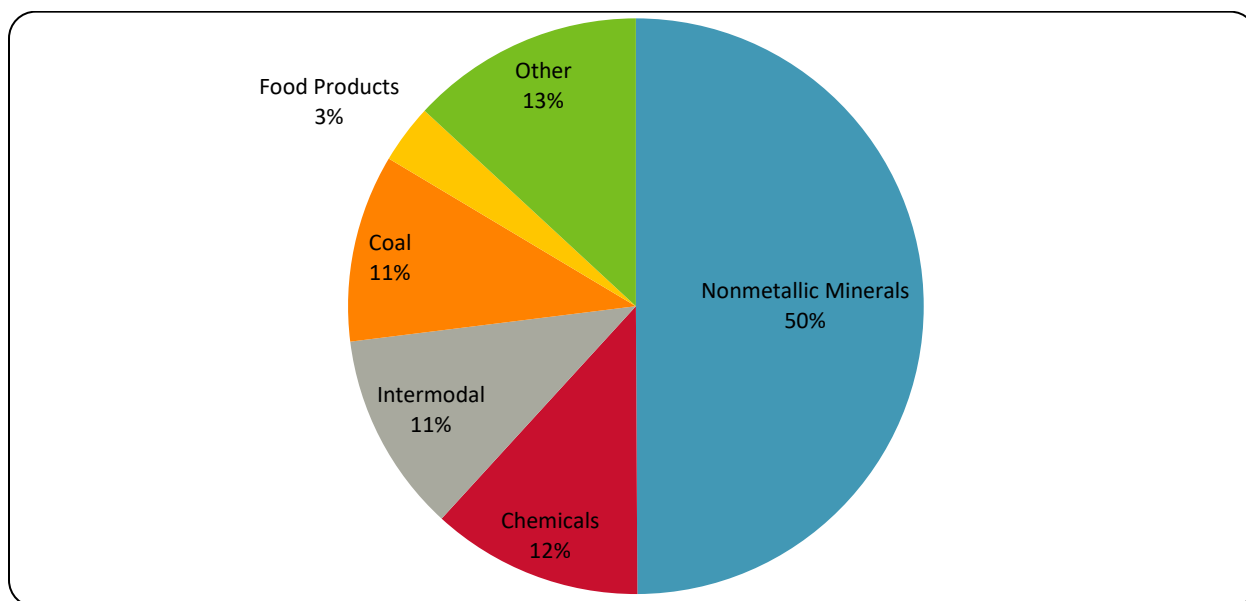
Figure 37 | Rail Tonnage Trends

¹¹ [Association of American Railroads, 2017](#)



Source: Association of American Railroads, 2017

Figure 38 | Rail Traffic Originating in Florida (Based on Tons)



Source: Association of American Railroads, 2017

Figure 39 | Rail Traffic Terminating in Florida (Based on Tons)



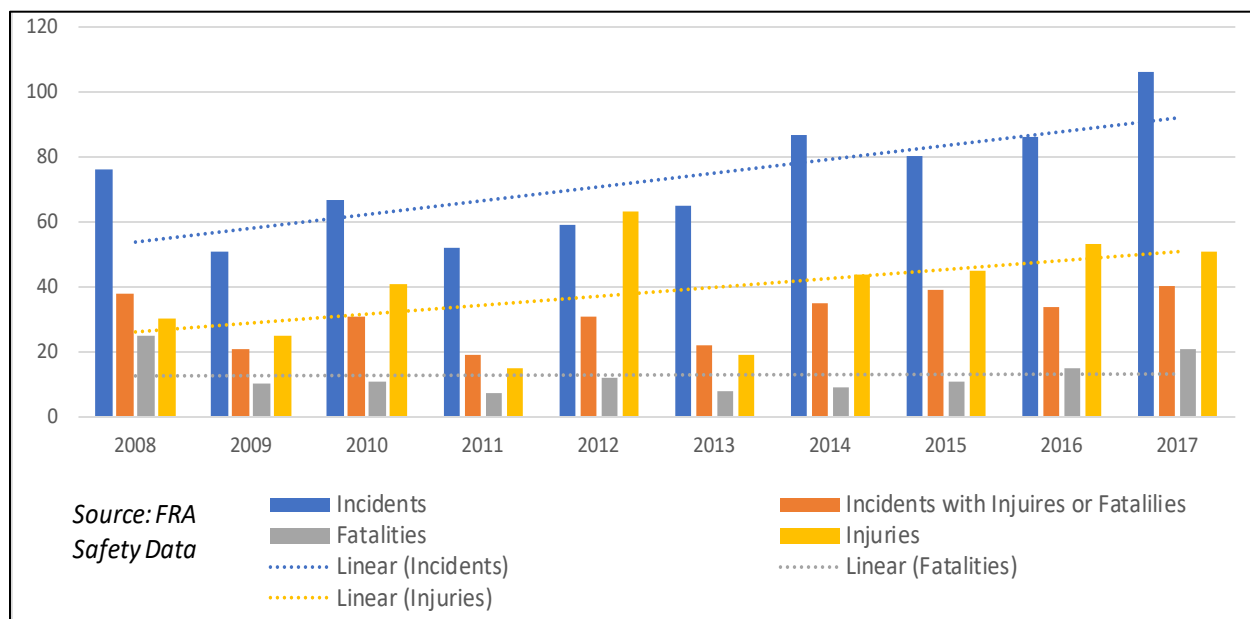
Rail Safety

Definition: The number of rail crashes or incidents in Florida.

$$\text{Rail Crashes or Incidents} = \sum \text{Rail Crashes or Incidents}$$

Data Coverage: All rail related crashes that resulted in an injury or fatality in Florida

In 2016 there were 343 total rail crashes/incidents in Florida, which is the sum of train crashes, highway-rail incidents (86 out of the total), and other incidents (Figure 40). There were a total of 2,119 highway railroad incidents in 2017 for the United States that resulted in 272 fatalities. 5% of those total incidents and 7.4% of those fatalities were in Florida. In addition, the rate of highway-railroad incidents in Florida have been increasing over the past decade. Florida experienced an upward trend of highway-railroad incidents totaling 729 occurrences from 2008 to 2017. The same ten-year period shows similar trends with 310 incidents resulting in 386 injuries and 129 fatalities.



Source: Federal Rail Administration (FRA)

Figure 40 | Rail Safety Trends (2008-2017)

Seaport Performance

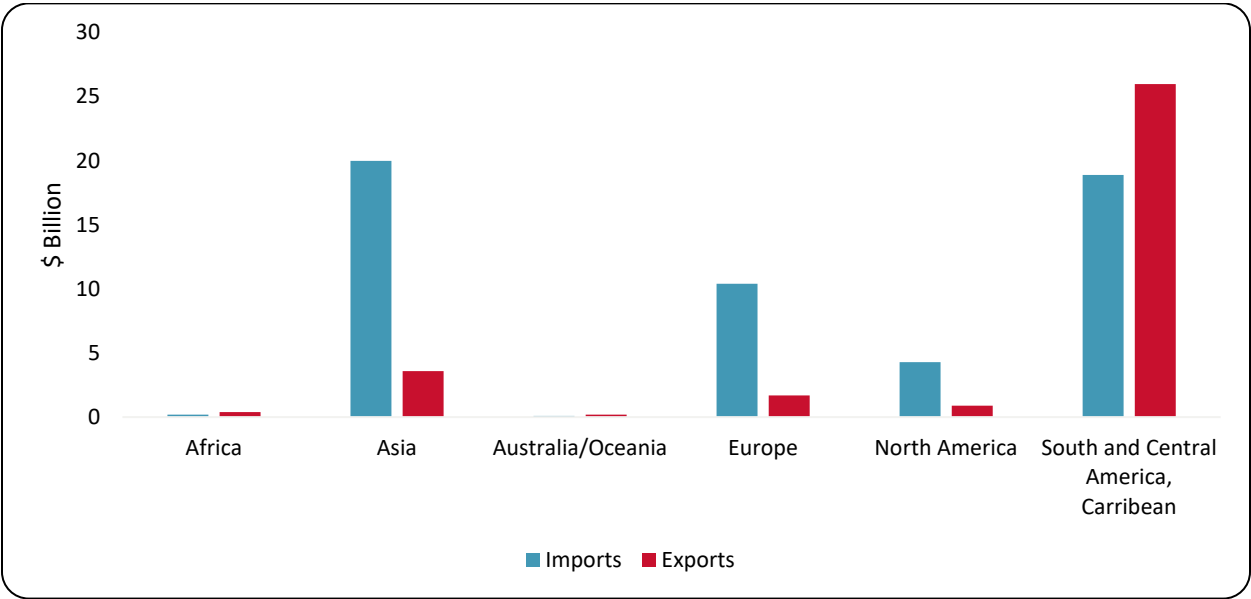
Seaport Tonnage and Value

Definition: The tons, value and TEUs of freight carried by seaport mode originated or terminated in Florida.

Data Source: Florida Ports Council

Data Coverage: All major Florida ports

Major observations: In 2018, Florida seaports handled \$87.3 billion of international trade and 4.1 million TEUs. This \$87.3 billion represented 55.6% of Florida’s total international trade. Figure 41 clearly indicates that Florida’s major export partners are South and Central America and the Caribbean region. On the other hand, Florida’s major import partners are Asian countries. Brazil and China are the top export and import partners for Florida ports respectively. Tables 7 and 8 depict the top 10 countries for imports and exports by commodity value.



Source: U.S. Census Bureau

Figure 41 | Florida International Waterborne Trade by Region (By Value) 2018 (US\$ Billions)



Table 7 | Top Ten Trading Import Partners for Waterborne Cargo, by Value (2016-2018)

Country	2016	2017	2018	Percent Change 2018 over 2017
China	\$6,141,798,998	\$6,441,885,051	\$7,133,750,876	10.70%
Japan	\$6,167,890,898	\$6,624,047,167	\$6,629,076,002	0.10%
Mexico	\$2,475,459,736	\$3,422,021,969	\$3,791,381,004	10.80%
Dominican Republic	\$2,661,076,914	\$2,656,952,146	\$2,977,571,897	12.10%
Honduras	\$2,456,892,181	\$2,391,894,727	\$2,594,241,862	8.50%
Chile	\$1,721,376,443	\$2,457,536,542	\$2,429,851,020	-1.10%
Germany	\$2,573,594,363	\$2,406,630,924	\$2,130,072,256	-11.50%
Italy	\$1,678,913,369	\$1,711,704,280	\$1,942,296,829	13.50%
Brazil	\$1,289,134,399	\$1,425,438,985	\$1,710,594,348	20.00%
Nicaragua	\$932,101,976	\$1,442,958,228	\$1,535,494,391	6.40%
All Countries	\$47,793,985,026	\$51,309,067,432	\$54,198,051,876	5.60%

Source: U.S. Census Bureau

Table 8 | Florida Top Ten Trading Export Partners for Waterborne Cargo, by Value (2016-2018)

Country	2016	2017	2018	Percent Change 2018 over 2017
Brazil	\$2,720,531,730	\$2,962,359,300	\$3,522,489,335	18.90%
Dominican Republic	\$2,577,378,910	\$2,506,872,061	\$2,729,582,417	8.90%
Honduras	\$1,667,800,215	\$1,643,226,136	\$1,654,773,020	0.70%
Colombia	\$1,427,787,978	\$1,549,554,579	\$1,610,238,674	3.90%
Chile	\$1,237,809,927	\$1,336,594,785	\$1,475,081,091	10.40%
Costa Rica	\$1,409,840,190	\$1,393,416,246	\$1,410,685,577	1.20%
Panama	\$1,378,854,963	\$1,303,330,945	\$1,291,268,770	-0.90%
Bahamas	\$1,118,143,111	\$1,243,926,513	\$1,252,371,757	0.70%
Peru	\$1,075,794,403	\$1,055,760,181	\$1,221,582,832	15.70%
Argentina	\$1,094,538,374	\$1,276,020,951	\$1,100,050,400	-13.80%
All Countries	\$31,494,869,596	\$31,869,527,760	\$33,148,125,407	4.00%

Source: U.S. Census Bureau



Tables 9 and 10 provide a list of top ten trading import and export commodities for waterborne cargo by value. There are more than 12 commodities with a value of more than \$1 billion for exports or imports.

Table 9 | Florida Top Ten Trading Import Commodities for Waterborne Cargo, by Value (2016-2018)

Imports	2016	2017	2018	Percent Change 2018 over 2017
Vehicles, Except Railway or Tramway, and Parts	\$11,900,439,363	\$13,175,511,693	\$12,738,160,490	-3.30%
Apparel Articles and Accessories, Knit or Crochet	\$4,411,718,247	\$4,691,688,266	\$5,026,434,698	7.10%
Electric Machinery, Including Sound and TV Equipment	\$2,517,996,693	\$2,845,157,414	\$3,247,733,742	14.10%
Mineral Fuel, Oil, Bituminous Substances, Mineral Wax	\$2,411,876,819	\$2,290,300,251	\$2,937,959,165	28.30%
Nuclear Reactors, Boilers, Machinery and Parts Thereof	\$2,129,516,017	\$2,063,843,149	\$2,442,001,545	18.30%
Copper and Articles Thereof	\$1,220,285,610	\$1,933,399,325	\$1,989,241,966	2.90%
Furniture, Bedding, Lamps, Prefabricated Buildings	\$1,425,479,076	\$1,540,445,091	\$1,723,721,808	11.90%
Beverages, Spirits and Vinegar	\$1,540,788,842	\$1,537,809,114	\$1,611,132,505	4.80%
Apparel Articles and Accessories, not Knit	\$1,589,764,191	\$1,527,017,219	\$1,607,325,063	5.30%
Fish, Crustaceans and Aquatic Invertebrates	\$1,360,904,836	\$1,565,361,052	\$1,565,887,578	0.00%
All Commodities	\$47,793,985,026	\$51,309,067,432	\$54,198,051,876	5.60%

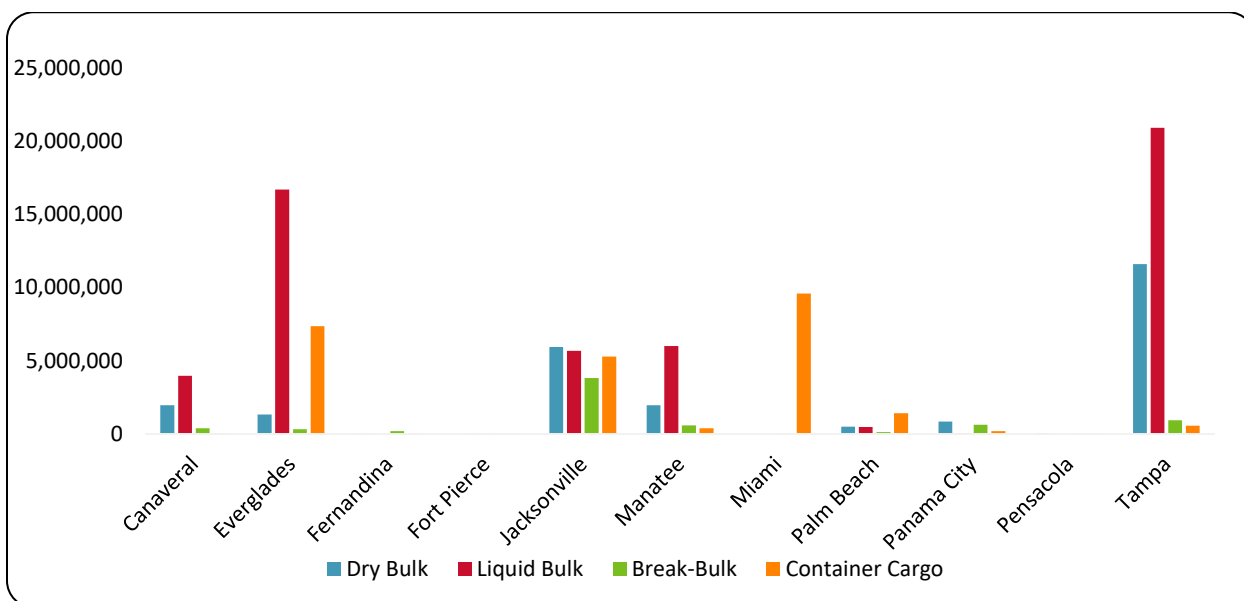
Source: U.S. Census Bureau

Table 10 | Florida Top Ten Trading Export Commodities for Waterborne Cargo, by Value (2016-2018)

Exports	2016	2017	2018	Percent Change 2018 over 2017
Nuclear Reactors, Boilers, Machinery and Parts Thereof	\$5,773,229,061	\$5,835,923,665	\$6,135,106,223	5.10%
Vehicles, Except Railway or Tramway, and Parts Equipment	\$5,058,953,402	\$4,809,423,418	\$5,166,001,164	7.40%
Electric Machinery, Including Sound and TV	\$2,691,482,853	\$2,848,377,067	\$2,833,277,696	-0.50%
Fertilizers	\$1,542,738,620	\$1,523,497,595	\$1,437,247,272	-5.70%
Plastics and Articles Thereof	\$1,126,751,076	\$1,110,555,624	\$1,169,615,392	5.30%
Essential Oils, Perfumery, and Cosmetic Preparations	\$893,570,427	\$990,756,623	\$995,182,639	0.40%
Cotton, including Yarn and Woven Fabric Thereof	\$778,963,991	\$839,056,770	\$881,871,755	5.10%
Optical, Photo, Medical or Surgical Instruments	\$792,342,557	\$768,332,015	\$823,914,889	7.20%
Meat and Edible Meat Offal	\$648,913,591	\$709,551,580	\$697,901,977	-1.60%
Ships, Boats and Floating Structures	\$485,172,158	\$548,648,669	\$648,855,753	18.30%
All Commodities	\$31,494,869,596	\$31,869,527,760	\$33,148,125,407	4.00%

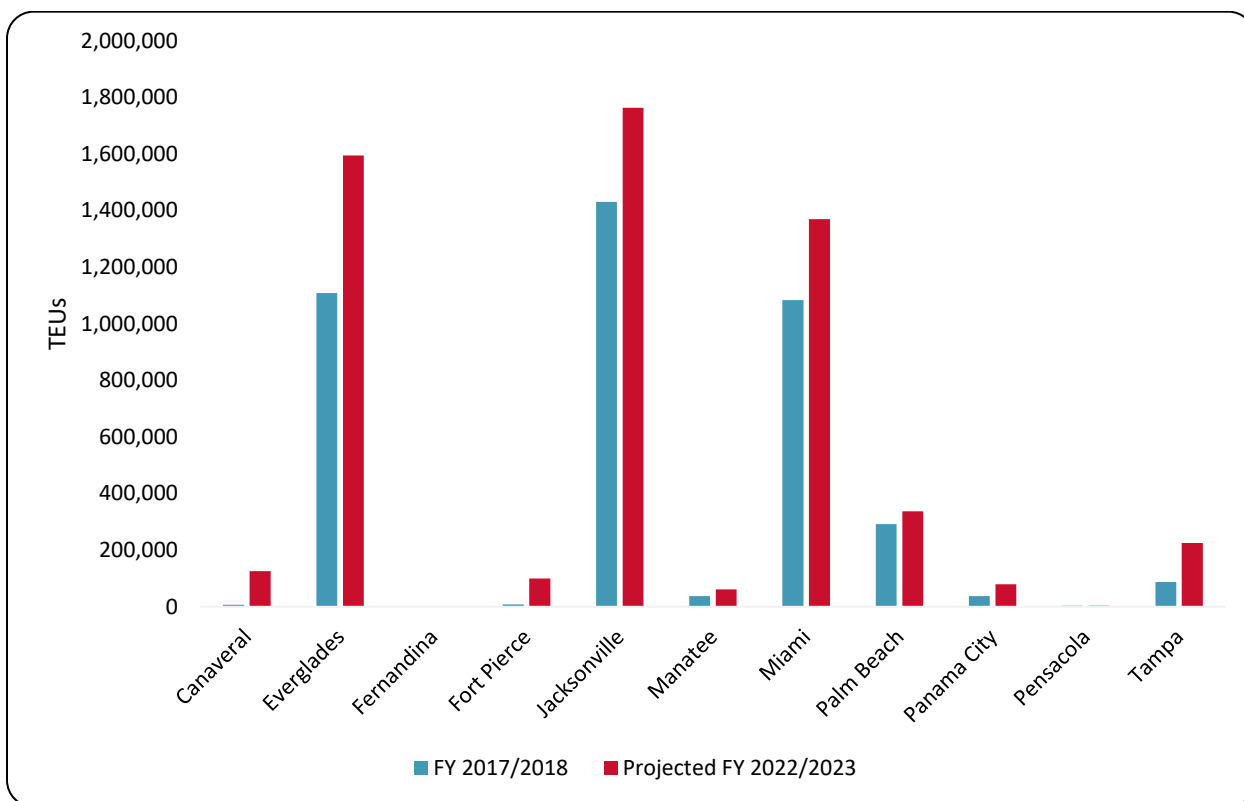
Source: U.S. Census Bureau

Figure 42 highlights the waterborne cargo types handled by Florida seaports (by total tonnage). Port Tampa Bay has the highest liquid bulk and dry bulk movement, whereas Port Jacksonville shows the highest break-bulk movement. Port Miami dominates in container cargo movement. Per Figure 43, Port Jacksonville has the highest TEU volume among all Florida ports.



Source: Five Year Florida Seaport Master Plan (FY-2017/2018)

Figure 42 | Waterborne Cargo Types Handled by Florida Seaports (by Tonnage)



Source: Five Year Florida Seaport Master Plan

Figure 43 | TEUs Handled by Florida Seaports



Aviation Performance

Aviation Tonnage

Definition: The weight of all air cargo handled at Florida airports.

$$\text{Aviation Cargo Landed Weight} = \sum \text{Cargo Landed Weight handled at all Florida Airports}$$

$$\text{Aviation Tonnage} = \sum \text{Tons handled at all Florida Airports}$$

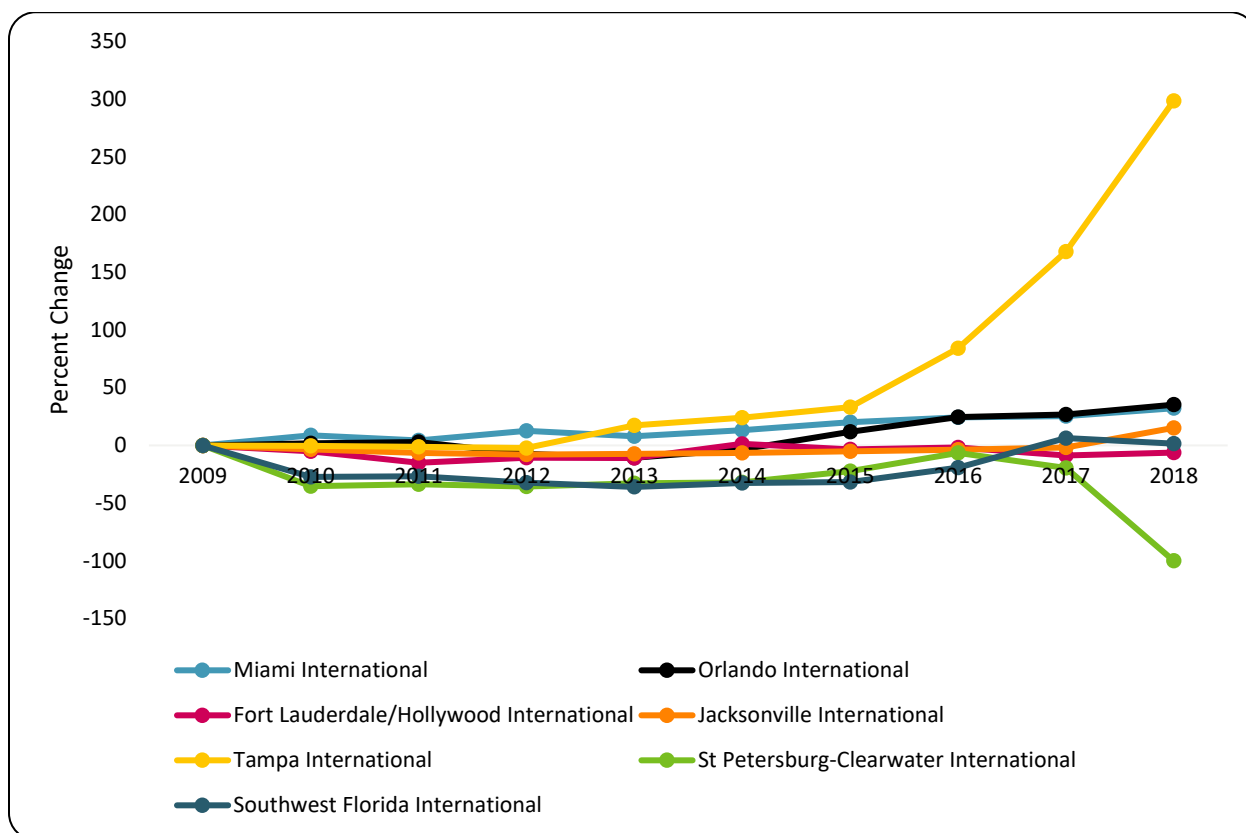
Data Source: U.S. Bureau of Transportation Statistics and Federal Aviation Administration

Data Coverage: All major airports

Major observations:

As per the Florida Aviation System Plan, Florida ranks #1 in air cargo with Latin American countries. Miami International Airport (MIA) features heavily in north-south cargo flows in the Western Hemisphere. 7 of the top 10 trade lanes are from MIA to markets located in Latin America and the Caribbean. MIA is a leading airport in the U.S. for international freight and ranks 10th globally. Figure 44 illustrates the percent change from 2009 to 2018 in “all cargo landed weight” at major Florida airports. “Landed weight” means the weight of aircraft transporting only cargo in intrastate, interstate, and foreign air transportation.¹² As per preliminary numbers for 2018, MIA ranks 4th in the nation with 8.4 million lbs. landed weight. Tampa International Airport (TPA) has seen significant growth in last decade. Since 2015, air cargo at TPA has more than doubled. Both Amazon and UPS shifted services and relocated portions of their air cargo operations from St. Petersburg to Tampa. TPA is now ranked 23rd nationally with 1.3 million lbs. landed weight. It has overtaken Orlando International Airport (MCO) which is ranked 29th in the nation now, with 1.06 million landed weight.

¹² [Federal Aviation Administration, 2020](#)



Source: Federal Aviation Administration

Figure 44 | Percent Change in Final All-Cargo Landed Weights (Base Year - 2009)

Tables 11, 12, 13 and 14 provide the top 5 origin and destination airports for freight and mail by tonnage. MIA is the leader in air freight and mail for the state of Florida. But, the growth of air freight at MCO and TPA should be noted. These growth rates need to be considered to ensure that sufficient capacity is available for intermodal truck movements as trucks are expected to be the primary transfer mode. It is a potential issue which needs to be considered for regional and state freight plans.



Table 11 | Top 5 Freight Destination Airports (pounds)

Airports	2013	2014	2015	2016	2017	2018
MIA	2,121,225,706	2,281,999,052	2,318,028,252	2,366,191,222	2,288,447,178	2,357,232,048
MCO	183,955,063	190,955,443	205,477,148	224,496,252	264,706,145	274,610,964
TPA	93,933,775	95,686,454	104,940,093	129,712,467	166,159,832	221,236,796
FLL	90,026,887	101,219,126	108,674,367	112,390,334	126,622,041	138,814,585
JAX	74,829,820	75,278,136	76,204,560	81,034,245	86,744,127	90,356,200

Source: Bureau of Transportation Statistics

Table 12 | Top 5 Freight Origin Airports (pounds)

Airports	2013	2014	2015	2016	2017	2018
MIA	1,684,011,990	1,807,110,506	1,659,785,198	1,594,325,598	1,615,742,555	1,674,663,569
MCO	157,856,912	160,213,328	178,685,325	193,550,635	207,274,585	218,074,614
TPA	85,761,264	89,437,335	97,784,484	120,522,980	148,724,314	202,468,201
FLL	95,030,996	95,423,804	108,552,194	102,748,097	109,250,628	116,910,185
JAX	73,289,678	75,794,736	76,256,127	75,472,133	78,413,332	81,512,647

Source: Bureau of Transportation Statistics

Table 13 | Top 5 Mail Destination Airports (pounds)

Airports	2013	2014	2015	2016	2017	2018
MIA	23,301,869	19,767,826	30,860,672	31,869,119	33,690,084	34,990,883
MCO	9,360,612	8,436,973	18,261,267	15,002,368	14,717,377	17,435,885
TPA	5,587,004	5,756,636	10,876,090	9,927,243	12,132,181	18,367,784
PIE	1,052,513	1,517,460	2,541,568	4,273,854	6,459,875	0
JAX	1,875,050	1,830,745	2,274,259	2,153,755	3,089,977	2,486,289

Source: Bureau of Transportation Statistics

Table 14 | Top 5 Mail Origin Airports (pounds)

Airports	2013	2014	2015	2016	2017	2018
MIA	36,630,039	27,647,764	33,050,575	33,478,127	34,940,193	35,110,159
MCO	2,213,684	2,728,816	11,126,356	10,850,443	9,835,684	10,487,704
TPA	3,802,130	4,484,522	5,572,549	4,513,385	4,588,410	8,322,083
JAX	3,912,594	4,879,246	4,580,032	4,063,191	5,421,882	4,984,167
FLL	5,709,933	6,353,773	1,792,271	615,663	512,183	781,398

Source: Bureau of Transportation Statistics

MIA: Miami International Airport | **MCO:** Orlando International Airport | **TPA:** Tampa International Airport | **FLL:** Fort Lauderdale-Hollywood International Airport | **JAX:** Jacksonville International Airport | **PIE:** St. Pete–Clearwater International Airport



Aviation Departure Reliability

Definition: Departure is deemed reliable if the flight departs within 15 minutes after the scheduled time shown in the carrier's Computerized Reservations Systems (CRS). In the aviation industry, this is commonly known as on-time departure. Departure reliability is based on departure from the gate and can be influenced by various factors such as heavy traffic volume, weather, and mechanical reasons.

Data Source: Bureau of Transportation Statistics

Data Coverage: Statewide Statistics

Major observations: As per statewide statistics, aviation departure reliability has been between approximately 75%-85% in the last decade. The highest reliability was in 2008 with 85.3% reliability, whereas the lowest reliability was in 2013 with 75.4%. In 2017, aviation departure reliability was 81.5%. These statistics are related to all air traffic movement.



Identification of Issues and Trends

Table 15 summarizes the issues and trends relevant to the different performance measures and conditions evaluated in this technical memorandum.

Table 15 | Identified Issues and Trends

Modes	Issues	Trends
Highway/Truck	<ul style="list-style-type: none">Major truck bottlenecksHigh rates of unauthorized truck parking across the stateHigh truck parking utilization in areas of concernHigh truck empty back haul out of the stateTruck travel time reliability is worse in the largest seven metropolitan areas	<ul style="list-style-type: none">Increasing trend in truck crashes across the stateHigh growth rate of truck miles traveled and truck ton miles traveled during peak period in largest seven metropolitan areas
Aviation and Spaceports		<ul style="list-style-type: none">Significant growth at Tampa, Orlando and Miami airports
Rail		<ul style="list-style-type: none">Number of rail crashes increasing over the years
Pipeline	<ul style="list-style-type: none">Florida's lack of connectivity to major domestic bulk liquid fuel pipelines and refining regions leads to an over reliance on waterborne and highway transportation for Florida's liquid fuel	

Heavy Truck Tonnage

It is important to note that high truck AADT and heavy truck tonnage in rural areas, as per Figures 5 and 8, are expected to substantially deteriorate the condition of roadways. Figure 26 indicates that the Florida National Highway System is performing very well. 0.6% of NHS interstate lane miles are poor. 0.4% of NHS non-interstate lane miles are poor. 91.3% of pavement on the SHS exceeds FDOT standards. The pavement conditions are not identified as an issue in this technical memorandum.



Appendix A. Truck Bottleneck Analysis Methodology

National Performance Management Research Data Set (NPMRDS)

Federal guidance published January 18, 2017 (23 CFR Part 490 – Subpart F) established, for the first time, a freight-specific performance measure – Truck Travel Time Reliability (TTTR). TTTR scores must be calculated annually for interstate highways (other NHS and non-NHS facilities are excluded), and reported to the U.S. Department of Transportation (USDOT) along with other required Highway Performance Monitoring System (HPMS) information on an annual basis. USDOT requires that this measure be calculated annually starting in 2018, reporting values for the previous calendar year.

This measure is calculated using the National Performance Management Research Data Set (NPMRDS), which was developed by the Federal Highway Administration (FHWA) to provide a comprehensive picture of travel times throughout the National Highway Network, for both passenger vehicles and trucks. NPMRDS is a probe dataset commissioned by the Federal Highway Administration (FHWA), available for free to DOTs and MPOs.

The NPMRDS data was obtained for Florida for calendar year 2018. This consisted of 309.2 million truck travel time records and 662.4 million passenger vehicle travel time records, throughout the National Highway System (NHS). NPMRDS divides the NHS in Florida into 14,212 segments identified by a TMC code. The travel time records are provided throughout the day at a time resolution of 5-minute intervals.

Because NPMRDS provides truck travel time data at the link level, for each roadway segment in the National Highway System, users are not limited to calculation of the Federal TTTR. Importantly, NPMRDS allows for the calculation of travel time-based performance metrics at the link level for most of the state's critical highway freight infrastructure, and for the identification of primary bottlenecks or chokepoints on the NPMRDS network based on truck travel time data.

Performance Measurement Methodology

For the FMTP Update, the methodology used for this analysis follows the recommendations provided in the soon to be published report of National Highway Cooperative Research Project 07-24: *Estimating the Value of Truck Travel Time Reliability*. This study recommends methodologies for estimating recurring and non-recurring congestion from NPMRDS data, and interpreting the results from an economics perspective.

The objective of the analysis was to describe the recurring and non-recurring congestion during a regular weekday. This is important because research shows that freight users care much more about non-recurring congestion than recurring congestion. Motor carriers can easily schedule deliveries to consider recurring congestion, however non-recurring congestion could lead



deliveries to be late, which not only causes disruptions for the motor carrier, but also for the receiver. Being on-time, which is one the most important factors in modern-day supply-chains, becomes much more difficult with high levels of non-recurring congestion.

First, the NPMRDS data was filtered to exclude weekends and federal holidays (1st of January, Martin Luther King Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas). Truck operations in these days are likely to be considerably different than during regular weekdays.

Then, several travel time metrics were calculated for each segment for each hour of the day:

- $\bar{\tau}_h$ - The average travel time during hour h .
- $10\%\tau$ - The 10th percentile travel time across all hours of the day. This was assumed to represent the free flow travel time.
- $95\%\tau_h$ - The 95th percentile travel time during hour h . This represents how slow travel times could get 5 percent of the time. The 95th percentile threshold has been used in many congestion studies to represent unreliability, including in the calculation of the Federal Reliability measure.

For each roadway segment, the Vehicle Miles of truck Travel (VMT) was calculated as

$$VMT = \sum_{vh} l T_h \quad (1)$$

where l represents the length of the segment and T_h represents the hourly truck volume. This was obtained by dividing the truck Average Annualized Daily Traffic (AADT) reported by NPMRDS by 2 (because traffic is reported combined for both directions of travel), and multiplying by the assumed share of volume during that time of the day (approximated from the 2018 FHWA Truck Freight Bottleneck Reporting Guidebook).

Similarly, the Vehicle Hours of truck Travel (VHT) was calculated as

$$VHT = \sum_{vh} \bar{\tau}_h T_h. \quad (2)$$

The average speeds of trucks in each segment were then calculated as VMT/VHT .

Recurring congestion was quantified as the number of hours of travel above free flow conditions, which was defined as the Vehicle Hours of Delay (VHD). This was estimated by comparing average travel times to the free flow travel time, and then summing according to



$$VHD = \sum_{\forall h} (\bar{\tau}_h - 10\% \tau_h) T_h . \quad (3)$$

Non-recurring congestion was quantified as the number of Vehicle Hours of Unreliability (*VHU*) accumulated in each segment, which was calculated as the difference between the 95th percentile travel time and the average travel time. This measure, first introduced in project NCHRP 07-24, sums the hours of uncertainty that trucks face while traveling throughout the day. This is a superior way of measuring unreliability than the often-used travel time indices or buffer indices, because it is additive and captures only non-recurring congestion.

$$VHU = \sum_{\forall h} (95\% \tau_h - \bar{\tau}_h) T_h \quad (4)$$

To compare the *VHD* and *VHU* measures between different segments, the metrics were normalized by segment mileage. This way, segments are not more likely to be identified as bottlenecks just because they are long. (Note that the extraction process for the NPMRDS travel times provides average, 10th percentile and 95th percentile metrics by segment, regardless of the number of travel lanes in that segment; with these metrics in hand it is not necessary to make further adjustments to normalize for the number of travel lanes.)

Using NPMRDS to Identify Leading Truck Bottlenecks

As described above, the two key performance measures calculated for this analysis are:

- Vehicle (Truck) Hours of Delay per Segment Mile (VHD/M)
- Vehicle (Truck) Hours of Unreliability per Segment Mile (VHU/M)

These measures are continuous, ranging from near zero in the best cases to high values (over 260 VHD/M and over 420 VHU/M) for the highest delay and unreliability segment. There is no specific cutoff point at which the metrics indicate that delay or unreliability are acceptable or unacceptable. Therefore, the metrics are best used in several ways:

1. To identify the segments of Florida's NHS which experience the highest VHD/M and VHU/M, as leading candidates for attention;
2. To identify the concentrations of the highest VHD/M and VHU/M segments by county and by route/road number; and
3. To examine the relative performance of Florida's NHS in each region, identifying segments that are performing better or worse than average, to highlight the most significant challenges and opportunities at the regional level.



Highest VHD/M and VHU/M Segments

The VHD/M and VHU/M metrics were calculated for 12,900 NPMRDS segments in Florida, and this document reports the 100 highest VHD/M and 100 highest VHU/M values. The top 100 VHD/M segments can be considered leading Recurring Congestion Bottlenecks, and have significant truck volumes along with the largest differences between average travel times and free flow speeds (see Tables 1 and 2 following). The top 100 VHU/M segments can be considered leading Non-Recurring Congestion Bottlenecks, and have significant truck volumes along with congested travel times that be much worse than average travel times, causing unreliability for system users (see Tables 3 and 4 following).

Table 1. Leading Recurring Truck Congestion Bottlenecks (1-50)

Rank	Road	Direction	County	VHD/mi
1	FL-414	EASTBOUND	ORANGE	265.0
2	I-4	WESTBOUND	HILLSBOROUGH	240.5
3	I-4	WESTBOUND	HILLSBOROUGH	237.6
4	FL-826	NORTHBOUND	MIAMI-DADE	223.9
5	I-4	WESTBOUND	OSCEOLA	219.0
6	FL-821	SOUTHBOUND	MIAMI-DADE	218.2
7	FL-826	NORTHBOUND	MIAMI-DADE	212.3
8	FL-826	NORTHBOUND	MIAMI-DADE	209.9
9	FL-826	NORTHBOUND	MIAMI-DADE	209.7
10	US-27	NORTHBOUND	MIAMI-DADE	194.3
11	FL-826	NORTHBOUND	MIAMI-DADE	192.7
12	FL-826	NORTHBOUND	MIAMI-DADE	188.3
13	I-4	WESTBOUND	HILLSBOROUGH	186.0
14	FL-826	NORTHBOUND	MIAMI-DADE	183.9
15	FL-826	NORTHBOUND	MIAMI-DADE	180.3
16	FL-826	NORTHBOUND	MIAMI-DADE	179.5
17	US-27	NORTHBOUND	MIAMI-DADE	178.5
18	I-95	SOUTHBOUND	MIAMI-DADE	174.1
19	PRITCHARD RD	WESTBOUND	DUVAL	174.0
20	FL-826	NORTHBOUND	MIAMI-DADE	173.8
21	US-27	NORTHBOUND	MIAMI-DADE	168.8
22	FL-948	WESTBOUND	MIAMI-DADE	166.9
23	FL-826	NORTHBOUND	MIAMI-DADE	165.9



Rank	Road	Direction	County	VHD/mi
24	FL-821	SOUTHBOUND	MIAMI-DADE	158.7
25	FL-821	SOUTHBOUND	MIAMI-DADE	157.6
26	FL-934	WESTBOUND	MIAMI-DADE	152.9
27	US-27	NORTHBOUND	MIAMI-DADE	150.0
28	US-27	NORTHBOUND	MIAMI-DADE	149.6
29	US-17	NORTHBOUND	ORANGE	148.4
30	FL-826	SOUTHBOUND	MIAMI-DADE	147.7
31	I-4	EASTBOUND	ORANGE	144.2
32	I-4	WESTBOUND	HILLSBOROUGH	143.1
33	I-95	SOUTHBOUND	BROWARD	141.4
34	45TH ST	EASTBOUND	PALM BEACH	140.0
35	FL-826	SOUTHBOUND	MIAMI-DADE	139.4
36	FL-826	SOUTHBOUND	MIAMI-DADE	138.3
37	45TH ST	WESTBOUND	PALM BEACH	137.8
38	US-17	NORTHBOUND	ORANGE	135.1
39	I-95	SOUTHBOUND	BROWARD	134.7
40	FL-934	EASTBOUND	MIAMI-DADE	134.2
41	FL-826	SOUTHBOUND	MIAMI-DADE	134.0
42	I-4	EASTBOUND	ORANGE	133.2
43	US-27	SOUTHBOUND	MIAMI-DADE	132.3
44	45TH ST	WESTBOUND	PALM BEACH	131.5
45	I-4	EASTBOUND	ORANGE	130.6
46	FL-826	SOUTHBOUND	MIAMI-DADE	130.6
47	US-27	NORTHBOUND	MIAMI-DADE	129.6
48	US-27	SOUTHBOUND	MIAMI-DADE	128.2
49	I-4	EASTBOUND	ORANGE	128.1
50	US-27	NORTHBOUND	MIAMI-DADE	127.9



Table 2. Leading Recurring Truck Congestion Bottlenecks (51-100)

Rank	Road	Direction	County	VHD/mi
51	E OSCEOLA PKWY	EASTBOUND	OSCEOLA	127.8
52	N JOHN YOUNG PKWY	NORTHBOUND	OSCEOLA	127.7
53	FL-826	SOUTHBOUND	MIAMI-DADE	127.4
54	NW 36TH ST	EASTBOUND	MIAMI-DADE	126.6
55	NW 36TH ST	EASTBOUND	MIAMI-DADE	125.9
56	I-95	NORTHBOUND	BROWARD	125.5
57	FL-826	SOUTHBOUND	MIAMI-DADE	125.5
58	US-27	NORTHBOUND	MIAMI-DADE	125.4
59	FL-934	EASTBOUND	MIAMI-DADE	124.8
60	FL-713	NORTHBOUND	ST. LUCIE	123.6
61	FL-826	SOUTHBOUND	MIAMI-DADE	123.3
62	I-95	SOUTHBOUND	BROWARD	123.1
63	US-27	NORTHBOUND	MIAMI-DADE	122.7
64	FL-932	EASTBOUND	MIAMI-DADE	121.7
65	US-301	NORTHBOUND	HILLSBOROUGH	120.6
66	FL-826	SOUTHBOUND	MIAMI-DADE	120.4
67	I-95	SOUTHBOUND	BROWARD	119.1
68	FL-826	SOUTHBOUND	MIAMI-DADE	118.9
69	I-4	EASTBOUND	ORANGE	117.8
70	US-27	NORTHBOUND	MIAMI-DADE	117.6
71	I-95 S	SOUTHBOUND	MIAMI-DADE	117.3
72	FL-826	NORTHBOUND	MIAMI-DADE	117.2
73	N JOHN YOUNG PKWY	NORTHBOUND	OSCEOLA	117.2
74	FL-948	WESTBOUND	MIAMI-DADE	117.1
75	I-4	EASTBOUND	POLK	116.5
76	FL-826	NORTHBOUND	MIAMI-DADE	116.4
77	I-95	SOUTHBOUND	BROWARD	114.6
78	FL-826	SOUTHBOUND	MIAMI-DADE	114.3
79	FL-826	SOUTHBOUND	MIAMI-DADE	113.1
80	PRITCHARD RD	EASTBOUND	DUVAL	112.6
81	NW 36TH ST	EASTBOUND	MIAMI-DADE	112.6
82	FL-948	EASTBOUND	MIAMI-DADE	112.2



Rank	Road	Direction	County	VHD/mi
83	FL-838	WESTBOUND	BROWARD	111.6
84	FL-932	EASTBOUND	MIAMI-DADE	110.8
85	FL-820	WESTBOUND	BROWARD	110.6
86	I-275	NORTHBOUND	HILLSBOROUGH	109.8
87	I-95	SOUTHBOUND	MIAMI-DADE	109.7
88	I-275	NORTHBOUND	HILLSBOROUGH	109.3
89	I-295	SOUTHBOUND	DUVAL	109.1
90	I-295	SOUTHBOUND	DUVAL	108.4
91	FL-112	WESTBOUND	MIAMI-DADE	108.4
92	NW 36TH ST	WESTBOUND	MIAMI-DADE	107.9
93	I-4	EASTBOUND	ORANGE	107.9
94	ORANGE AVE	WESTBOUND	ST. LUCIE	107.6
95	I-4	EASTBOUND	ORANGE	107.1
96	US-27	SOUTHBOUND	MIAMI-DADE	106.4
97	I-4	EASTBOUND	ORANGE	105.7
98	US-27	SOUTHBOUND	MIAMI-DADE	105.6
99	S 50TH ST	SOUTHBOUND	HILLSBOROUGH	105.6
100	45TH ST	EASTBOUND	PALM BEACH	104.7

Table 3. Leading Non-Recurring Truck Congestion Bottlenecks (1-50)

Rank	Road	Direction	County	VHU/mi
1	FL-414	EASTBOUND	ORANGE	420.1
2	I-4	WESTBOUND	HILLSBOROUGH	395.9
3	I-4	EASTBOUND	POLK	389.4
4	US-27	NORTHBOUND	MIAMI-DADE	380.2
5	US-27	NORTHBOUND	MIAMI-DADE	370.6
6	FL-826	NORTHBOUND	MIAMI-DADE	361.5
7	US-27	NORTHBOUND	MIAMI-DADE	349.8
8	US-27	NORTHBOUND	MIAMI-DADE	347.8
9	FL-826	NORTHBOUND	MIAMI-DADE	346.2
10	FL-826	SOUTHBOUND	MIAMI-DADE	340.6
11	PRITCHARD RD	WESTBOUND	DUVAL	340.3
12	I-4	WESTBOUND	HILLSBOROUGH	336.1



Rank	Road	Direction	County	VHU/mi
13	US-27	NORTHBOUND	MIAMI-DADE	318.4
14	I-4	WESTBOUND	HILLSBOROUGH	313.4
15	US-301	NORTHBOUND	HILLSBOROUGH	302.0
16	FL-934	WESTBOUND	MIAMI-DADE	301.2
17	I-95	NORTHBOUND	BROWARD	300.8
18	FL-934	EASTBOUND	MIAMI-DADE	299.4
19	US-27	SOUTHBOUND	MIAMI-DADE	297.0
20	N JOHN YOUNG PKWY	NORTHBOUND	OSCEOLA	291.7
21	FL-826	SOUTHBOUND	MIAMI-DADE	291.5
22	FL-826	NORTHBOUND	MIAMI-DADE	286.2
23	NW 36TH ST	EASTBOUND	MIAMI-DADE	286.1
24	I-95	SOUTHBOUND	BROWARD	278.3
25	FL-91 S	SOUTHBOUND	MIAMI-DADE	275.8
26	US-27	SOUTHBOUND	MIAMI-DADE	274.4
27	45TH ST	EASTBOUND	PALM BEACH	273.6
28	45TH ST	WESTBOUND	PALM BEACH	271.4
29	US-27	SOUTHBOUND	MIAMI-DADE	267.3
30	FL-713	NORTHBOUND	ST. LUCIE	264.4
31	US-301	NORTHBOUND	HILLSBOROUGH	264.0
32	FL-845	SOUTHBOUND	BROWARD	263.3
33	PRITCHARD RD	EASTBOUND	DUVAL	263.0
34	US-27	NORTHBOUND	MIAMI-DADE	261.1
35	US-301	SOUTHBOUND	HILLSBOROUGH	261.1
36	US-27	NORTHBOUND	MIAMI-DADE	259.8
37	E OSCEOLA PKWY	EASTBOUND	OSCEOLA	258.1
38	FL-821	SOUTHBOUND	MIAMI-DADE	257.6
39	FL-826	NORTHBOUND	MIAMI-DADE	257.3
40	NW 36TH ST	WESTBOUND	MIAMI-DADE	257.0
41	FL-948	WESTBOUND	MIAMI-DADE	254.5
42	S JOHN YOUNG PKWY	SOUTHBOUND	ORANGE	254.0
43	FL-845	NORTHBOUND	BROWARD	254.0
44	FL-826	SOUTHBOUND	MIAMI-DADE	252.5
45	S JOHN YOUNG PKWY	SOUTHBOUND	ORANGE	251.3



Rank	Road	Direction	County	VHU/mi
46	S JOHN YOUNG PKWY	NORTHBOUND	ORANGE	249.2
47	FL-826	NORTHBOUND	MIAMI-DADE	247.4
48	FL-845	SOUTHBOUND	BROWARD	246.9
49	I-95 S	SOUTHBOUND	MIAMI-DADE	246.2
50	US-27	NORTHBOUND	MIAMI-DADE	245.5

Table 4. Leading Non-Recurring Truck Congestion Bottlenecks (51-100)

Rank	Road	Direction	County	VHU/mi
51	NW 36TH ST	EASTBOUND	MIAMI-DADE	245.5
52	NW 36TH ST	WESTBOUND	MIAMI-DADE	245.3
53	I-95	SOUTHBOUND	BROWARD	245.1
54	US-27	SOUTHBOUND	MIAMI-DADE	245.0
55	N JOHN YOUNG PKWY	NORTHBOUND	OSCEOLA	244.9
56	E OSCEOLA PKWY	EASTBOUND	OSCEOLA	244.8
57	45TH ST	EASTBOUND	PALM BEACH	244.2
58	S 50TH ST	SOUTHBOUND	HILLSBOROUGH	244.1
59	FL-826	NORTHBOUND	MIAMI-DADE	243.5
60	I-4	EASTBOUND	ORANGE	242.4
61	I-4	EASTBOUND	ORANGE	241.4
62	I-4	EASTBOUND	ORANGE	241.3
63	I-4	EASTBOUND	ORANGE	241.1
64	FL-713	SOUTHBOUND	ST. LUCIE	240.8
65	FL-948	WESTBOUND	MIAMI-DADE	240.7
66	S JOHN YOUNG PKWY	SOUTHBOUND	ORANGE	240.3
67	FL-708	WESTBOUND	PALM BEACH	240.2
68	I-95	SOUTHBOUND	BROWARD	240.1
69	FL-826	SOUTHBOUND	MIAMI-DADE	240.1
70	FL-838	WESTBOUND	BROWARD	239.7
71	I-4	EASTBOUND	ORANGE	239.6
72	FL-948	EASTBOUND	MIAMI-DADE	238.4
73	FL-826	NORTHBOUND	MIAMI-DADE	235.4
74	FL-948	EASTBOUND	MIAMI-DADE	234.1
75	US-27	SOUTHBOUND	MIAMI-DADE	233.5



Rank	Road	Direction	County	VHU/mi
76	NW 36TH ST	EASTBOUND	MIAMI-DADE	229.3
77	I-4	EASTBOUND	ORANGE	228.5
78	I-4	EASTBOUND	ORANGE	227.5
79	I-4	WESTBOUND	HILLSBOROUGH	227.2
80	I-4	WESTBOUND	OSCEOLA	226.8
81	FL-934	EASTBOUND	MIAMI-DADE	225.4
82	S JOHN YOUNG PKWY	NORTHBOUND	ORANGE	225.3
83	FL-60	EASTBOUND	HILLSBOROUGH	225.2
84	FL-826	NORTHBOUND	MIAMI-DADE	225.0
85	FL-826	SOUTHBOUND	MIAMI-DADE	225.0
86	S JOHN YOUNG PKWY	NORTHBOUND	ORANGE	222.7
87	US-301	NORTHBOUND	DUVAL	222.4
88	US-98	EASTBOUND	POLK	222.1
89	FL-713	SOUTHBOUND	ST. LUCIE	221.1
90	N JOHN YOUNG PKWY	SOUTHBOUND	OSCEOLA	220.7
91	FL-821	SOUTHBOUND	MIAMI-DADE	219.0
92	I-4	EASTBOUND	OSCEOLA	218.6
93	FL-826	SOUTHBOUND	MIAMI-DADE	218.6
94	FL-826	NORTHBOUND	MIAMI-DADE	218.4
95	FL-948	WESTBOUND	MIAMI-DADE	217.5
96	I-4	EASTBOUND	ORANGE	217.3
97	FL-948	EASTBOUND	MIAMI-DADE	216.8
98	E OSCEOLA PKWY	EASTBOUND	OSCEOLA	216.0
99	FL-713	NORTHBOUND	ST. LUCIE	214.6
100	FL-60	WESTBOUND	HILLSBOROUGH	214.0
100	45TH ST	EASTBOUND	PALM BEACH	104.7



Concentration of Highest VHD/M and VHU/M Segments

The top 100 VHD/M and VHU/M segments show a strong tendency to cluster in a limited number of counties. As shown in Figures 1 and 2 following:

- Miami-Dade has 58% of the Top 100 Recurring and 46% of the Top 100 Non-Recurring bottlenecks
- Orange has 11% of the Top 100 Recurring and 15% of the Top 100 Non-Recurring bottlenecks
- Hillsborough and Broward each have 8% of the Top 100 Recurring and 8 of the Top 100 Non-Recurring bottlenecks
- Palm Beach, Osceola, Duval, St. Lucie, and Polk counties also have Top 100 bottlenecks

Figure 1: Share of Top 100 Recurring Truck Congestion Bottlenecks by County

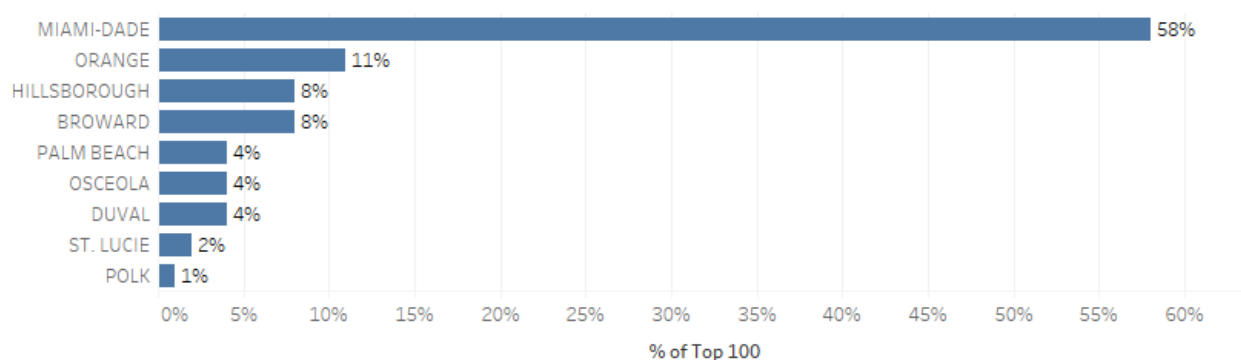
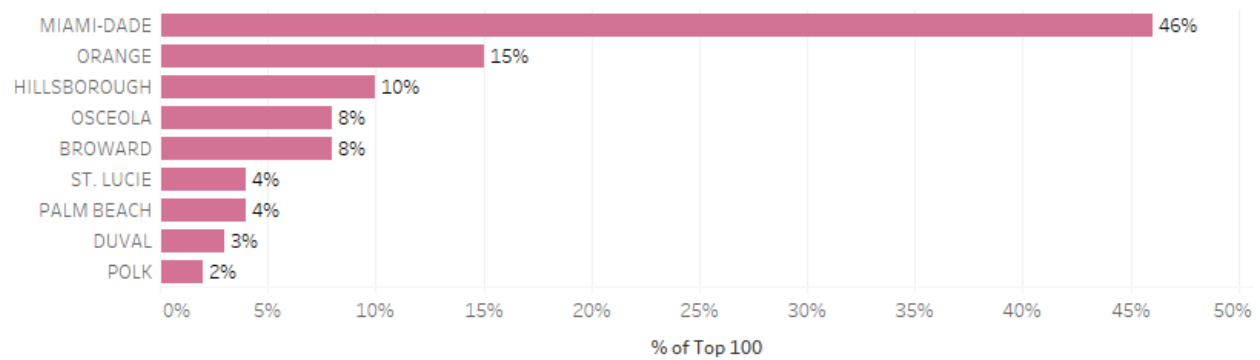




Figure 2: Share of Top 100 Non-Recurring Truck Congestion Bottlenecks by County

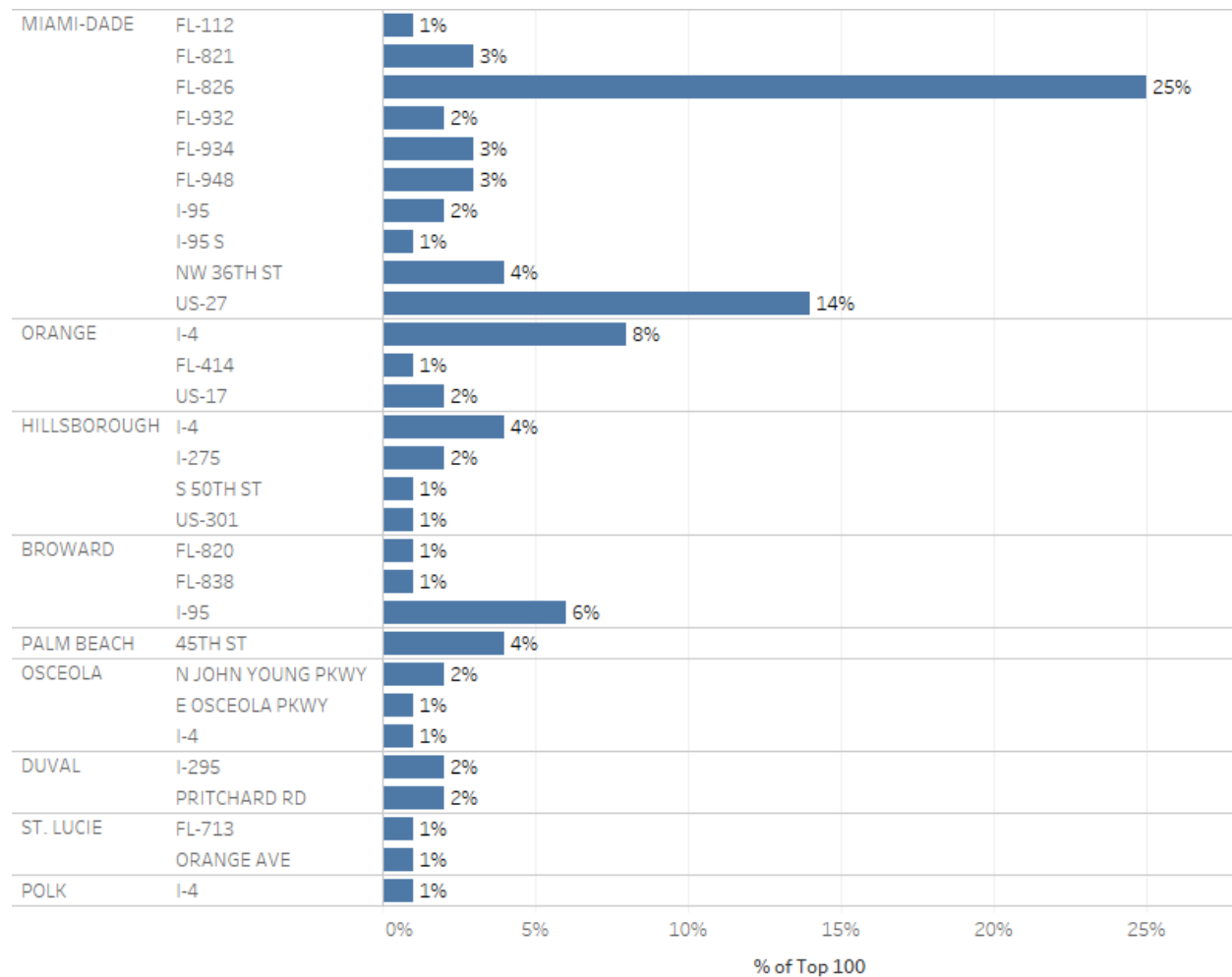


As shown in Figure 3 following, the highest shares of Top 100 Recurring bottleneck locations are located on:

- FL-826 in Miami-Dade (25%)
- US-27 in Miami-Dade (14%)
- I-4 in Orange (8%)
- I-95 in Broward (6%)
- NW 36th St. in Miami-Dade, I-4 in Hillsborough, 45th St. in Palm Beach (4% each)



Figure 3: Share of Top 100 Recurring Truck Congestion Bottlenecks by County and Road

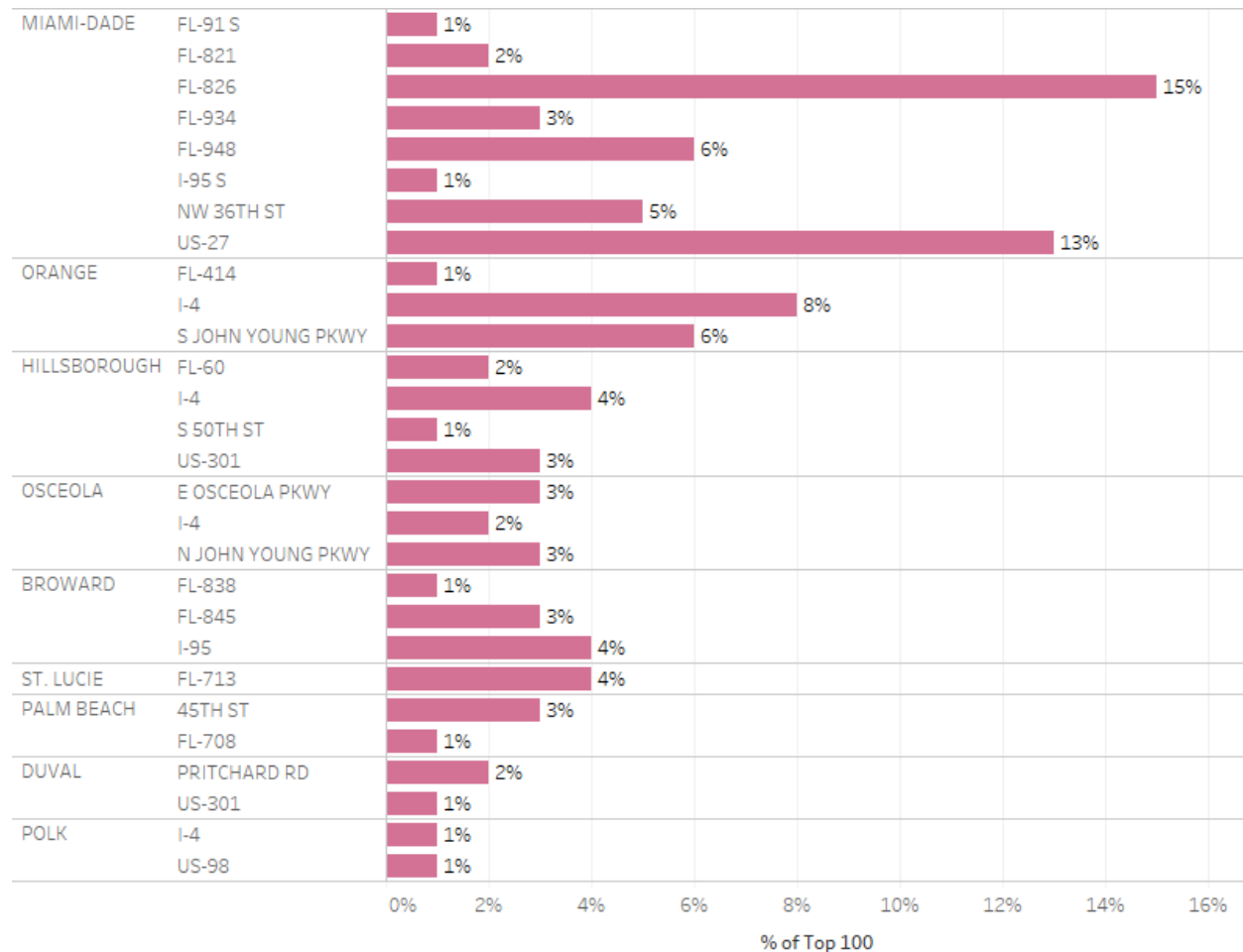


As shown in Figure 4 following, the highest shares of Top 100 Non-Recurring bottleneck locations are located on:

- FL-826 in Miami-Dade (15%)
- US-27 in Miami-Dade (13%)
- I-4 in Orange (8%)
- FL-948 in Miami-Dade and S. John Young Pkwy in Orange (6% each)
- NW 36th St. in Miami-Dade (5%)
- I-4 in Hillsborough, I-95 in Broward, and FL-713 in St. Lucie (4% each)



Figure 4: Share of Top 100 Non-Recurring Truck Congestion Bottlenecks by County and Road

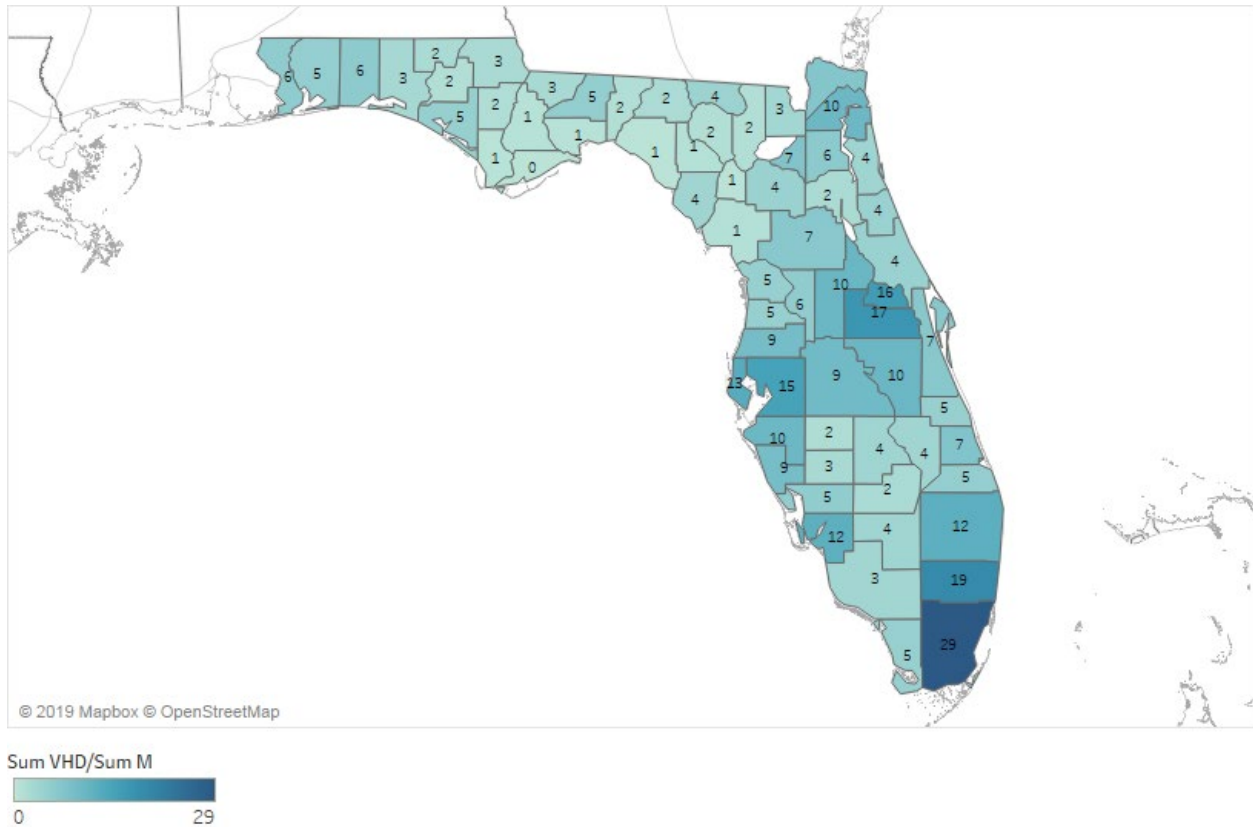


Regional Performance

Figure 5 following illustrates the sum of all VHD divided by the sum of all segment miles in each of Florida's counties, providing a general measure of how recurring bottlenecks are distributed throughout the state. The highest average VHD/M, by far, is in Miami-Dade (29), followed by Broward, Hillsborough, Orange, and Lake counties.



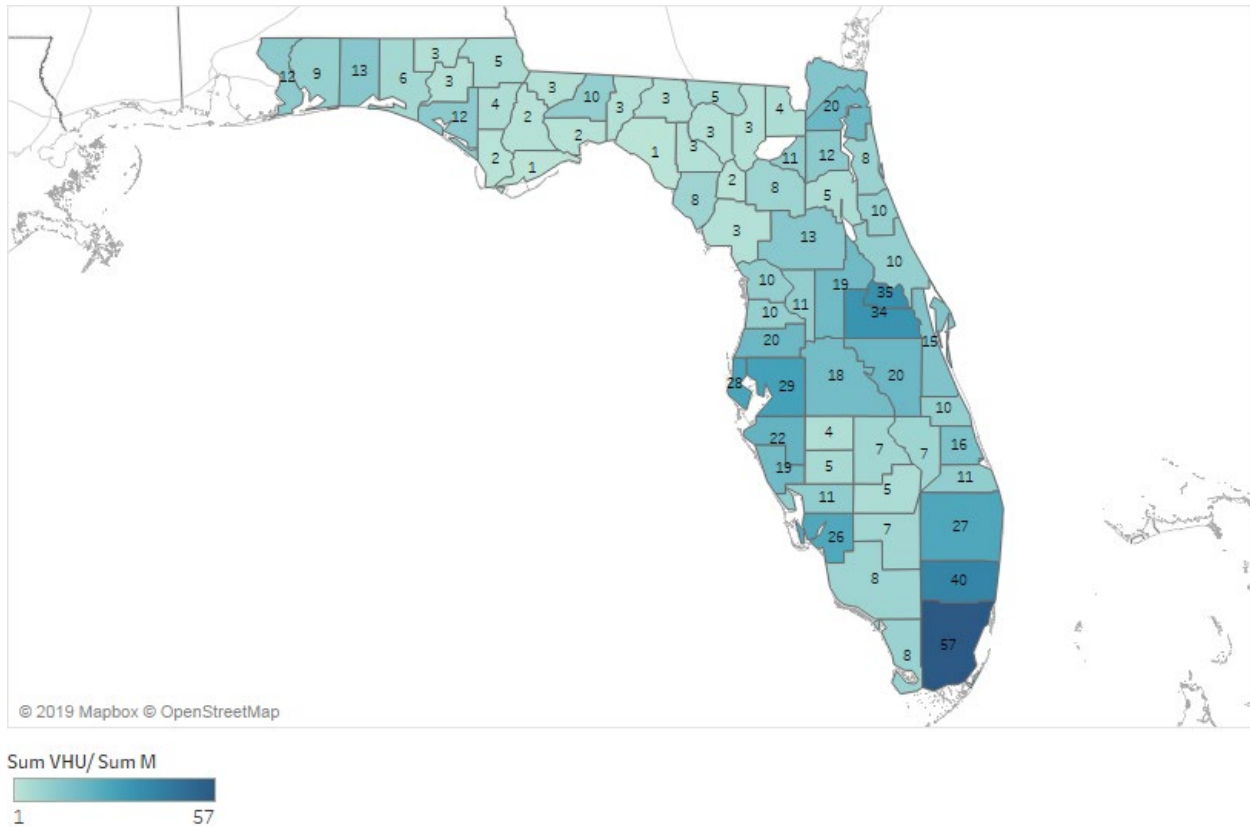
Figure 5: County-Wide Average VHD/M (Intensity of Recurring Congestion)



Similarly, Figure 6 following illustrates the sum of all VHU divided by the sum of all segment miles in each of Florida's counties, providing a general measure of how non-recurring bottlenecks are distributed throughout the state. The highest average VHD/U, by far, is again in Miami-Dade (57), followed by Broward, Lake, Orange, and Hillsborough counties.



Figure 6: County-Wide Average VHU/M (Intensity of Non-Recurring Congestion)

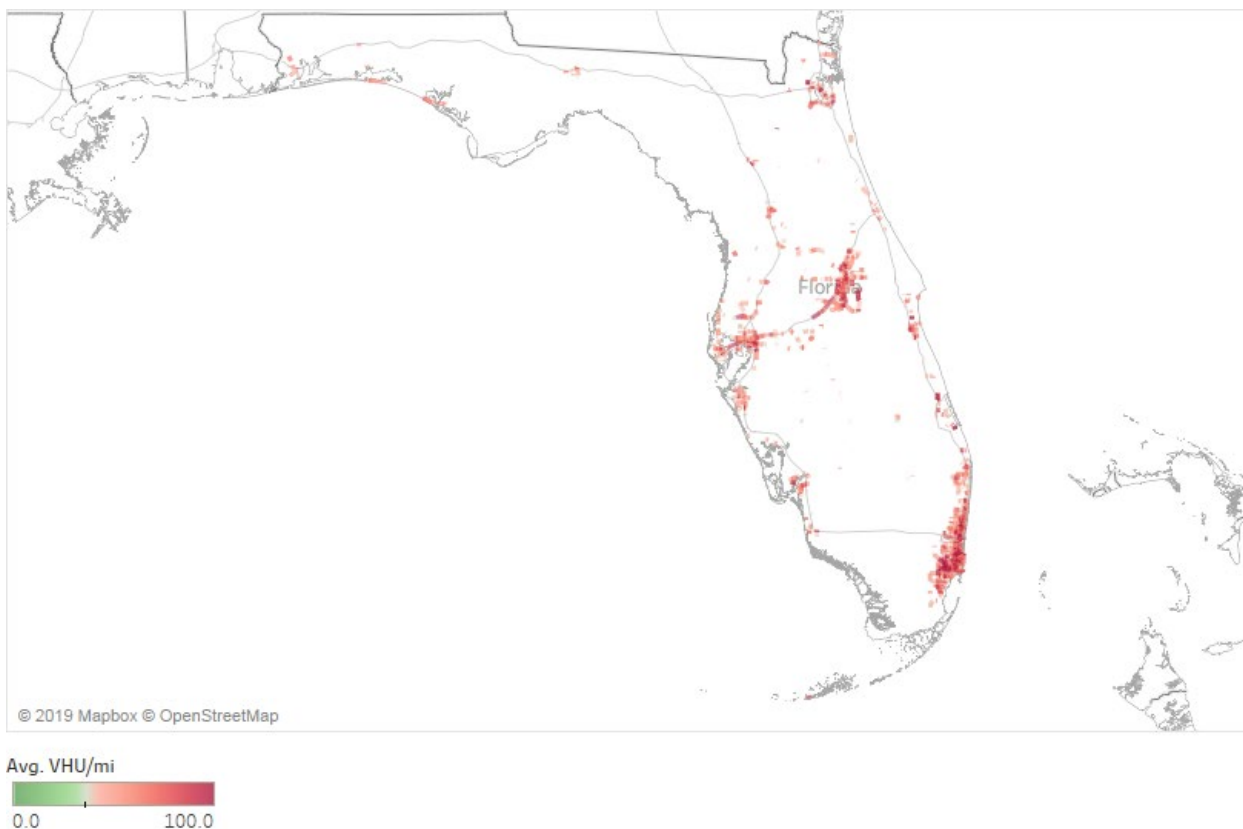


Interestingly, the distribution of non-recurring congestion indicates more significant challenges in certain counties – Palm Beach, Pinellas, Lee, Manatee, Duval, etc. – than the distribution of recurring congestion. To examine this effect at a link level, each Florida segment with a VHU/M of 36 or more was mapped. (The statewide average of all links is 18 VHU/M, and 36 was chosen as a display threshold value representing twice the average level of non-recurring congestion.) As shown in Figure 7 below, these bottlenecks are:

- Clustered (in the metropolitan areas of Miami-Ft. Lauderdale-West Palm Beach, Tampa, Orlando, Jacksonville, and Ft. Myers);
- Distributed (along the I-95, I-75, and I-4 corridors); or
- Showing as localized hot spots or mini-clusters in other locations throughout Florida.



Figure 7: Link Locations with ≥ 36 VHU/M (Non-Recurring Congestion)



For ease of illustration, Figure 7 is scaled with a midpoint of 36, and all values over 100 are assigned the highest intensity color on a green-white-red scale. Using this same display method, Figure 8 illustrates link-level non-recurrent congestion for the most impacted sub-areas and regions of the state like Miami-Dade/Broward. In Miami-Dade/Broward, high non-recurrent congestion is seen not only on major controlled access interstate and state highways, but also on much of the local street grid. In other regions, like Duval/Nassau, high non-recurrent congestion occurs primarily on major controlled access highways and their connectors, and in areas with very limited NHS route choices.



Figure 8: VHU/M (Non-Recurring Congestion), Miami-Dade/Broward





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Freight Mobility and Trade Plan

Technical Memorandum 4
Trends

April 2020



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Introduction

This technical memorandum analyzes national and Florida freight related trends. The trends identified in this memo relate to Florida's population, economy, freight modes, and technology. This information was derived from a host of sources, including but not limited to the Bureau of Economic and Business Research (BEBR), the U.S Census Bureau, the Florida Chamber, Enterprise Florida, and the Freight Analysis Framework (FAF).

The evolution of freight transportation is largely shaped by trends in demographics, consumer behavior, economics, regulations, and technological advances. By analyzing the progression of these factors, planners and policy-makers can anticipate future impacts to plan for more efficient and sustainable freight environments. The following trends are shaping freight movement in Florida.

Population Trends

Florida currently has a population of 20.8 million, ranking third among the states. According to BEBR's forecasting model, Florida's population is expected to reach 27.4 million by 2045.¹ Florida's

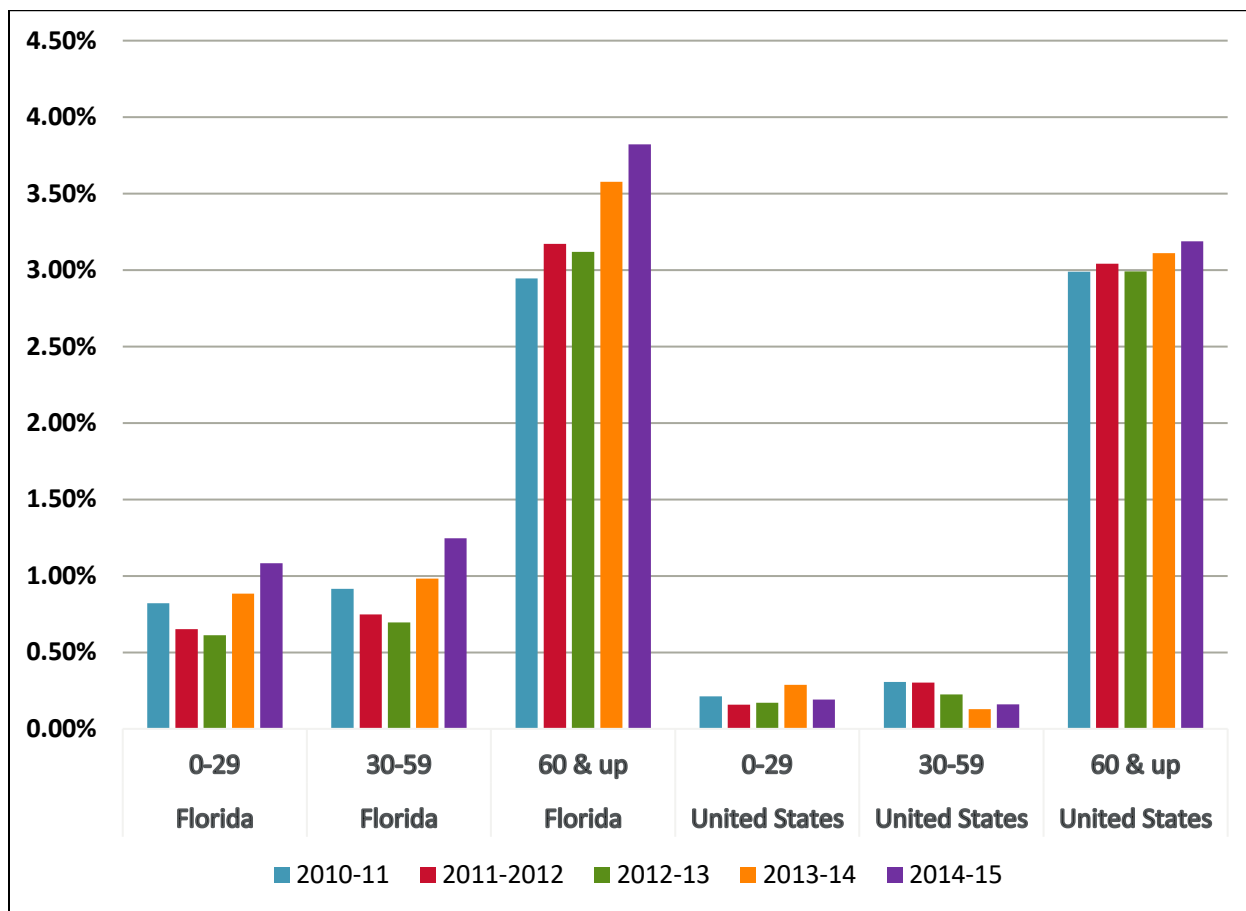


population is growing at a greater rate than that of the United States, signifying a net migration of residents from other states and countries. Florida's large population, evolving demographics and projected growth require the state and freight industry to develop and maintain a reliable, connected, and safe freight system. As Florida's population continues to grow so does the freight required to sustain daily life.

Aging

As Florida's population continues to grow, the population aged 60+ is growing at a notably quicker pace. Figure 1 shows the difference between Florida's and the United States' population growth rates by age cohort from 2010 to 2015.

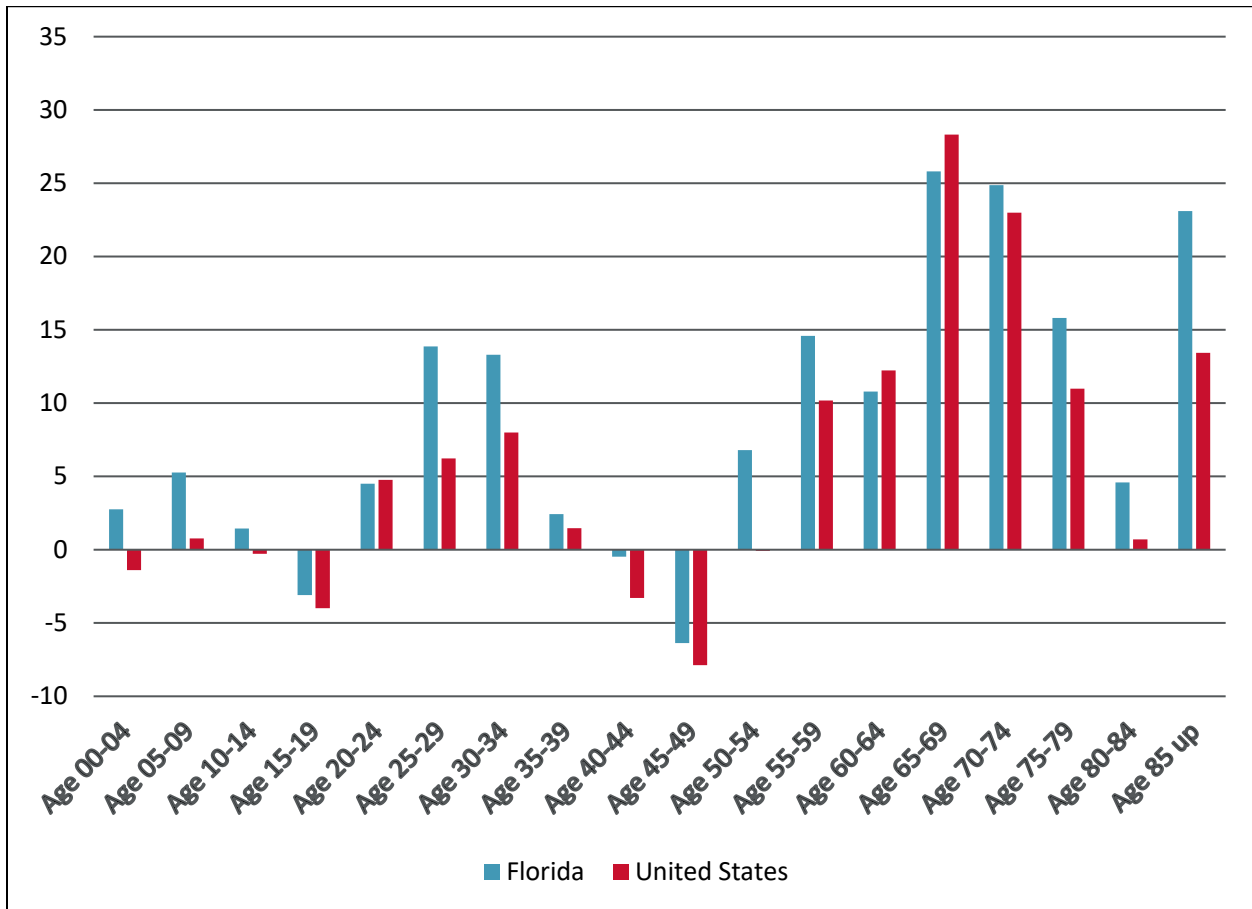
¹Bureau of Economic and Business Research (BEBR). (2019) Retrieved from <https://www.bebr.ufl.edu/population>



Source: Bureau of Economic and Business Research, University of Florida, <https://www.bebrr.ufl.edu/population>.

Figure 1 | Florida's Population Growth Rates, 2010-2015

Trends show that the growth rate of most older age cohorts in the last five years have been greater than younger cohorts; in addition, the growth rates in Florida have mostly exceeded comparable cohorts for the United States as a whole (see Figure 2).



Source: Bureau of Economic and Business Research, University of Florida, <https://www.bebr.ufl.edu/population>.

Figure 2 | Florida's Population Growth Rates – by Age Cohort, 2010-2015

Within a few decades, residents aged 60 and older are expected to outnumber residents under the age of 18 (See Figure 2). In 2030, there will be comparatively fewer people in the working age population

(age 25-64), bolstering the demand for labor and wages and a greater shift toward online shopping. These population trends will lead to a shift in freight distribution patterns.



67% ROAD USERS WILL OUTLIVE THEIR ABILITY TO DRIVE BY AN AVERAGE OF 7-10 YEARS

Source: Bureau of Economic and Business Research (BEBR), 2019

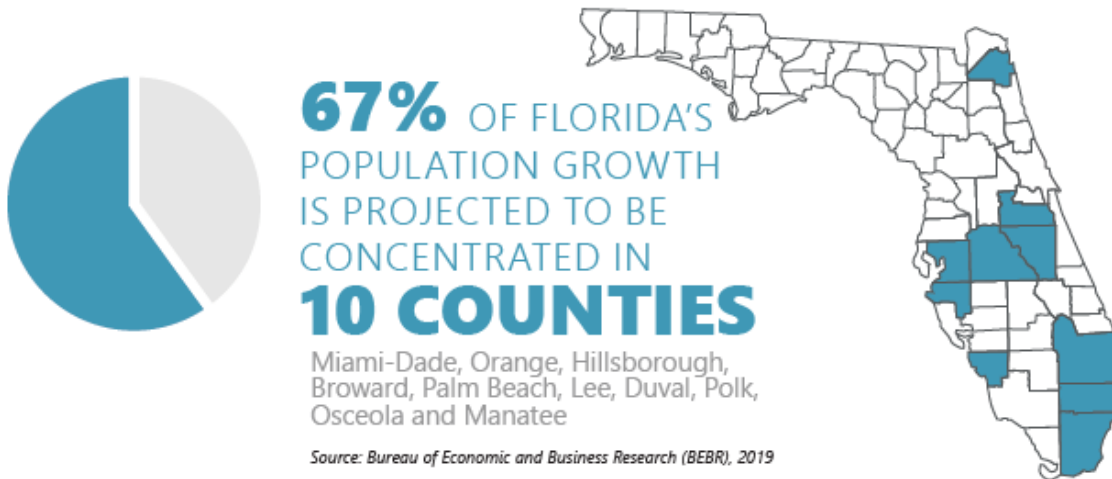
Urbanizing

Today, 9 out of 10 Floridians live in urban areas and this is unlikely to change into the future. 67% of the population growth is expected to be concentrated in ten counties.² Decades of

² U.S. Census Bureau. (2019). Retrieved from <https://www.census.gov/>



outward urban expansion have erased the defined boundaries for many of the state's urban areas, as economic ties between the expanding regions have been supported by the development of a roadway network.³ By 2045, Florida is expected to become one integrated region in which there is little physical or geographic delineation between the metropolitan areas defined as urban centers.



The combination of population growth, demographic changes, and urbanization trends will have a transformative effect on Florida's supply chains. Increased congestion, higher numbers of urban deliveries and changing distribution networks are expected to have a significant impact on the state's economy and residents' quality-of-life.

Economic Trends

Growing Economy

The Florida economy is the 4th largest in the U.S. and 17th largest globally. Freight related industries - construction, manufacturing, trade, and logistics – support every facet of the state's economy. The trade sector has seen a tremendous growth with 40% increase in

FLORIDA HAS A GROSS DOMESTIC PRODUCT OF A **\$1 TRILLION, RANKED 4TH** IN THE U.S.

IF FLORIDA WERE AN **INDEPENDENT COUNTRY,** IT WOULD RANK **17TH IN THE WORLD**

Source: U.S. Bureau of Economic Analysis, 2019

³ [FDOT report on Florida Transportation Trends and Conditions, June 2014](#)

wholesale trade and 80% in retail trade industries from 2009 to 2019. Transportation and warehousing industries have seen a 60% growth since 2009. Because of tourism and population growth, as well as a large population of retirees, Florida is largely a consumer state. This factor contributes significantly to the domestic trade imbalance, which manifests into the high quantity of empty trailers and containers moving out of Florida.

Tourism

In 2018, Florida saw 127 million visitors, up from 82.3 million in 2010. On an average day there are over 2.4 million, non-resident, visitors in Florida. While Florida has 20.8 million residents, Florida must “flex” its infrastructure and industries to accommodate a population 11% above its official tally. While the tourism industry supports 1.3 million jobs in Florida, it also increases the demand for freight. Approximately 50% of the tourists arrive via the roadways which adds to Florida’s VMT.

Freight Transportation Choices

Florida’s multimodal freight system is supported by all five freight transportation modes, shown in Figure 3, giving Florida businesses significant choices on how to convey their goods. Shippers and supply chain managers typically balance two key factors in determining freight modal choice – customer service and cost.

In 2017, trucks transported 65% of freight tonnage in the U.S. and rail accounted for approximately 10%.⁴ FHWA’s 2045 forecast shows that truck freight tonnage will increase modal share to 68% and rail tonnage will decline to 8%. However, many truckload carriers now utilize rail to transport both trailers and containers on long distance moves. This tactic not only reduces costs but also helps to off-set the driver shortage for the trucking industry. The trucking industry is a significant customer for the rail industry and while trucking and rail compete for some elements of the same freight market, they complement each other to a much larger degree. The Class I railroads focus on transporting many categories of goods and commodities, but are typically more profitable when moving freight over 600 miles. Conversely, the trucking industry’s average length of haul is less than 400 miles. Figure 3 illustrates typical modal selection, depending upon variables related to shipment weight, shipment value, the origin and destination/distance, and when the product is needed. Although not shown, other variables enter into freight modal selection, including safety and security, transportation costs, reliability, and customer needs.

⁴ U.S. Department of Transportation, Bureau of Transportation Statistics and Federal Highway Administration, Freight Analysis Framework, version 4.5, 2019.

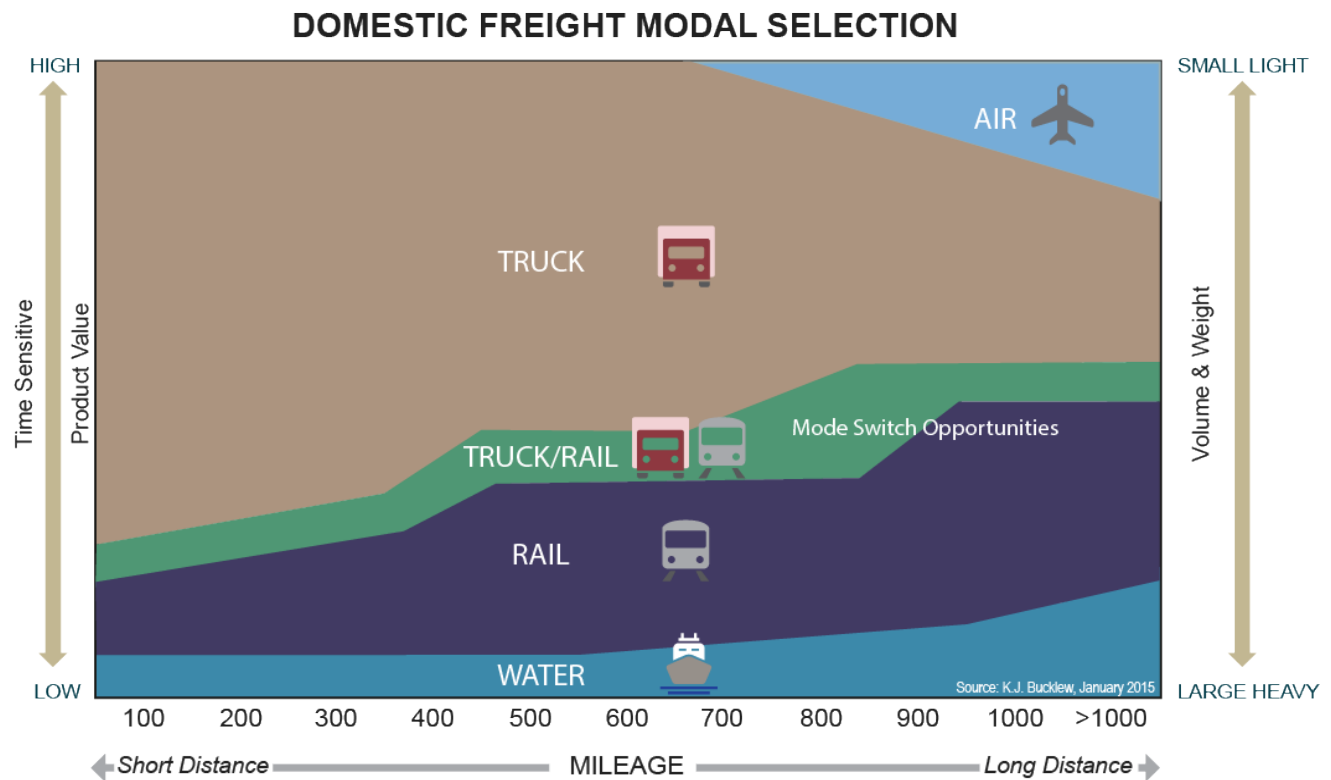


Figure 3 | Freight Mode Selection Framework

E-Commerce

The retail business model involving a direct, physical relationship between consumers and retailers is changing all over the world. E-commerce, defined as retail and business transactions involving the use of online platforms, is making waves in the retail industry. In 2017, total retail sales in the U.S. amounted to over \$5 trillion,⁵ of which e-commerce represented \$449.9 billion, or nearly 9% of the total. The growth rate for e-commerce spending has ranged from 13% to 16% annually over the past five years, outpacing the 1% to 5% annual growth in traditional retail sales observed during the same time period.⁶ It is estimated that Amazon was responsible for half of the nation's e-commerce sales in 2018.⁷

As e-commerce grows in popularity and efficiency, customers are increasingly expecting their orders to be fulfilled quickly. This contributes to the shift to smaller but increasing numbers of

⁵ Monthly Retail Trade Report. "Estimates of Monthly Retail and Food Services Sales by Kind of Business." U.S. Census Bureau. Retrieved June 11, 2018. Available online: <https://www.census.gov/retail/mrts/www/mrtssales92present.xls>.

⁶ Quarterly E-Commerce Report. "Estimated Quarterly U.S. Retail Sales (Not Adjusted): Total and E-commerce." U.S. Census Bureau. Retrieved January 4, 2019. Available online: <https://www.census.gov/retail/mrts/www/data/excel/tsnotadjustedsales.xls>.

⁷ <https://www.miamiherald.com/real-estate/article232817377.html>

distribution centers/warehouses and more nimble delivery vehicles like delivery vans and personal vehicles.

Brick-and-mortar stores still remain an essential component of current retail operations, but retailers are becoming more flexible in how they reach and interact with consumers by decentralizing their distribution/fulfillment networks to bring inventory closer to consumers, sometimes even using their brick-and-mortar locations as e-commerce distribution centers.⁸

In order to get “close to clicks” for quick delivery, distributors like Amazon are looking to locate in dense urban areas. Amazon recently opened an 855,000-square-foot fulfillment center in Opa-Locka, bringing its industrial footprint in Miami-Dade County close to 1.5 million square feet of space. Roughly 4.5 million square feet of speculative industrial and warehouse space in Miami-Dade was under construction and/or delivered in 2018, despite continuous land-constraints and congestion issues.⁹

Gig Economy

The gig economy is changing the landscape of business, and affects freight in a variety of ways. For example, e-commerce deliveries are increasingly made by independent contractors using mobile applications to match their personal vehicle locations with deliveries. Another example is “Amazon Flex” as a Freight Mobility as a Service (FMaaS) solution, where just about anyone with a car and a smart phone can pick up parcels at a distribution center, route drop-offs, and make deliveries. Similarly, freight brokerage apps like the on-demand, real-time Uber Freight can match freight truckload shipments with available drivers/equipment.

Military Activity

Florida’s multimodal freight system supports the deployment of military forces overseas. Not only is Florida home to 22 U.S. military bases with more than 56,000 active military personnel, JAXPORT serves as the point of embarkation for Fort Campbell, Kentucky deployed personnel. This Army installation is home to the 101st Airborne Division and is therefore a designated Power Projection Platform by the U.S. military. Each designated Platform is a U.S. Army installation that can strategically deploy active duty combat brigades in short notice. These efforts are supported in Florida by the 832nd Transportation Battalion – based at JAXPORT. Overall, large deployments of troops have decreased as a result of the drawdown in the Middle East and Afghanistan. However, smaller groups strategically deploying around the globe still rely on Florida’s multimodal freight facilities.

⁸ (ATRI Impacts of E-Commerce on Trucking, Feb 2019)

⁹ <https://www.miamiherald.com/real-estate/article232817377.html>



Resilience

The impacts of disruption to the nation's freight system from both natural and man-made events have become increasingly apparent to planners, policy makers, freight stakeholders, and the public at large. With much of the nation's freight movement being multimodal and multi-state in nature, freight movement in each state has been impacted to some extent by disruptions from non-recurrent episodic events (like major storms or fires) or recurrent risks (like relative sea level rise). In response, freight transportation systems must become more resilient, in terms of their ability to: resist disruption; adapt quickly and provide emergency services immediately following disruption; and re-establish full operations following disruption.

Resiliency is the ability to prepare and plan for, absorb, respond, recover from, and more successfully adapt to adverse events. Enhanced resilience allows better planning to reduce disaster losses – rather than waiting for an event to occur and paying for it afterward

FDOT Transportation Resilience Primer

Since 1980, Florida has experienced 48 different billion-dollar (or more) damage natural disaster events, including drought, flooding, freezes, severe storms, hurricanes, wildfires, and winter storms.¹⁰ Florida's location makes it a prime target for hurricanes, which can create storm surge over 20 feet high.¹¹ Aggravating this situation, strong (Category 5) Atlantic hurricanes are increasing in frequency.

Each year FDOT invests billions of dollars into improving and expanding the state's mobility infrastructure, much if not most of which has to regularly endure extreme weather conditions. Thus, resilience remains a critical factor of Florida's transportation system, particularly the Strategic Intermodal System (SIS), which carries the majority share of freight transport mileage in the state.

¹⁰ National Oceanic and Atmospheric Administration, (2018). Billion-Dollar Weather and Climate Disasters: Overview. <https://www.ncdc.noaa.gov/billions>

¹¹ United States Geological Survey, (2018). Hurricane Michael Storm Tide and Pressure, Mexico Beach Pier, Florida. <https://www.wunderground.com/cat6/Hurricane-Michael-Brought-Water-Levels-Over-20-High-Coast>

Modal Trends

Highway

The growing population fueled by a growing economy has increased the number of trucks on the road (see Figure 4). The number of intra-regional and last-mile truck trips has increased while the average length of haul has declined with more distribution/fulfillment centers being built. Average trip lengths have decreased 37% since 2000, while urban vehicle miles traveled have increased for much of this period. Due to the more frequent but shorter trips, congestion and bottlenecks have increased in dense urban areas. Not only are vehicle miles traveled (VMT) increasing with shorter but more frequent trips, but trucking accidents and fatalities are on the rise since 2012.

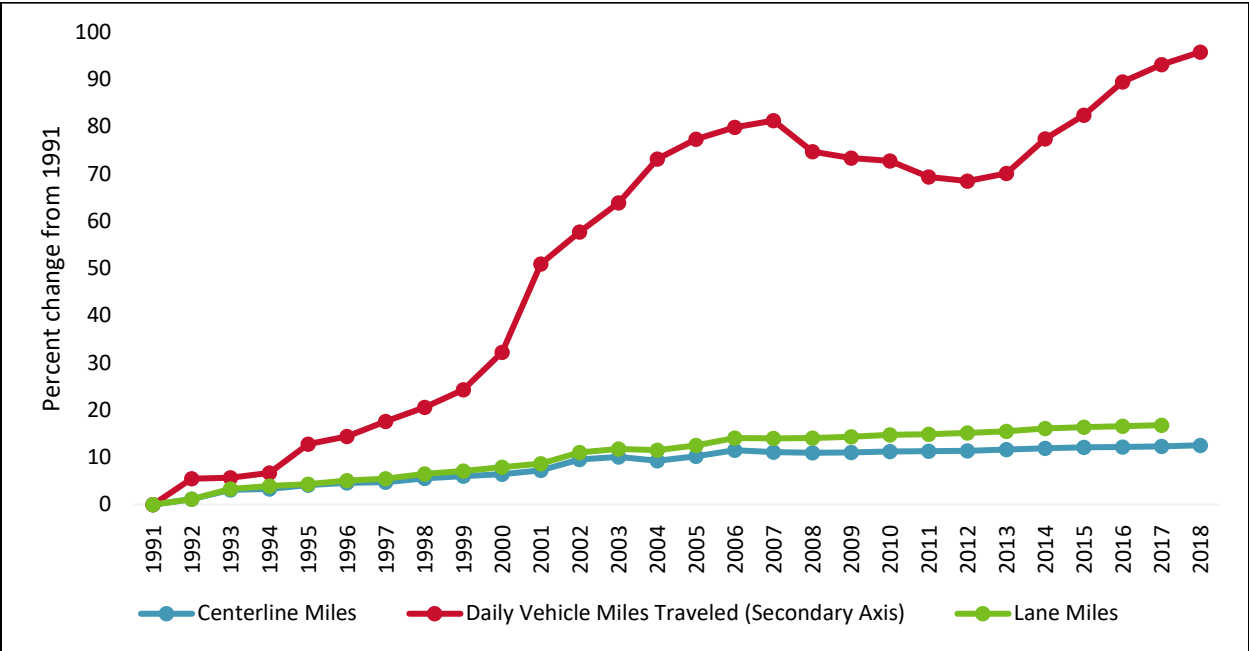


Figure 4 | Growth in Truck VMT

Alternative Fuel

Florida’s businesses, local governments, and private citizens are realizing the benefits of alternatively fueled vehicles. Vehicle fleets are being converted to propane, compressed natural gas (CNG) and liquefied natural gas (LNG).¹²

The market for natural gas technology vehicles and fueling infrastructure has experienced substantial growth in the past few decades. Since the Natural Gas Fuel Fleet Vehicle Rebate Program’s (2013-2018) inception, the number of private and public compressed natural gas

¹² Florida Department of Agriculture & Consumer Services, 2018 Office of Energy Annual Report

fueling stations in Florida has increased from 19 to 58 with another six stations planned as of May 2018.¹³

The use of electric vehicles is also increasing with technology, charging infrastructure, and consumer awareness. Improved battery performance has led to longer ranges, shorter recharge times, and lower maintenance, and has bolstered consumer confidence and public acceptance of electric vehicles.

The Florida Department of Highway Safety and Motor Vehicles lists the number of registered electric vehicles in Florida as 82,682 as of December 30, 2018

2018 Office of Energy Annual Report

Aviation and Aerospace

Tampa International Airport (TPA) has seen tremendous growth in the last decade. Cargo volume at TPA has doubled since 2015 largely due to the addition of Amazon air operations in 2015 and UPS in 2017, with other smaller airports like Lakeland International also adding Amazon services. In addition, the commercialization of the space industry is attracting significant private investment and creating a new paradigm for the space freight market.

Panama Canal

The expanded Panama Canal, coupled with increases in vessel sizes, has changed the flow of goods movement since 2016 on the West, Gulf and East Coasts. Goods from North East Asia that were previously offloaded from vessels on the West Coast and railed across the United States can now be moved on all-water routes directly to Florida seaports. The larger vessels and additional volumes are requiring new investment and technology in marine terminals. It has also required changes to truck movements accessing marine terminals for imported and exported goods.

The benefit to Florida is its proximity to the Panama Canal by about 150 nautical miles. The next closest port is Gulfport; however, it lacks the marine terminal capacity of PortMiami. PortMiami is one of a few East Coast seaports that can handle a fully-laden New Panamax container vessel; and JAXPORT is currently deepening its navigation channel to 47 feet.¹⁴

International Marine Industry

Although the Panama Canal has diverted 10% or more cargo to East Coast ports, the international sea shipping market has been in a state of fluctuation since 2008. The cost of fuel and desire to gain greater market shares has helped create alliances – most notably, recent

¹³ Florida Department of Agriculture & Consumer Services, 2018 Office of Energy Annual Report

¹⁴ The [2018 Panama Canal Expansion and Florida Seaports – Preliminary Study](#)

consolidations of several Chinese carriers. The result has been a larger share of the market controlled by fewer (larger) carrier services, which has affected rates. These factors can make it more difficult to serve Florida with large ships.

Cargo Theft

In 2018 there were 72 reported incidents of cargo theft in Florida. The total value stolen was \$7,783,964. Since 2012, when the State of Florida first began participating in the FBI's Uniform Crime Reporting Program, there has been an uptick in the number of incidents reported, a reduction in the value of property stolen per incident, and increase in the value of property recovered.¹⁵ See Figure 5.

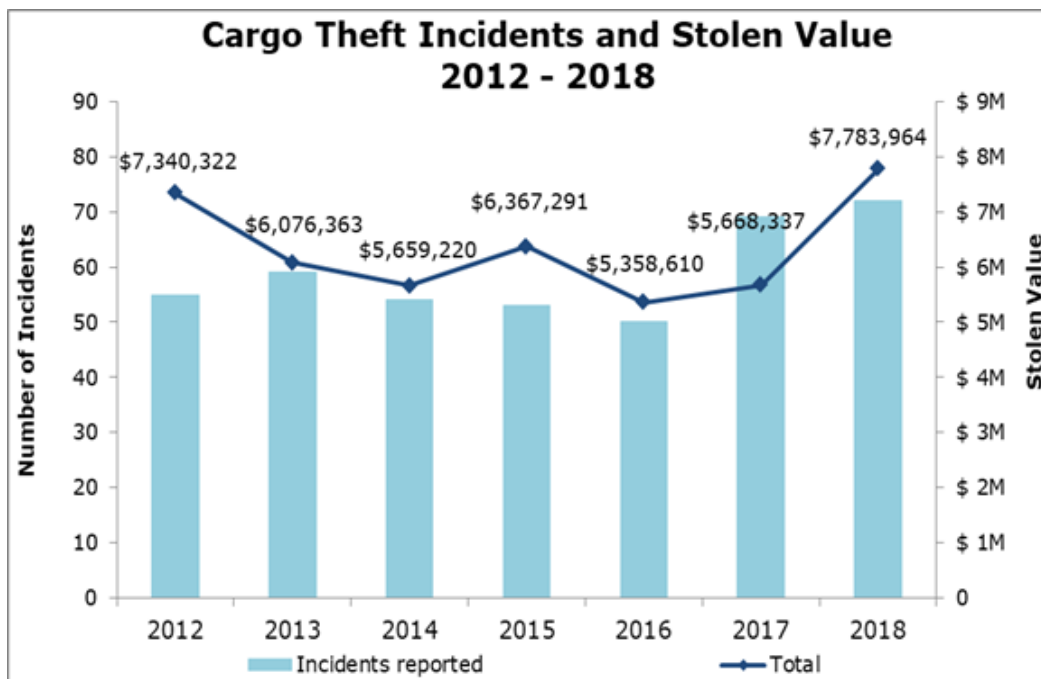


Figure 5 | Florida Cargo Theft

While Florida still rounds out the top three states for frequency of cargo thefts along with California and Texas, the number of thefts has recently seen a decline across the nation. In the second quarter of 2019, there was a 14% drop in "cargo theft events" from the same period a year ago. What was stolen still amounted to tens of millions in losses.¹⁶

¹⁵ <https://www.fdle.state.fl.us/FSAC/Crime-Data/Cargo-Theft.aspx>

¹⁶ https://www.truckinginfo.com/337434/cargo-theft-rate-drops-14-estimated-loss-still-enormous?utm_campaign=Daily%20Newsletter&utm_source=hs_email&utm_medium=email&utm_content=75303681&hsenc=p2ANqtz-9tV7duQASgrYq1aVKQRo0l_8b8TEQ2jR3fBC7SHaWPuc9sCUYUrh8iplMdapvHxEQdb8zrzofRDnrHv7PWdLYavZAuTw&hsmi=75303681



Rising Insurance Costs

The trucking industry is facing the issue of rising insurance costs. Costs have risen due to litigation for crashes which result in damages, injuries, time-lost, and other associated factors. Vehicles equipped with expensive technology, declining insurer competition, and “nuclear verdicts,” are contributing to the issue. The latter, resulting from a Florida tort law, allows juries to award damages if a trucker is 1% negligent, whereas in states like Georgia, juries demand that litigants prove a trucker is 50% negligent.¹⁷

Technology

Connected/Automated Vehicles (CAV)

Automation

Autonomous Vehicle (AV) and Connected Vehicle (CV) technologies hold great potential to significantly reduce crashes, improve capacity, and enhance mobility for all transportation users. It is estimated that 90% of all traffic accidents are the result of human error. The U.S. Department of Transportation (USDOT) and the National Highway Traffic Safety Administration (NHTSA) are aggressively pursuing the implementation of CAV technologies, which could potentially avoid up to 80% of all traffic accidents (assuming full adoption/market adoption).

Highly Automated Trucks (HATs) are currently being tested in Florida by companies like Starsky Robotics, who hope to have driverless deployments beginning in Florida by the end of 2020.¹⁸ This includes autonomous operation on limited access facilities and/or rural divided highways, with supervision (in-cab or remotely), and tele-operation (remote control) for arterial roadways. Operation of HATs with no operator (driver) in the cab could lead FMCSA to consider HOS regulations specifically for this new business model, since HAT systems do not suffer from fatigue in the same way as humans.

While HATs are still in testing, the Advanced Driver Assistance Systems (ADAS) are currently used in trucks, primarily to improve safety and reduce fatigue on drivers; ADAS includes features such as active lane centering, adaptive cruise control, forward collision warning, automatic emergency braking, and blind spot monitoring. As trucks age and are replaced with newer models, Florida can expect to see more vehicles equipped with these technologies.

¹⁷ <https://www.bizjournals.com/jacksonville/news/feature/statewide-transportation/2019/03/florida-tort-law-makes-it-tough-for-truckers.html>

¹⁸ <https://www.govtech.com/fs/automation/Florida-Roads-Could-See-Autonomous-Trucks-Next-Year.html>

As seen in Figure 6,¹⁹ Florida has been at the forefront of CAV investments. The map exemplifies Florida's early-adopter attitude towards CAV technology with a host of projects and initiatives underway.

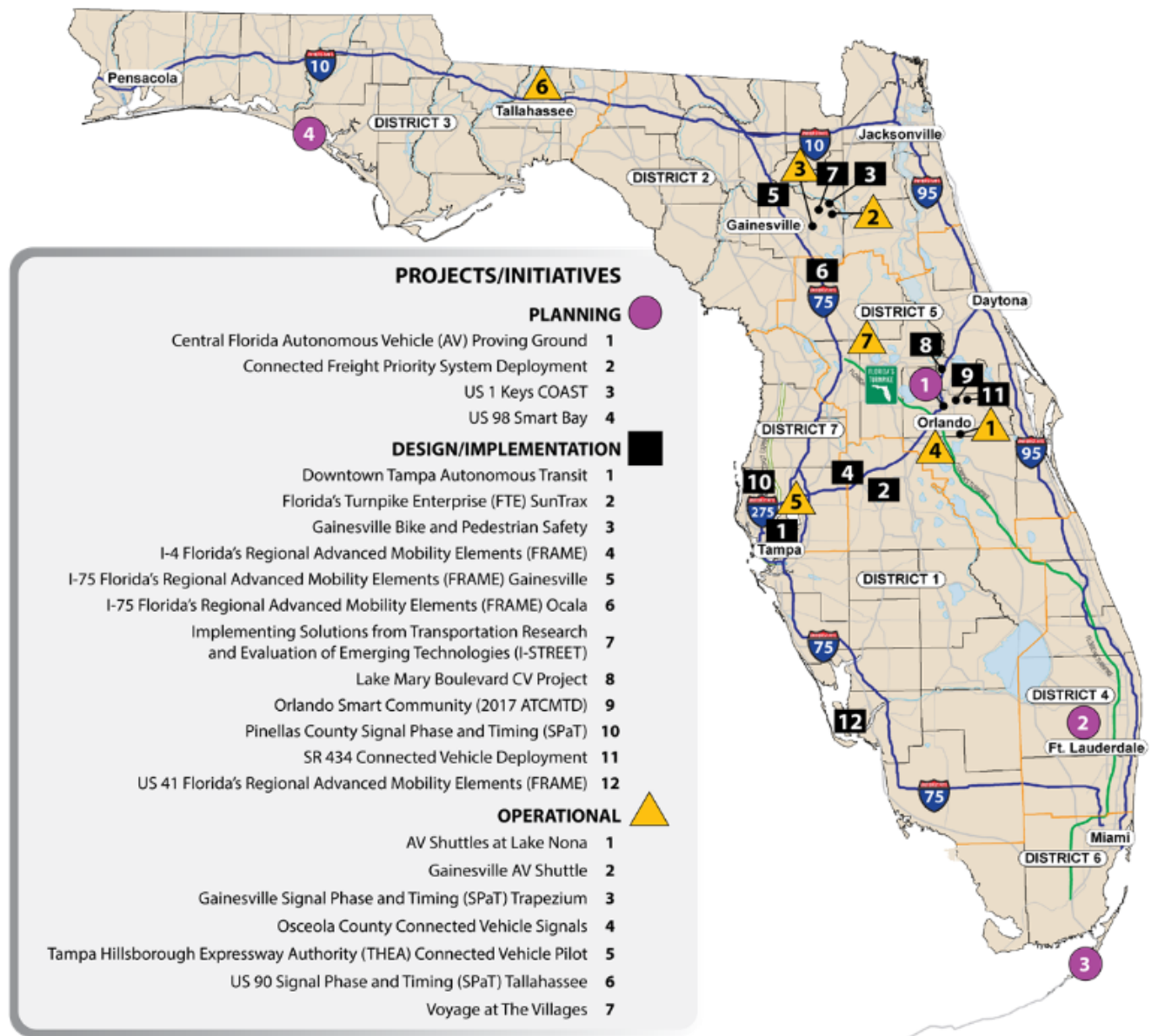


Figure 6 | Florida's CAV Projects/Initiatives

¹⁹ <https://www.fdot.gov/traffic/its/projects-deploy/cv/connected-vehicles>



Truck Platooning

Truck platooning electronically synchronizes multiple trucks to allow them to operate closer together, one behind another. The use case for platooning is to improve fuel economy for all platooned trucks, however most of the efficiency gains are afforded to the rear truck(s). As with HATs, truck platoons have been successfully tested on public roadways, but are still not ready for full operation.

Driver-Assistive Truck Platooning (DATP) is likely to be the first iteration of truck platooning, but will likely be limited to two or three trucks per platoon. DATP is considered an ADAS at SAE Automation Level 1 (system controls braking & acceleration) or Level 2 (system controls braking, acceleration, and steering). This means that each driver must remain alert and focused on the task of driving, although perhaps at lower levels of stress.

Infrastructure-to-Vehicle (I2V) Communication

Infrastructure-to-Vehicle communication requires CV (4G, 5G, DSRC, or C-V2X) Road Side Units (RSUs) to be deployed within range of roadways. Freight specific CV applications include, but are not limited to, the following:

- Connected Vehicles for Freight Signal Priority – non-safety critical, designed to improve truck travel times
- Eco-Speed/Harmonization (recommended speed through a corridor to minimize braking and acceleration, maintain consistent speed) – non-safety critical, designed to improve truck travel times and/or fuel consumption
- Wrong Way Driver Warning – safety critical Basic Safety Message (BSM)
- Low Clearance Bridge Warning – safety critical BSM
- Queue Warning – safety critical BSM
- Notification to dis-engage DATP near areas of concern (identified bridges, dense-interchange locations, etc.)

Wide spread deployment of CV infrastructure is contingent upon if the automotive industry adopts 5G or DSRC radio technology. If 5G is determined to be more appropriate, then the telecommunications industry will be compelled to deploy 5G small cells along transportation corridors. If DSRC is determined to be more appropriate, then state DOTs and other transportation agencies will be compelled to deploy DSRC RSUs along their infrastructure. Urban areas and locations experiencing high crash rates will be prioritized for first deployment. Interstate facilities and state highways in rural areas will likely be equipped with CV infrastructure, but the deployment will lag behind higher priority areas.



Communication and Information Exchange

Big Data

There are currently 2.5 quintillion bytes of data created each day, and the pace is accelerating. Over the last two years alone, 90% of the data in the world was generated. By 2020, it is estimated that more than 40 trillion gigabytes of data will be generated annually.²⁰

While organizations have been using warehouse and distribution system data to conduct transportation and freight analysis for decades, 'big data' allows for the harvesting of the enormous datasets in non-traditional ways.²¹ Big data is already changing the freight industry with its ability to increase transparency, optimize consumption, improve process quality and performance, and create new revenue streams from new data/products.²²

There is a push for open source datasets as well as open source computing environments (R, python, OpenStreetMap) for universal accessibility. The advent of applications like Trucker Path, which informs truckers about available parking spaces, is helping the industry deal with some of its greatest challenges.

Truck Parking Availability System (TPAS)

In Florida, the limited availability of truck parking spaces has caused overcrowding and overflow at existing truck parking locations. At times, truck drivers turn to parking on the interstate mainline, ramp shoulders, or in vacant lots. To address the issue, the FDOT is in the process of deploying a statewide Truck Parking Availability System along I-4, I-10, I-75 and I-95 at welcome centers, weigh stations, and rest areas. TPAS is helping to improve the safety of truck drivers by identifying safe locations to park along the interstate system and maximizing their HOS requirements by lowering the amount of time spent to find parking spaces.

Container Identification System

Another trend impacting all modes stems from increased connectivity and advances in cargo tracking through any given trip. Radio Frequency Identification (RFID) tracking of containers and/or rail cars/trailers could significantly reduce time spent identifying and tracking cargo – and ultimately inform supply chain optimization and decision-making (i.e. carrying inventory cost, etc.)

Blockchain

Blockchain allows for an entire supply chain network to contribute to data validation, helping build trust and confidence among users in the data and information. Data is stored in a

²⁰ FTP

²¹ <https://www.xeneta.com/blog/big-data-shipping-analysis>

²² <https://cerasis.com/big-data-in-the-transportation/>

decentralized manner, and the integration of data is simplified because all systems connect to a single node of access.²³ The logistics industry is already incorporating elements of blockchain, like using transactional 'live' databases for real-time exchange of bill of lading, contracts, financial exchanges, etc. Multiple levels of actors (administrator, user, observer, etc.) can have various levels of access.

Multimodal Freight Technology

Positive Train Control

Positive Train Control (PTC) systems are technologies designed to automatically stop trains when they enter certain crash-prone conditions. Mandated by Congress as part of the Rail Safety Improvement Act of 2008 (RSIA) on passenger rail corridors, PTC helps to prevent accidents related to human error, like train-to-train collisions, derailments caused by excessive speed, unauthorized train movement onto sections of track where maintenance activities are taking place, and movement of a train through a track switch left in the wrong position.²⁴ PTC can also increase rail throughput and capacity through better communication/coordination.

However, railroads and commuter rail agencies are facing potential deadline difficulties with meeting the December 2020 deadline for PTC implementation. The 2020 deadline was delayed by Congress from its 2018 deadline, which had in turn been extended by Congress from the original 2015 deadline. Many PTC suppliers are keeping up with the demand for PTC systems despite funding challenges have led to compressed schedules to meet the 2020 deadline.²⁵

NexGen

NexGen is the name of a FAA-led overhaul of the nation's air traffic control system. It helps airlines, general aviation operators, pilots, and air traffic controllers get access to data and tools that help passengers and cargo arrive at their destinations more quickly, while consuming less fuel and producing fewer emissions. This transformation involves an ongoing rollout of improvements which began in 2007 and are expected to be complete in 2025.²⁶

Port Automation

Port automation for seaports and airports could significantly improve on-facility operations resulting in greater throughput of cargo and passengers. Automated cranes could improve capacity/throughput/productivity (containers per hour). Although, when an automated crane

²³ <https://enterprise-info.trimble.com/blockchain-technology#freight>

²⁴ <https://www.aar.org/campaigns/ptc/>

²⁵ <https://www.enotrans.org/article/as-2020-deadline-looms-railroads-face-ptc-implementation-challenges/>

²⁶ https://www.faa.gov/nextgen/what_is_nextgen/



fails, it takes longer than a standard crane to become operational again. As with the new CAV technologies, the industry will need to hire/contract new skillsets.

Similarly, Automated Ground Vehicles (AGVs) can be used for on-site movement of cargo, which boosts capacity as a result of decreased processing and handling times. There are, however, liability issues as cargo changes 'hands' (firms) many times, and everyone involved must approve that their property can be moved via AGV.

Drone/Robot Delivery

The nature of freight deliveries is morphing in both urban and rural settings. Drones, or Unmanned Aerial Vehicles (UAVs), and robots, or Personal Delivery Devices (PDDs), are being tested to fulfil last-mile delivery needs.

UAVs can deliver packages to their final destination once a truck reaches a strategic location and deploys them. The benefits include significant fuel/time savings for parcel delivery services and a reduction in costs for maintenance of unpaved roads to rural counties. Delivery vehicles currently add significant wear and tear on these facilities as a result of e-commerce. UPS has estimated that cutting off the last mile for each of their 66,000 delivery drivers would amount to \$50 million in savings.²⁷

PDDs can legally operate on sidewalks in FL (F.S. 316.2071), making last-mile deliveries as courier service providers do currently. In several cities around the United States, Postmates, a third-party delivery app, is testing PDDs that deliver food from local restaurants to people's homes. Important considerations include how they will navigate dense urban areas and pedestrians, and how sidewalk/curb-side management policies might evolve in their wake.

3D Printing

As manufacturers adopt 3D printing, the commercial transportation industry could evolve dramatically. 3D printing allows for companies to produce finished goods using a printing machine and 'raw' material input, localizing production. Without the need to procure parts and pieces from all over the globe, shipments of materials could be greatly reduced. One estimation says 3D printing could disrupt freight by as much as 41% of air cargo, 37% of ocean freight, and 25% of truck freight in loss of annual value.²⁸

²⁷ Business Insider. Desjardins, J. (2018, March 11) *Amazon and UPS are betting big on drone delivery*. Retrieved from <https://www.businessinsider.com/amazon-and-ups-are-betting-big-on-drone-delivery-2018-3>

²⁸ Strategy + Business. Rothfeder, J. (2015, April 20) *The Imagination Gap: Business leaders in at least 16 sectors are still not fully prepared for the digital transformation of their industries*. Retrieved from <https://www.strategy-business.com/article/00334?gko=86e01>



Integrating Technology

The plethora of technologies is challenging to integrate and incorporate into processes and systems to enhance freight mobility. Understanding the benefits and costs of the technologies, the complexity and cost to implement, utilize and maintain, and knowing the capabilities of the technology and foreseeing its unintended consequences is a daunting responsibility.

Technologies are tools and techniques that enhance efficiency, reliability, safety, security, economic development, and support improvements to the environment. The technologies should be considered in light of how they will best support Florida's freight mobility goals.



Commodity Flow Analysis

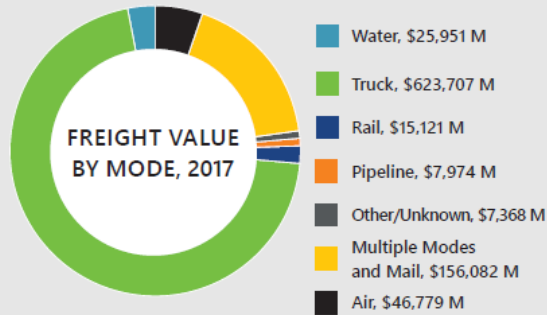
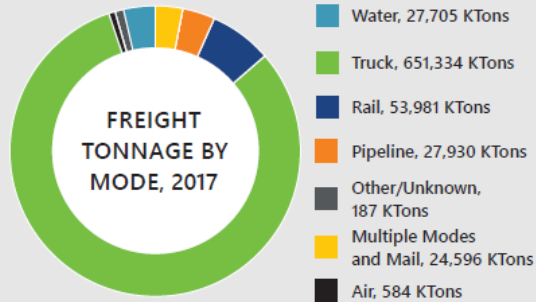
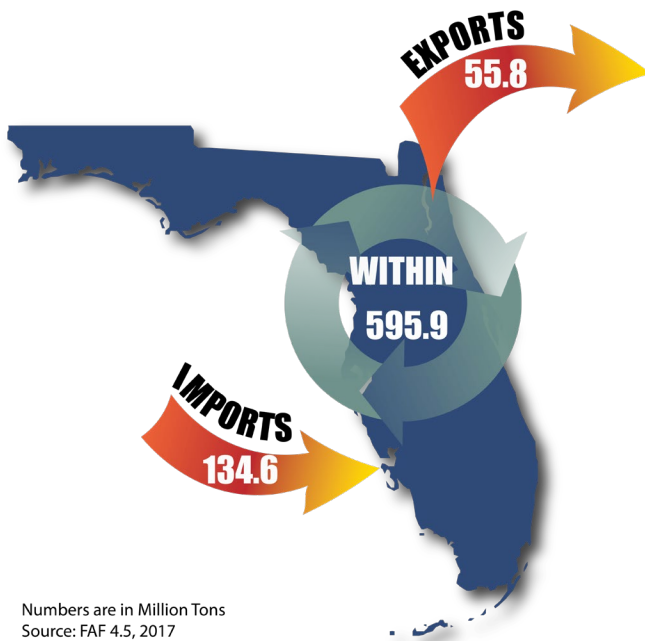
This section uses the Freight Analysis Framework (FAF) and Enterprise Florida to analyze the commodity flows in Florida. The FAF is produced through a partnership between the Bureau of Transportation Statistics (BTS) and FHWA. It integrates data from a variety of sources to create a comprehensive summary of freight movement across states and major metropolitan areas by all modes of transportation. The FAF provides estimates for tonnage and value of commodities by regions of origin and destination, commodity type, and mode. Enterprise Florida uses Wisser Trade information and U.S. Census Bureau Foreign Trade Division to compute these statistics.

It is important to define two terminologies here:

- Merchandise trade consists of those goods that are shipped to, from, and through Florida, regardless of where they were produced, as well as those goods that are produced, grown, or mined in Florida and are shipped from the state to an overseas destination.
- Florida-origin data series measures the value of merchandise exports grown, mined, manufactured, assembled or that otherwise had value added in Florida regardless of where the goods exit the United States. The origin of movement series attempts to ascertain the transportation origin of exports, e.g., it tries to allocate exports to states based on where the export journey began.

Freight Analysis Framework

Figure 7 illustrates the commodity flow for the state of Florida using the Freight Analysis Framework, 2017 data (4.5 version). As expected, the majority of commodity movement is within the state (595.9 million tons) and imports (134.6 million tons) to Florida highly outnumber exports (55.8 million tons). These numbers emphasize that Florida is predominantly a consumer state. Subsequent figures and statistics provide a comprehensive summary of the current (2017) and forecasted (2045) commodity flows for the state of Florida. Additionally, the major commodity types and the modal splits for different commodity flow movements are identified.



Source: Freight Analysis Framework 4.5, 2017

Figure 7 | Commodity Movement In, Out and Within Florida

Figure 8 provides the modal splits for exports (in tonnage) for 2017. Trucks export 68.1% of commodity tonnage from Florida. Rail (15.8%) and multiple modes and mail (12.8%) are the other major export modes.

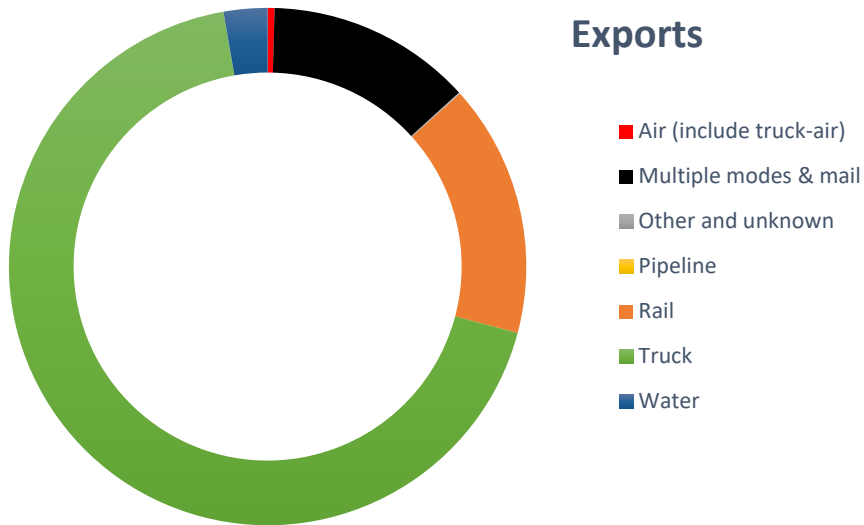


Figure 8 | Modal Splits (Exports – 2017 KTons)

Figures 9 and 10 provide the top 10 export (domestic and foreign) commodity flows. Other foodstuffs, fertilizers and other agricultural products are the top commodities in tonnage. Similarly, motorized vehicles, electronics and pharmaceuticals are the top commodities in value.

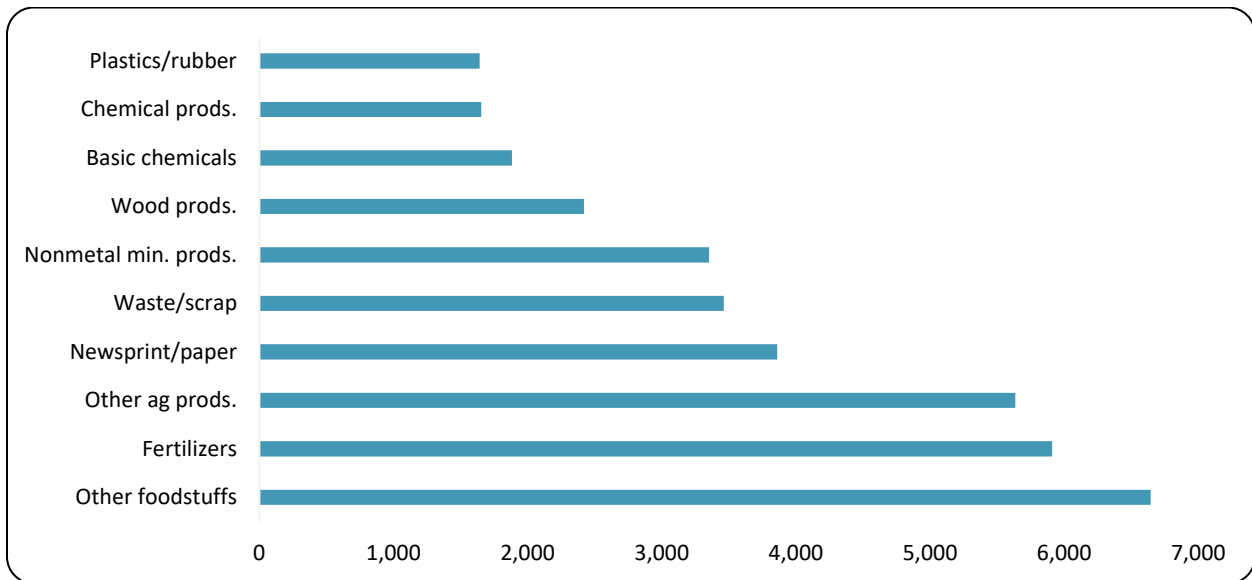


Figure 9 | Top 10 Export Commodities (in KTons) in 2017

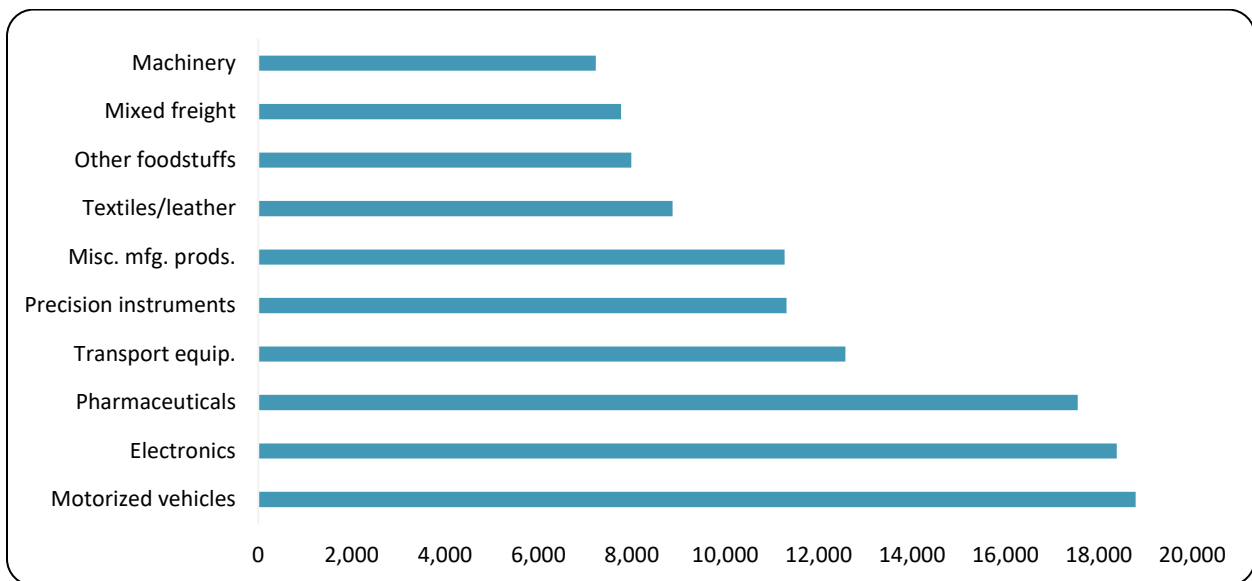


Figure 10 | Top 10 Export Commodities (in Million \$) in 2017

Figure 11 provides the modal splits for imports (in tonnage) for 2017. Truck (37.4%), rail (21.4%), pipeline (19%) and water (13.1%) are the major import modes. The majority of pipeline imports

are from Alabama to Florida (18%) which are for products of petroleum and coal, not elsewhere classified (coal n.e.c.).²⁹

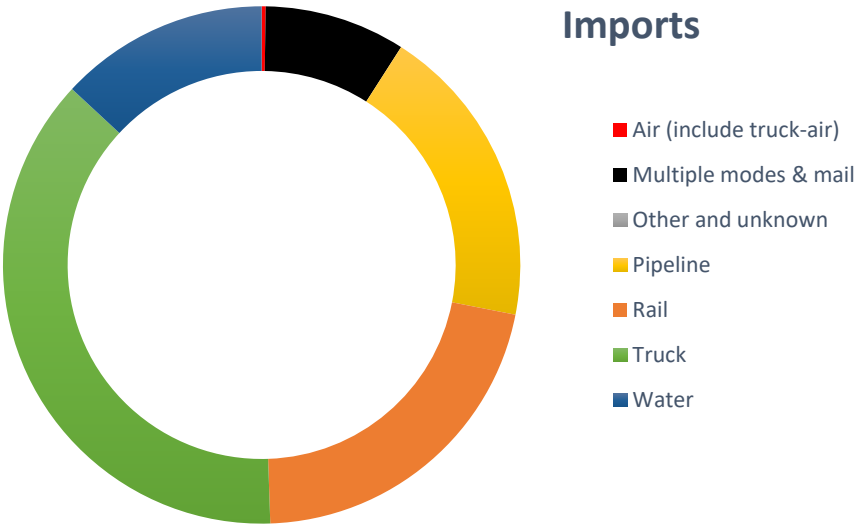


Figure 11 | Modal Splits (Imports – 2017 Ktons)

Figures 12 and 13 provide the top 10 import (domestic and foreign) commodities. Coal-NEC (Not Elsewhere Classified), gravel and gasoline are the top commodities in tonnage. Similarly, motorized vehicles, electronics and miscellaneous manufacturing products are the top commodities in value.

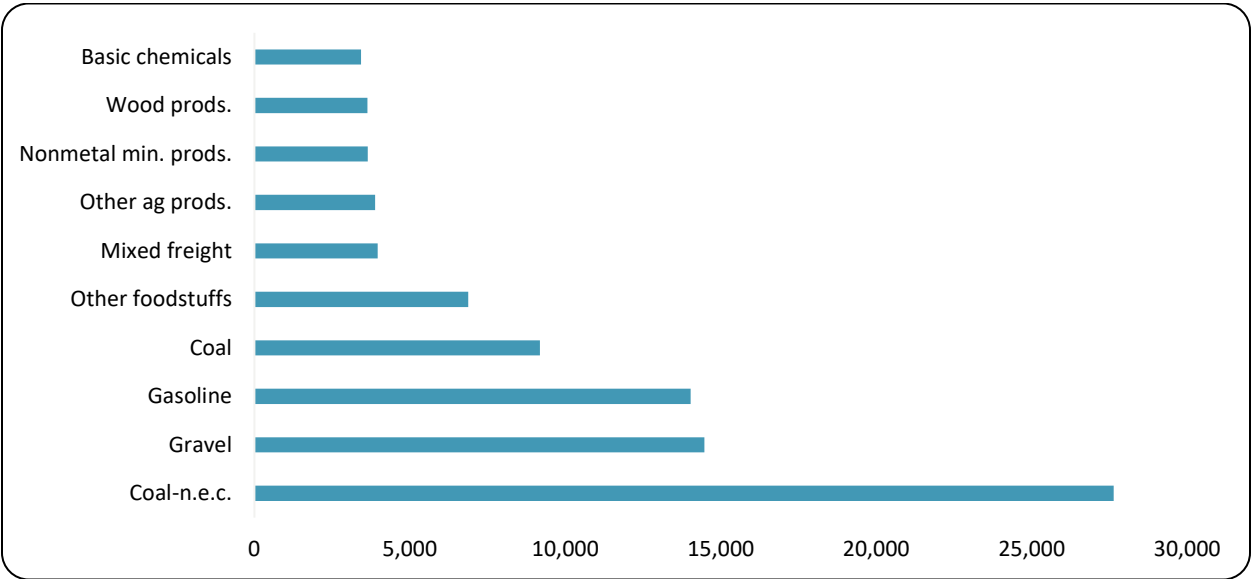


Figure 12 | Top 10 Import Commodities (in Ktons) in 2017

²⁹ [SCTG2 Dictionary](#)

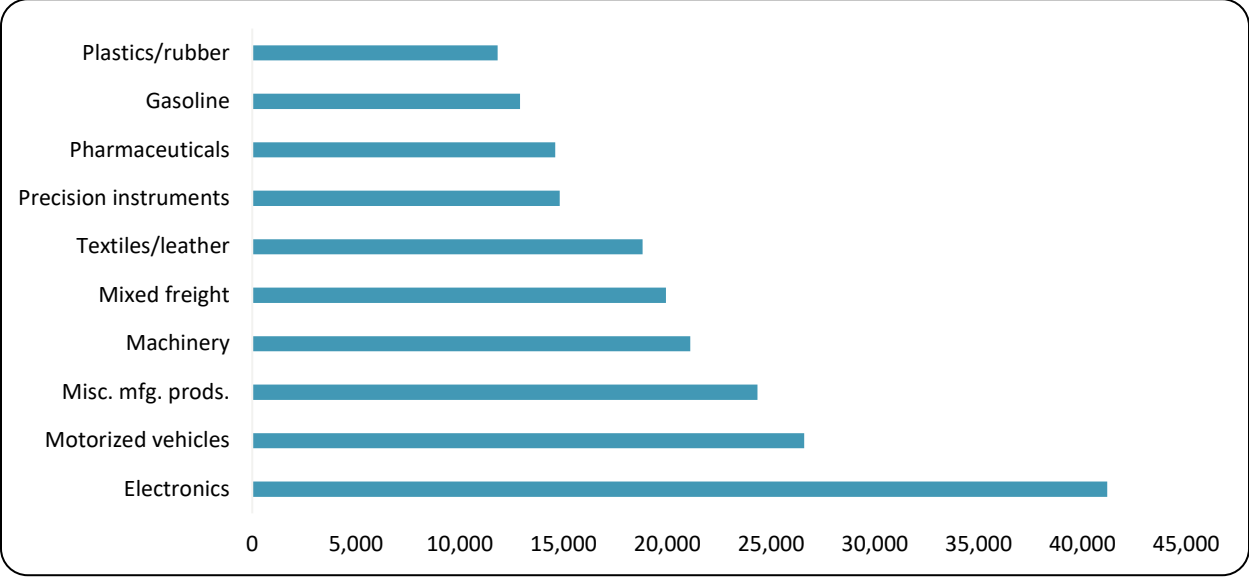


Figure 13 | Top 10 Import Commodities (in Million \$) in 2017

Figure 14 provides the modal splits for commodity movement within Florida (in tonnage) for 2017. Trucks haul more than 95% of commodity tonnage within the state.

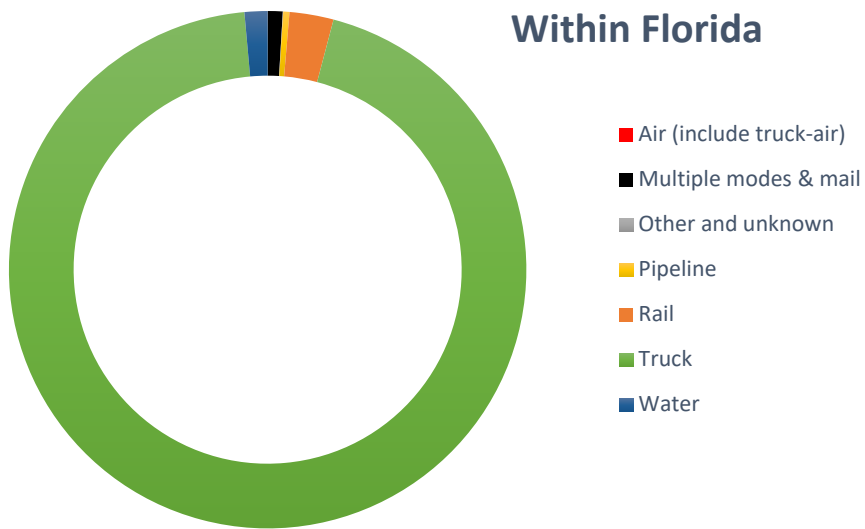


Figure 14 | Modal Splits (Within Florida – 2017 Ktons)

Figures 15 and 16 provide the top 10 commodity flows within the state of Florida. Gravel, natural sands, nonmetallic mineral products, gasoline and waste/scrap are the top commodities in tonnage. Motorized vehicles, electronics and pharmaceuticals are the top commodities in value.

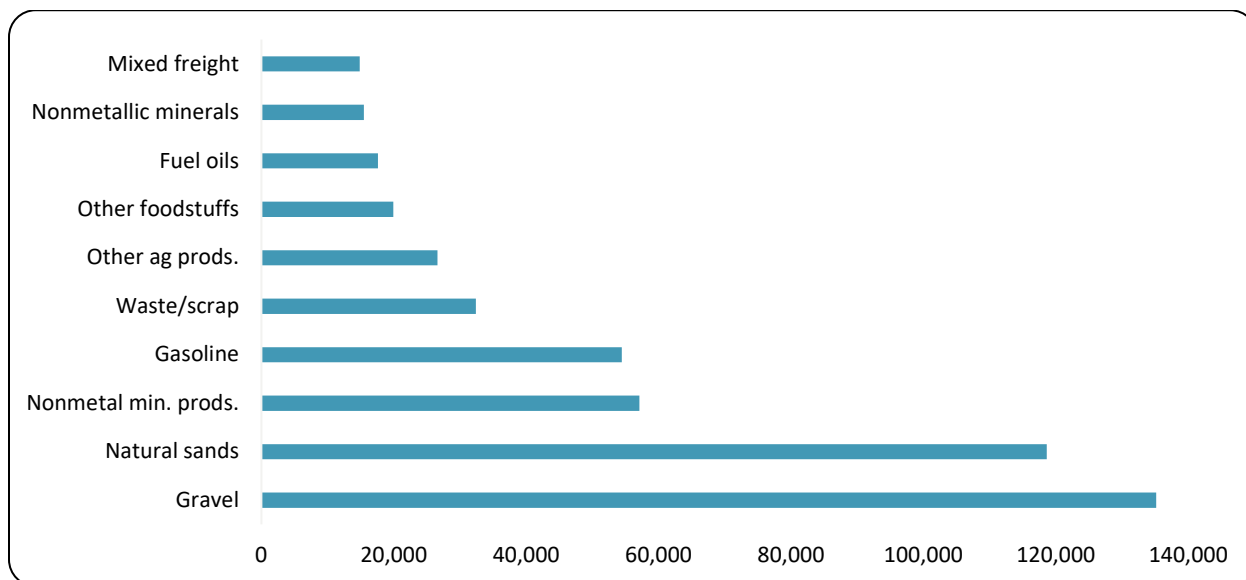


Figure 15 | Top 10 Commodities (in Ktons) Movement Within Florida in 2017

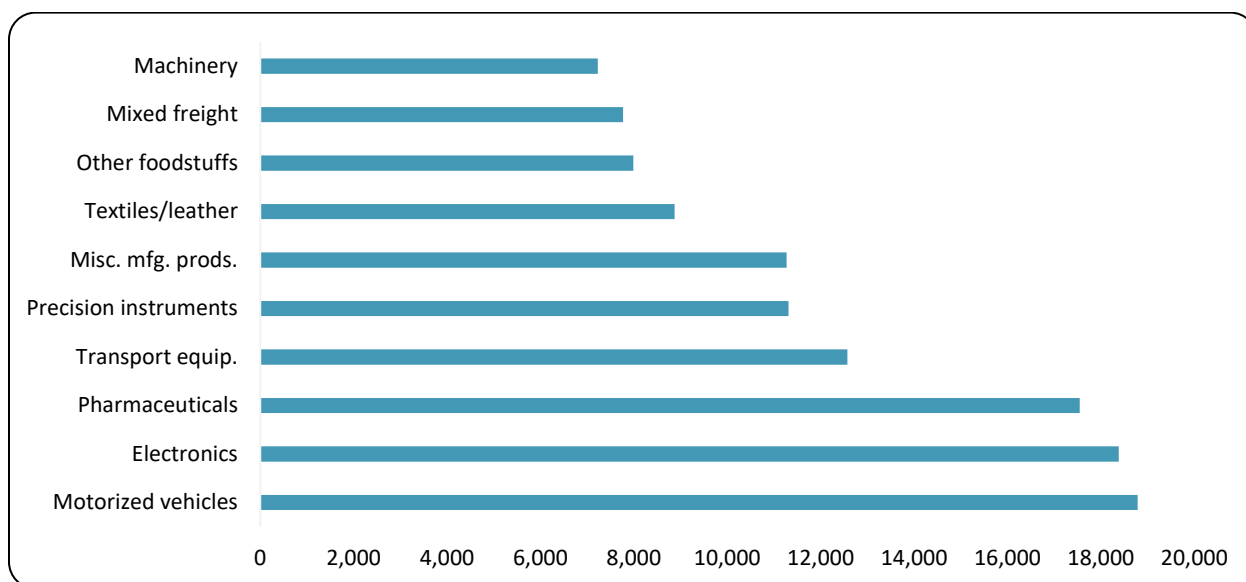


Figure 16 | Top 10 Commodities (in Million \$) Movement Within Florida in 2017

Figure 17 illustrates the forecasted change in the commodity tonnage from 2017 to 2045 for different modes. The statistics below indicate that the air mode (includes truck-air) has the highest estimated growth rate. This is primarily driven by forecasted growth in high value goods. Truck freight is expected to have an increase of approximately 80% with rail expected to grow significantly too. Water is forecasted to have a decrease in imports which is primarily driven by a forecasted decrease in gasoline imports from Louisiana. FAF 4.5 documentation³⁰ supports this

³⁰ [Freight Analysis Framework Inter-Regional Commodity Flow Forecast Study, 2016](#)

inference under the following assumptions: “Meanwhile, the growth in domestic energy products used primarily for motor vehicle fuel such as gasoline and diesel (the former is a component of SCTG 17, while the latter is a component of SCTG 18) peaks around 2020 as fuel efficiency standards and changing transportation patterns drive 2045 consumption below 2012 levels.” Trucks are forecasted to dominate commodity movement within Florida (95%) in 2045.

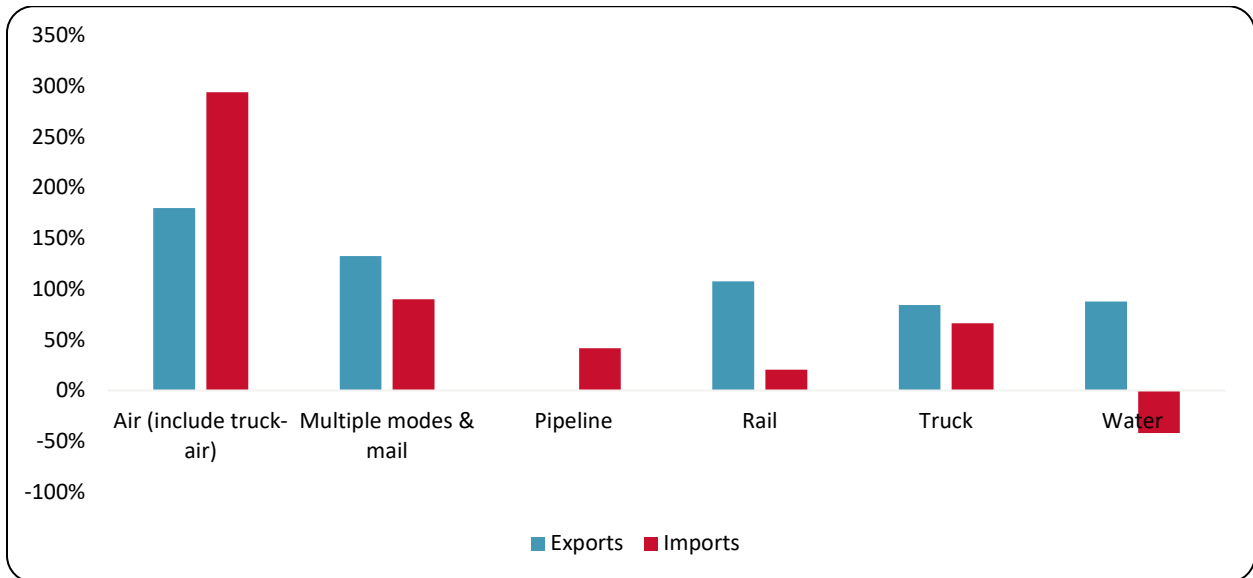


Figure 17 | Forecasted Percent Change in Tonnage Movement from 2017 to 2045

Figures 18 through 21 include the top 10 import and export commodities (KTons and Million\$) for forecast year 2045. It is important to note the top commodities are not forecasted to change considerably from 2017 to 2045.

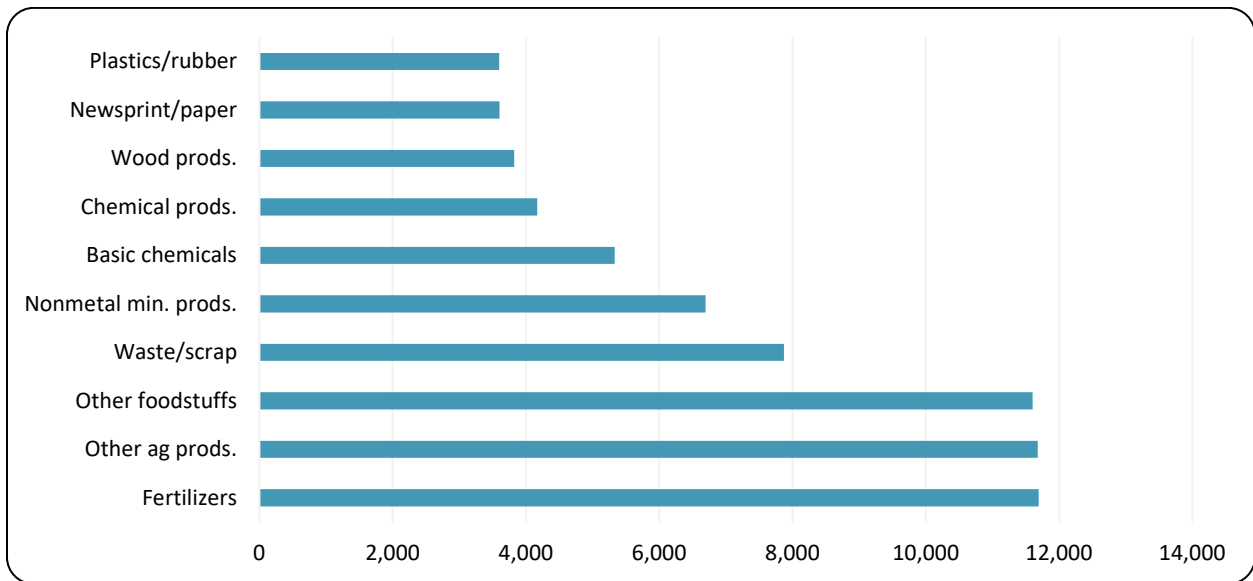


Figure 18 | Top 10 Export Commodities (in KTons) in 2045

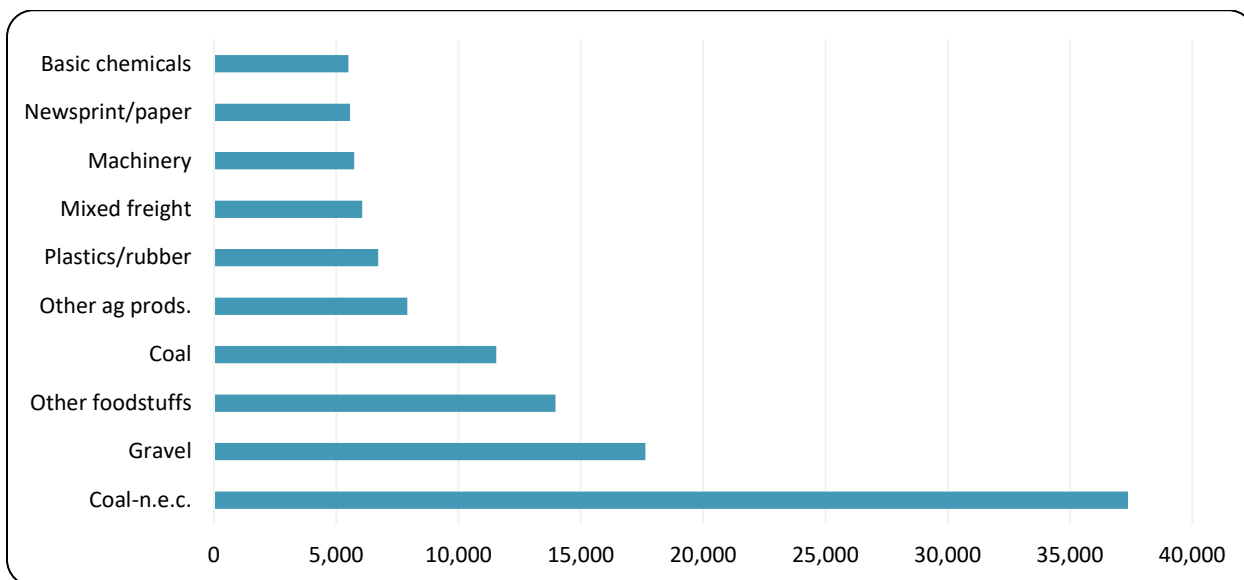


Figure 19 | Top 10 Import Commodities (in Ktons) in 2045

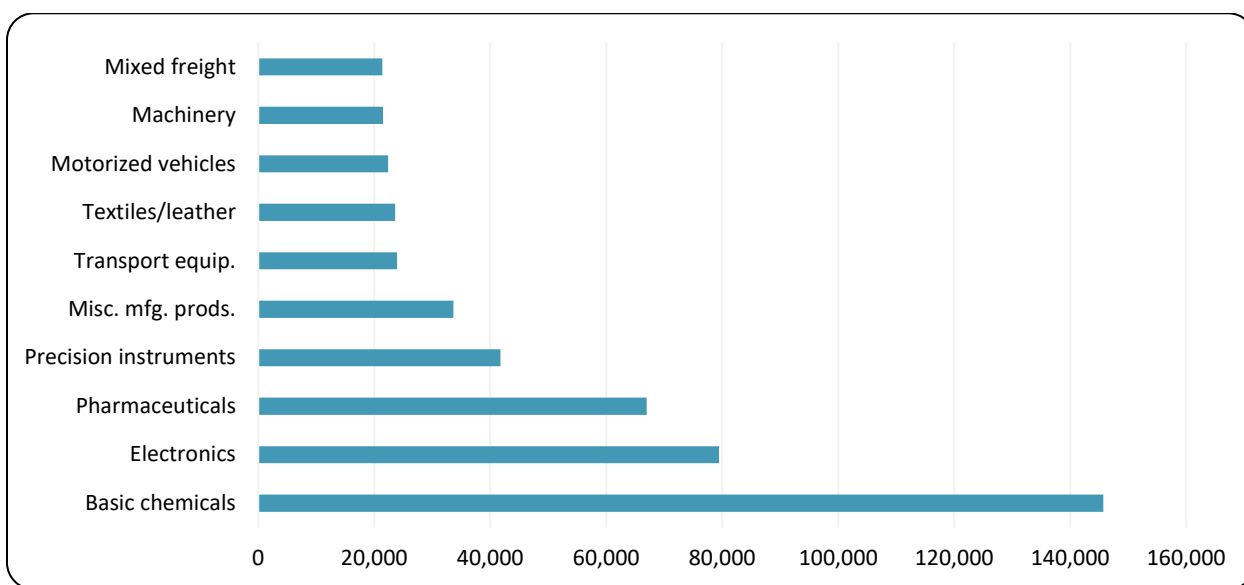


Figure 20 | Top 10 Export Commodities (in Million \$) in 2045

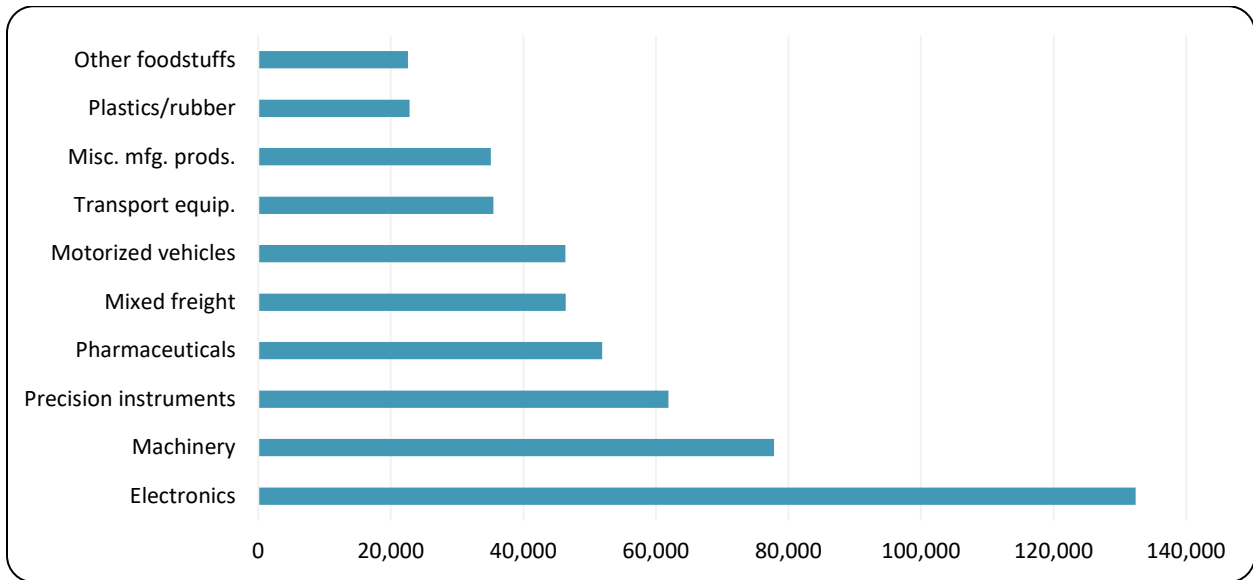


Figure 21 | Top 10 Import Commodities (in Million \$) in 2045

Table 1 | Percent Change in Tonnage for Major Commodities via Air (Includes Truck-Air) from 2017 to 2045

Exports			Imports		
Top 10 commodities (2045)	2045 (ktons)	Percent growth (from 2017-2045)	Top 10 commodities (2045)	2045 (ktons)	Percent growth (from 2017-2045)
Other ag prods.	183	361%	Electronics	399	709%
Electronics	104	422%	Machinery	306	312%
Meat/seafood	57	68%	Precision instruments	158	678%
Precision instruments	54	322%	Chemical prods.	107	487%
Transport equip.	53	115%	Textiles/leather	80	463%
Machinery	40	99%	Articles-base metal	68	326%
Textiles/leather	40	321%	Pharmaceuticals	68	775%
Articles-base metal	29	122%	Plastics/rubber	64	359%
Chemical prods.	26	720%	Motorized vehicles	42	44%
Plastics/rubber	20	122%	Misc. mfg. prods.	34	192%

Table 2 provides the percent change in tonnage (for all modes) from 2017 to 2045. The majority of commodities are forecasted to have an increase in exports (85.27%), imports (40.78%) and movements within Florida (27.67%).

Table 2 | Percent Change in Tonnage (All Modes) from 2017 to 2045

Commodity Types (SCTG2)	Exports	Imports	Within Florida
Alcoholic beverages	149.73%	84.51%	72.32%
Animal feed	96.54%	41.64%	52.61%
Articles-base metal	127.61%	41.54%	61.64%
Base metals	58.02%	29.17%	37.18%
Basic chemicals	183.17%	60.09%	100.49%
Building stone	435.01%	1115.54%	180.65%
Cereal grains	58.12%	-26.27%	37.65%
Chemical prods.	152.03%	107.40%	61.91%
Coal	-61.45%	25.75%	496.28%
Coal-n.e.c.	-48.46%	35.26%	64.99%
Crude petroleum	-76.54%	-	490.09%
Electronics	118.65%	105.60%	96.68%
Fertilizers	97.91%	440.80%	90.92%
Fuel oils	29.83%	-73.99%	-42.61%
Furniture	220.72%	67.80%	83.88%
Gasoline	-51.97%	-64.92%	-53.28%
Gravel	114.25%	21.90%	15.69%
Live animals/fish	127.53%	37.08%	40.91%
Logs	365.02%	46.60%	9.06%
Machinery	208.34%	219.68%	127.87%
Meat/seafood	133.79%	38.20%	72.80%
Metallic ores	-0.55%	305.69%	-40.31%
Milled grain prods.	88.67%	89.02%	85.73%
Misc. mfg. prods.	142.58%	28.22%	62.19%
Mixed freight	75.08%	52.70%	82.23%
Motorized vehicles	6.96%	52.01%	44.90%
Natural sands	87.57%	12.21%	21.12%
Newsprint/paper	-6.65%	79.28%	35.54%
Nonmetal min. prods.	99.84%	5.08%	11.75%
Nonmetallic minerals	67.23%	104.74%	36.28%
Other ag prods.	107.30%	103.96%	38.66%
Other foodstuffs	74.63%	103.05%	132.82%
Paper articles	38.92%	33.28%	27.48%
Pharmaceuticals	189.68%	291.09%	142.30%



Commodity Types (SCTG2)	Exports	Imports	Within Florida
Plastics/rubber	119.16%	113.45%	73.62%
Precision instruments	126.15%	161.20%	171.30%
Printed prods.	26.13%	14.23%	20.72%
Textiles/leather	81.64%	93.83%	74.75%
Tobacco prods.	-38.53%	-57.00%	-84.32%
Transport equip.	22.70%	223.08%	49.82%
Waste/scrap	127.48%	84.50%	70.00%
Wood prods.	58.02%	3.97%	21.38%
All commodities	85.27%	40.78%	27.67%

Figures 22 and 23 illustrate the FAF tonnage assignment on the major roadways in 2012 and 2045. The highest tonnage movement (>100,000 Ktons) is forecasted for the following three corridor segments:

- I-75 between Turnpike and I-10
- I-10 between I-75 and Tallahassee
- I-95 traversing District 4 and 6

It is important to note that all major routes are forecasted to have a significant growth in truck tonnage movement.



Freight *Mobility* and Trade Plan

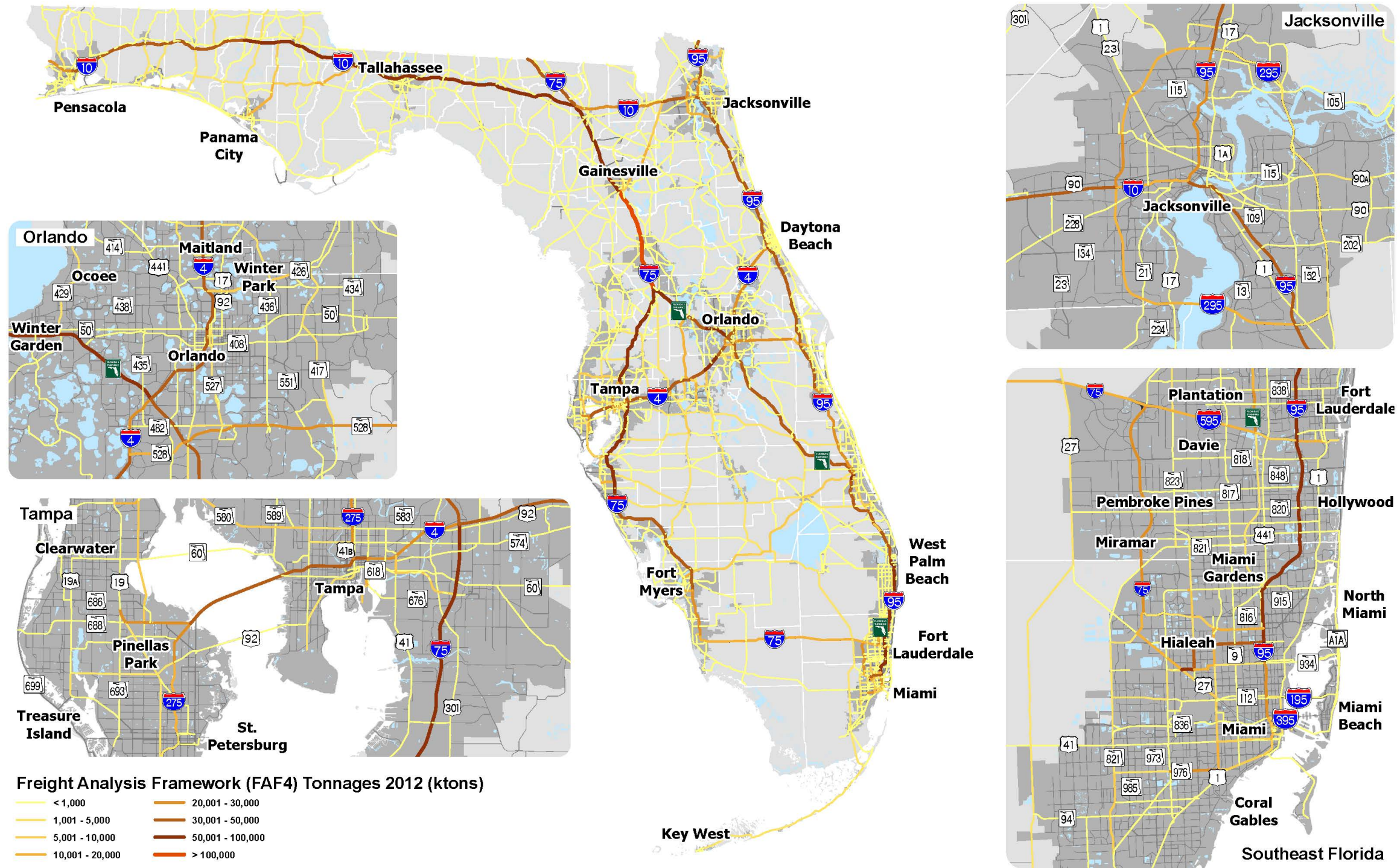


Figure 22 | Freight Analysis Framework (FAF4) Tonnage 2012 (KTons)



Freight *Mobility* and Trade Plan

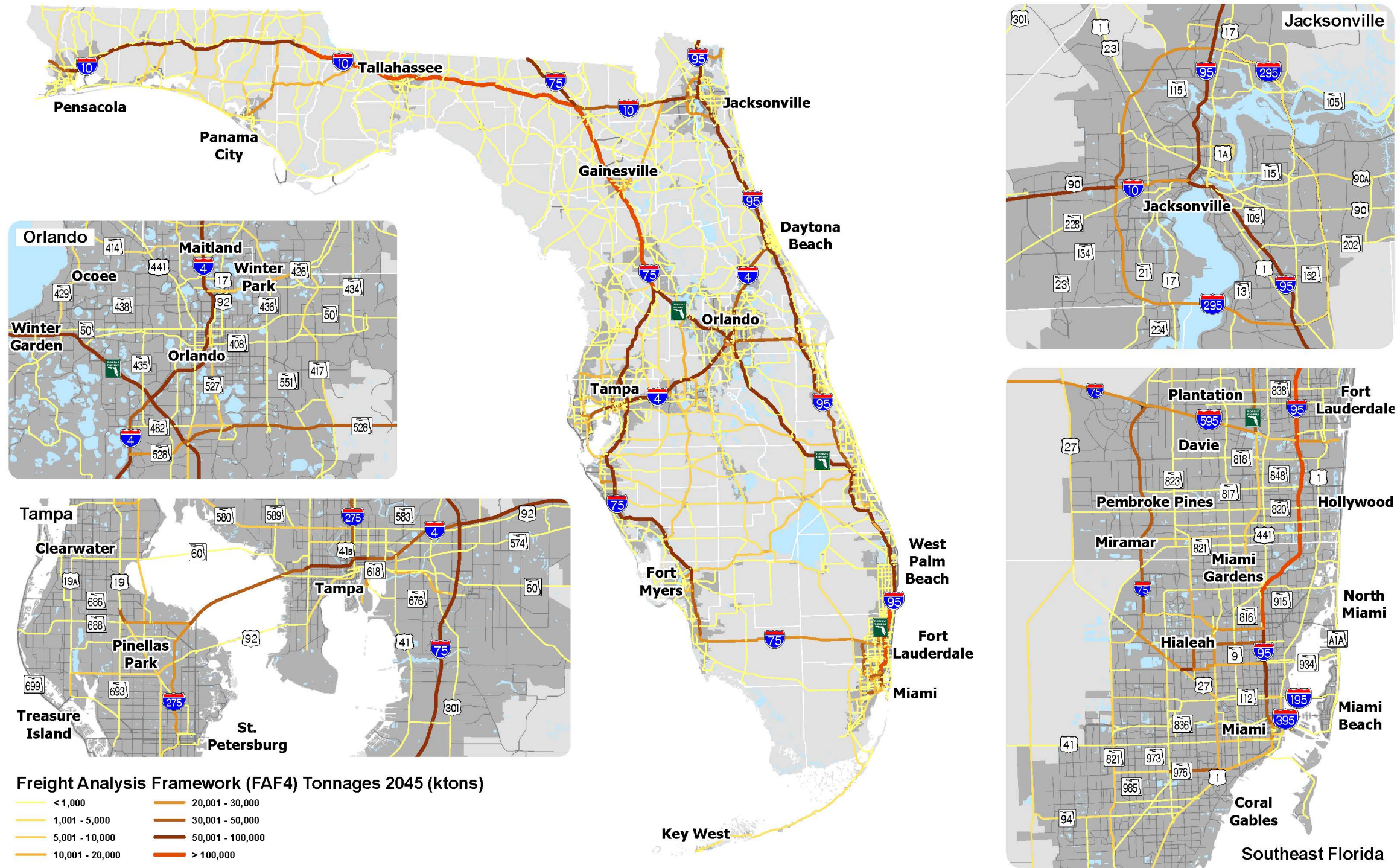


Figure 23 | Freight Analysis Framework (FAF4) Tonnage 2045 (KTons)

Enterprise Florida

According to Enterprise Florida, the state’s total merchandise trade in 2018 increased by 4.0% to \$153.5 million. Merchandise exports (goods shipped from or through the state) grew 4.7% to \$73.5 million while imports increased by 3.3% to \$80 million. Florida-origin exports gained 4.2% to \$57.2 million last year, maintaining the status of the 8th largest export state in the United States. Figure 24 and Tables 3 through 8 below provide a snapshot of Florida international trade in terms of value (\$) of commodities.

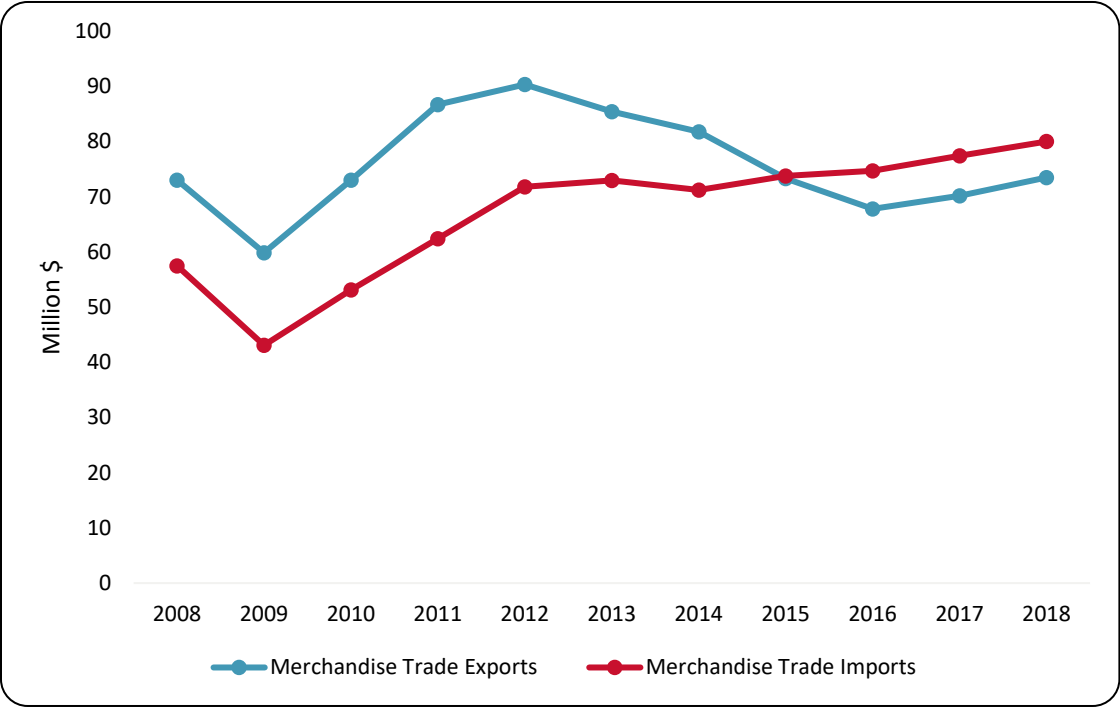


Figure 24 | Florida Merchandise Trade Exports and Imports (Million \$)

Figure 24 illustrates the trends of the growth/decline of merchandise trade exports and imports in Florida. Trends indicate that there was a steady decline of merchandise trade exports from Florida from 2012 to 2016. Since 2016, the exports have shown an upward trend. Merchandise trade imports have shown a healthy growth since 2009 as it exceeded the trade exports in 2015.

Tables 3 and 4 provide the top 10 destinations for Florida merchandise exports and Florida merchandise imports respectively. South America and Central American countries are the major countries for Florida merchandise exports. More than 25% of the Florida imports come from China, Japan, and Brazil. Tables 5 and 6 provide the top 10 commodities for Florida merchandise exports and Florida merchandise imports respectively. The top merchandise export and import commodities for the state include electronics, aircraft parts, motor cars and their parts, and high value metals.

Table 3 | Top 10 Destinations for Florida Merchandise Exports

Rank	Description	Annual 2016 (\$)	Annual 2017 (\$)	Annual 2018 (\$)	% Change 2017-2018
	TOTAL ALL COUNTRIES	67,839,914,053	70,191,646,748	73,502,783,317	4.7
1	Brazil	11,957,615,532	13,343,754,631	14,698,017,425	10.2
2	Colombia	4,055,552,798	4,193,702,823	4,444,501,446	6.0
3	Chile	3,650,629,223	3,886,824,016	3,987,143,488	2.6
4	Dominican Republic	3,111,165,288	3,021,872,452	3,239,131,216	7.2
5	Argentina	3,269,250,191	3,567,786,841	3,211,702,281	-10.0
6	Peru	2,508,955,582	2,401,687,390	2,572,993,114	7.1
7	Costa Rica	2,469,513,568	2,415,187,465	2,496,817,496	3.4
8	Paraguay	1,640,884,598	2,257,681,028	1,962,157,380	-13.1
9	Mexico	1,770,676,936	1,766,659,878	1,876,348,241	6.2
10	Honduras	1,897,579,731	1,874,822,163	1,861,591,390	-0.7

Table 4 | Top 10 Florida Merchandise Imports by Country

Rank	Description	Annual 2016 (\$)	Annual 2017 (\$)	Annual 2018 (\$)	% Change 2017-2018
	TOTAL ALL COUNTRIES	74,731,434,457	77,454,618,115	80,029,174,669	3.3
1	China	8,982,653,187	9,563,256,204	10,762,325,849	12.5
2	Japan	6,534,957,092	6,972,360,020	7,107,963,960	1.9
3	Brazil	6,141,267,343	6,443,404,324	5,707,734,288	-11.4
4	Mexico	3,352,089,010	4,520,676,663	4,918,968,165	8.8
5	Chile	2,909,340,519	3,738,324,475	3,925,617,954	5.0
6	Germany	4,204,023,226	3,697,980,967	3,598,895,134	-2.7
7	Dominican Republic	2,799,632,023	2,858,812,984	3,205,338,851	12.1
8	Honduras	2,563,072,587	2,511,209,583	2,666,204,035	6.2
9	Colombia	3,631,075,639	3,052,245,416	2,529,136,043	-17.1
10	Italy	2,203,899,510	2,180,567,290	2,460,383,080	12.8

Table 5 | Top 10 Merchandise Export Commodities

Rank	Description	Annual 2016 (\$)	Annual 2017 (\$)	Annual 2018 (\$)	% Change 2017-2018
	TOTAL ALL COUNTRIES	67,839,914,053	70,191,646,748	73,502,783,317	4.7
1	Civilian Aircraft, Engines, And Parts	7,141,502,238	8,177,780,476	8,996,354,653	10.0
2	Electric Apparatus For Line Telephony Etc., Parts	4,370,405,921	5,056,850,203	4,644,594,234	-8.2

Rank	Description	Annual 2016 (\$)	Annual 2017 (\$)	Annual 2018 (\$)	% Change 2017-2018
3	Motor Cars & Vehicles For Transporting Persons	3,713,007,043	3,166,757,283	3,611,376,088	14.0
4	Automatic Data Process Machines; Magn Reader Etc.	2,860,352,256	3,076,810,578	3,065,240,541	-0.4
5	Gold (Incl Plat Plated), Unwr, Semimfr Or Powder	1,794,888,457	2,338,867,871	2,014,718,939	-13.9
6	Human Blood; Animal Blood; Antisera, Vaccines Etc.	1,305,948,808	1,223,545,625	1,641,812,375	34.2
7	Medical, Surgical, Dental Or Vet Inst, No Elec, Pt	1,609,744,835	1,547,122,214	1,616,112,340	4.5
8	Mineral or Chemical Fertilizers	1,510,566,729	1,428,649,213	1,399,269,571	-2.1
9	Electronic Integrated Circuits & Microassembl, Pts	1,058,948,646	1,240,923,524	1,199,865,652	-3.3
10	Parts & Access For Motor Vehicles (Head 8701-8705)	955,297,310	1,169,181,014	1,194,515,838	2.2

Table 6 | Top 10 Merchandise Import Commodities

Rank	Description	Annual 2016 (\$)	Annual 2017 (\$)	Annual 2018 (\$)	% Change 2017-2018
	TOTAL ALL COUNTRIES	74,731,434,457	77,454,618,115	80,029,174,669	3.3
1	Motor Cars & Vehicles For Transporting Persons	10,695,291,472	11,901,849,319	11,386,135,644	-4.3
2	Imports Of Articles Exported And Returned, Unadvanced	3,585,439,165	3,511,494,480	4,231,933,015	20.5
3	Oil (Not Crude) From Petrol & Bitum Mineral Etc.	2,276,105,439	1,984,597,790	2,821,473,305	42.2
4	Electric Apparatus For Line Telephony Etc., Parts	2,597,861,772	2,758,380,461	2,621,203,397	-5.0
5	Gold (Incl Plat Plated), Unwrought, Semimfr Or Powder	4,615,478,748	3,212,131,398	2,240,372,443	-30.3
6	Refined Copper & Alloys (No Mast Alloy), Unwrought	1,162,836,761	1,849,447,404	1,903,683,543	2.9

Rank	Description	Annual 2016 (\$)	Annual 2017 (\$)	Annual 2018 (\$)	% Change 2017-2018
7	Fish Fillets & Oth Fish Meat, Fresh, Chill Or Froz	1,549,024,378	1,714,895,797	1,869,289,666	9.0
8	Sweaters, Pullovers, Vests Etc., Knit Or Crocheted	1,329,181,103	1,550,373,867	1,779,558,185	14.8
9	Imports Of Articles Exported And Returned, Advanced Abroad	1,621,672,554	1,986,713,469	1,728,176,248	-13.0
10	T-Shirts, Singlets, Tank Tops Etc., Knit Or Crochet	1,539,982,493	1,509,214,884	1,712,747,651	13.5

Tables 7 and 8 provide the top 10 Florida-origin exports by country and top 10 Florida-origin export commodities respectively. South America, Canada, Mexico, and Central American countries are the major countries for Florida-origin exports. The top origin export commodities from the state include electronics, aircraft parts, motor cars and their parts, and high value metals.

Table 7 | Top 10 Florida-Origin Exports by Country

Rank	Description	Annual 2016 (\$)	Annual 2017 (\$)	Annual 2018 (\$)	% Change 2017-2018
	TOTAL ALL COUNTRIES	52,031,706,238	54,914,286,865	57,240,939,285	4.2
1	Brazil	3,593,395,698	4,086,385,558	4,510,329,619	10.4
2	Canada	3,501,336,042	3,585,057,264	3,749,187,041	4.6
3	Mexico	2,830,100,596	3,078,531,389	3,335,060,512	8.3
4	Colombia	2,186,779,345	2,298,547,744	2,431,055,522	5.8
5	Germany	1,950,081,089	2,368,292,808	2,296,689,699	-3.0
6	United Kingdom	1,425,417,936	1,491,841,685	2,103,382,541	41.0
7	China	1,205,565,717	1,864,919,590	2,073,823,687	11.2
8	Chile	1,872,693,664	1,815,531,517	1,927,578,212	6.2
9	Paraguay	1,508,709,981	2,114,124,778	1,781,212,681	-15.8
10	Dominican Republic	1,708,002,902	1,551,633,995	1,673,937,876	7.9

Table 8 | Top 10 Florida-Origin Exports by Commodity

Rank	Description	Annual 2016 (\$)	Annual 2017 (\$)	Annual 2018 (\$)	% Change 2017-2018
	TOTAL ALL COUNTRIES	52,031,706,238	54,914,286,865	57,240,939,285	4.2
1	Civilian Aircraft, Engines, And Parts	5,420,025,366	6,325,870,677	6,581,974,387	4.1
2	Electric Apparatus For Line Telephony Etc., Parts	3,790,782,654	4,338,775,434	4,271,941,373	-1.5
3	Automatic Data Process Machines; Magn Reader Etc.	1,817,079,614	2,057,953,947	1,999,472,981	-2.8
4	Gold (Incl Plat Plated), Unwrought, Semimfr Or Powder	1,804,394,618	2,238,107,018	1,997,189,244	-10.8
5	Mineral or Chemical Fertilizers	1,755,501,464	1,707,116,658	1,700,490,204	-0.4
6	Medical, Surgical, Dental Or Vet Inst, No Elec, Pt	1,092,359,295	1,108,481,070	1,188,375,336	7.2
7	Electronic Integrated Circuits & Microassembly, Pts	1,054,804,596	1,249,118,815	1,180,106,446	-5.5
8	Motor Cars & Vehicles For Transporting Persons	1,155,958,617	970,711,464	1,024,548,096	5.6
9	Exports Of Articles Imported For Repairs Etc.	627,332,234	731,422,838	879,796,267	20.3
10	Parts Etc. For Typewriters & Other Office Machines	736,003,620	710,231,402	766,921,642	8.0

Moving Forward

The trends in this tech memo were identified as a means of better understanding the direction of Florida's freight needs. By analyzing the expected changes in Florida's population, economy, and other aspects surrounding daily life, future actions and recommendations can be made with a high degree of accuracy. Through the utilization of multiple data sources, the freight trends are ensured to be accurate, useful, and holistic. The FMO office is equipped to ensure that investments keep Florida's freight system on the leading edge of freight design, project prioritization and implementation for the nation.



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Freight Mobility and Trade Plan

Technical Memorandum 5
Needs, Issues and Scenario Planning

April 2020



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Introduction

This technical memorandum identifies freight mobility and trade specific needs and issues that need to be addressed as the state works towards achieving the FMTP objectives. Each need and issue was identified through a review of current conditions, industry trends, stakeholder input and past studies. The respective needs and issues in this memorandum are organized by mode, including multimodal considerations. Table 1 provides a list of the issues and needs which might impact the state's ability to meet FMTP objectives. This memorandum also explores potential future scenarios, and concludes with a comprehensive SWOT analysis – which will be used to inform this project's recommendations and implementation effort.

Table 1 | Freight Needs and Issues

Needs and Issues		
Highway	<ul style="list-style-type: none">• Congestion/Bottlenecks• State of Good Repair• Truck parking• Domestic Freight Imbalance	<ul style="list-style-type: none">• Driver Shortage• Insurance Costs• Highway Technology
Freight Rail	<ul style="list-style-type: none">• Precision Scheduled Railroading (PSR)• Rail Bottlenecks/On-Dock Rail• Positive Train Control	<ul style="list-style-type: none">• Supply Chain Visibility• Road Grade Crossings
Maritime	<ul style="list-style-type: none">• Access Channel Draft• Inland Distribution• Marine Terminal Technology	<ul style="list-style-type: none">• Emissions• Resiliency• International Market Share & Port Investment
Aviation	<ul style="list-style-type: none">• Land Use Conflicts• Effect of Highway Congestion• Aviation Manufacturing	
Space	<ul style="list-style-type: none">• International Competition• Public-Private Partnerships	
Pipeline	<ul style="list-style-type: none">• Capacity	
Multimodal	<ul style="list-style-type: none">• Freight Optimization• Cargo Theft• Environmental Stewardship & Community Concerns• Trade Barriers (and Agreements)	<ul style="list-style-type: none">• Land Use• Community/Collaboration/Partnerships• Funding



Needs and Issues

Highway

According to the Florida Chamber of Commerce, "By 2030, there will be approximately four to five million new Florida drivers commuting on (Florida's) roads. Along with the (more than) 112 million visitors that come to the state each year, it is estimated that there will be more than 150 million daily vehicle miles added to Florida roads."¹

These new drivers impact Florida's freight system in two ways:

1. More residents mean more freight demand; and
2. Increased passenger and truck travel can create increased congestion and reliability issues – particularly in urban areas.

According to the American Society of Civil Engineers, "Since 1984, the number of highway system miles has increased by 25%, while the daily vehicle miles traveled increased by 84%."

- Source: 2016 Report Card for Florida's Infrastructure," American Society of Civil Engineers.

Moreover, according to the American Transportation Research Institute, traffic congestion costs the U.S. trucking industry more than \$75 billion.

- Source: "Breaking: Florida's Economy Hits New \$1 Trillion GDP Milestone," Florida Chamber of Commerce, July 13,

Congestion/Bottlenecks

Stakeholders statewide stated that congestion is their number one issue. The Florida Chamber of Commerce identified congestion as the primary hindrance delaying overall economic activity but more specifically, the logistics industry. In 2016, the freight industry's share of the total cost of congestion in Florida was more than \$5.6 billion.² With combined passenger and truck growth (trucks currently account for 70 percent of Florida's freight movement), congestion will continue to increase without significant action.

However, there are several contributing factors that add to the complexity of solving the congestion issue. First, e-commerce has shifted distribution patterns linking distribution centers to brick-and-mortar establishments to neighborhood homes. While the long-term effect of this

¹ Source: Florida Chamber of Commerce, <https://www.flchamber.com/advocacy/issues/transportation-investments/>.

² Source: "On MCSAW, TDA, and TSM&O Synergy: Intelligent Connected Freight Mobility" By Paul Clark, Statewide Scale Operations Manager, FDOT; Ed Hutchinson, Transportation Data and Analytics Office Manager, FDOT; Pradeep Rao, HNTB Corporation. It appeared in July-August 2019 edition of the TSM&O Disseminator



shift is unknown, most experts expect the freight industry to continue moving from large trucks to smaller delivery vehicles – while safer for pedestrians, this increases overall VMT.³

Another significant factor is the state's lack of petroleum pipelines. With the population growth and the resulting demand for energy, more energy means more trucks and therefore more VMT.

There are a growing number of vehicles on the road – a mix of freight traffic and passenger traffic (residential and visitor) – leading to unpredictability in travel times and more crashes. Highway reliability, specifically dependability and consistency, is a major concern for shippers. Stakeholders identified that the conversation around congestion does not always have to be about freight movement – investments in public transit would help get predominately single occupancy cars off the road and could free highway capacity for other users, including freight.

State of Good Repair

Florida's state roads, U.S. and Interstate Highways are in a state of good repair. For example, there are 140 bridges in Florida that are rated as "Poor" in the National Bridge Inventory (only 13 are on FDOT routes).⁴ Similarly, only 9 percent of all roads in Florida are considered below "ride quality."⁵ As truck traffic continues to increase, care should be taken to retain Florida's quality road network including through continued leveraging of federal funds for emergency repairs, given the cost to develop new interstate in urban and/or rural areas.⁶

Truck Parking

While FDOT's new Truck Parking Availability System (TPAS) has helped align truck parking demand with available supply, truck parking remains a challenge. Stakeholders identified the most significant needs near Jacksonville, Miami and along the I-4 corridor. FDOT found that overall truck parking facility demand is near 85 percent for truck stops and 50 percent at rest areas statewide. However, during peak periods, truck parking demand can exceed 150 percent in some areas.⁷ When there is limited parking available, drivers often park in unauthorized areas including the right-of-way on access and egress ramps. In recent years, a reduction in allowable driving time and not being able to take rest breaks from driving without forfeiting total work

³ Fulfillment and consolidation centers are commonly located closer to target markets and associated with more truck trips to directly serve urban populations. DCs serve a state or region and serve business locations.

⁴ Source: National Bridge Inventory Data. Available at <http://bridgereports.com/>.

⁵ "Transportation Asset Management Plan," Florida Department of Transportation, June 28, 2019.

⁶ Source: "U.S. Department of Transportation Announces \$871.2 Million in Emergency Relief for Road and Bridge Repairs," Federal Highway Administration, September 10, 2019. Florida Federal Lands received \$4.9 million.

⁷ Source: "Statewide Truck GPS Data Analysis – Parking Supply and Utilization," Florida Department of Transportation, April 15, 2019.



time arising from Federal HOS regulations and the ELD mandate has manifested into a challenging situation for commercial drivers in seeking out truck parking availability.

Domestic Freight Imbalance

There is a domestic trade imbalance between Florida and the rest of the United States. Stakeholders identified that this was likely the result of a consumption based economy and a population growth rate of more than 1 percent annually over the past eight years. This creates an environment where 30 to 50 percent of truck backhauls out of Florida are empty increasing unproductive truck VMT.

Driver Shortage

Florida is feeling the effects of a commercial driver shortage in the trucking industry. The American Trucking Association reports the industry is short 60,000 drivers nationally. The shortage is most notable in the long-haul truckload segment of the market, where drivers are unable to return home every night and are sometimes on the road for weeks at a time. Truck drivers are not the only workers in shortage; diesel mechanics are in short supply as well.

However, stakeholders identified a potential role for technology to help solve this issue. Technology could reduce the amount of miles being driven by trucks, and help attract young talent to the industry. This type of shift coupled with driving automation/truck platooning could lead to a more appealing job for the next generation of truck drivers, who may avoid dealing with the challenges of the job including the long time away from home, lack of truck parking, congestion, and hours of service regulations.

Insurance Costs

Another issue affecting the trucking industry in Florida is the increase in insurance costs. The trucking industry faces issues when it comes to litigation due to crashes which result in damages, injuries, time-lost, and other associated factors. Vehicles equipped with expensive technology, declining insurer competition, and "nuclear verdicts," (repeated stakeholder term) are contributing to the issue. The latter, resulting from a Florida tort law allows juries to award damages if a trucker is 1 percent negligent, whereas in states like Georgia, juries demand that litigants prove a trucker is 50 percent negligent.⁸

Highway and Vehicle Technology

Advanced vehicle technologies will have profound impacts on the freight industry and Florida roadways. Some of these technologies are already embedded in commercial vehicles offered by Original Equipment Manufacturers (OEMs) while some technologies are aftermarket options and other technologies are brought onboard on a daily basis (navigation via smartphone app).

⁸ <https://www.bizjournals.com/jacksonville/news/feature/statewide-transportation/2019/03/florida-tort-law-makes-it-tough-for-truckers.html>



Emerging technologies supplement and/or serve as a catalyst for improved operations on top of advanced vehicle technologies. Although it is important for the Florida Department of Transportation (FDOT) to be aware of all emerging technologies that operate on its facilities, this section is strategically focused on the technologies that could impact FDOT's business practices, mission, and vision of moving freight on highways. More specifically, it will focus only on those technologies that may potentially pose issues for which FDOT, or other state agencies, may be able to take action.

At a high level, technologies that could impact freight movement on highways include the following:

- Advanced Driver Assistance Systems (ADAS), which include low levels of automated vehicle features
- Highly Automated Trucks (HATs), which include higher levels of automation;
- Connected Vehicles (CAVs)
- Driver-Assistive Truck Platooning (DATP)
- Alternative Fuels (AFs)
- Blockchain
- Last-mile package delivery vehicles and devices
- Electronic Logging Devices (ELDs)

These eight technology categories will be discussed further in the following sub-sections.

Advanced Driver Assistance Systems (ADAS)

Advanced Driver Assistance Systems (ADAS) are considered low-levels of automation (Automation Level: 0-2), as defined by the Society of Automotive Engineers. These are generally safety or convenience-oriented vehicle features, such as adaptive cruise control, blind spot monitoring, forward collision warning, lane departure warning, active lane centering, and automatic emergency braking. These features, some of which are becoming standard equipment, can be found on modern long-haul trucks.

ADAS is included in the FMTP because commercial vehicles equipped with ADAS, as well as Highly Automated Trucks (HATs), rely heavily on accurate roadway characteristics, for which FDOT has direct responsibility for maintaining (on state-owned roadways).

The underlying technologies for ADAS features rely on cameras, radars, drive-by-wire, central processing units, and/or LiDAR. These are essentially the 'eyes, ears and brain' of advanced vehicle technologies and are, collectively, referred to as "machine-vision." It is imperative for the safe operation of these advanced vehicle technologies to accurately perceive (i.e., object



detection and recognition) roadway characteristics (lane markings, lane width, signage, edge of pavement, traffic signals, etc.) and other transportation roadway users (vehicles, pedestrians, etc.). There are instances, usually associated with low contrast between pavement markings, which can result in poor 'readability' of the infrastructure on behalf of these systems. Updated Connected/Automated Vehicle (CAV)-ready infrastructure design standards and maintenance cycles can have a direct influence on the safe operation and reliability of these advanced vehicle technologies.

FMO, through the FMTP, recommends to other FDOT offices that CAV-ready infrastructure design standards should be developed for commercial vehicles, in addition to passenger vehicles. Another recommendation could be to partner with Florida Highway Patrol, Florida Department of Safety and Motor Vehicles, and federal agencies to promote the adoption and safe use of ADAS by commercial vehicle operators.

Highly Automated Trucks (HATs)

Highly Automated Trucks (HATs) rely on more robust sensor suites, have more sophisticated algorithms and superior computing power over ADAS technology. HATs are not yet ready for commercial production, as successfully executing decisions and tactical maneuvers for edge case⁹ situations are extremely difficult to master. As such, some HAT developers have developed operational models that rely on tele-operations (i.e., remote control) of the vehicle when not on limited-access facilities. When on arterials and other lower functionally classified roadways, an operator controls the HAT using cellular connectivity, on-board cameras, HD maps and telematics data.

Fully autonomous vehicles can legally operate on Florida roadways without the operator being physically present in the vehicle (i.e., being operated remotely).¹⁰ Potential issues for HATs operating on the roadway are difficult to predict. Some potential benefits include exemption from driver HOS restrictions, demand reduction of truck parking, and improved safety.

Connected Vehicles (CAVs)

Connected Vehicles (CAVs) can provide drivers with enhanced situational awareness by-way-of Traveler Information Messages (TIMs) and Basic Safety Messages (BSMs) and can deliver safety-critical data for ADAS/HATs to use as input to execute decisions and make tactical maneuvers. HATs may likely differ very little in operational and logistical behavior (compared to traditionally driven trucks) as standalone vehicles on Florida highways without CAV technology. However, with CAV technology, they may be able to travel in much closer proximity (reduced distance

⁹ 'Edge case', in the AV developer community, refers to those situations that are extremely rare and/or difficult to program (software code) for how a machine should handle the situation.

¹⁰ The Florida Legislature unanimously passed a bill legalizing the use of self-driving cars statewide on May 1, 2019.



between vehicles), whether or not they form an official platoon (which will be addressed in the next section). This Vehicle-to-Vehicle (V2V) communications concept does not require Infrastructure-to-Vehicle (I2V) communications, hence no assistance is needed from Road Side Units (RSUs) to be deployed along FDOT ROW. Although, this is generally considered an improvement in capacity of freight movement, it could create issues for law enforcement such as Florida's 'following too closely' law for tractor-trailer combination vehicles.

CAV RSUs could be deployed in strategic locations to deliver BSMs such as 'low bridge clearance ahead,' 'curve speed warning' or in known bottleneck areas (i.e., dense interchanges in urbanized areas) a 'queue warning' message once other traffic monitoring systems detect congestion. Although these could significantly improve safety (when RSUs are operational), FDOT will need to ensure 24/7/365 functionality to be recognized as reliable sources of information. FMO may want to consider coordinating with the Transportation Systems Management and Operations (TSM&O) office to identify which CAV applications, and where, CAV can best improve freight operations.

Driver-Assistive Truck Platooning

Driver-Assistive Truck Platooning (DATP) is a combination of ADAS features and CAV connectivity between two to four trucks. Most system development in the United States has involved two trucks, with potential for more in the future, but not likely to exceed four trucks due to concerns over 'road trains' and issues with other vehicles needing to merge into through lanes. For this reason, it is recommended that policy and regulation limit DATP operation to two trucks, at least in the near-term.

DATP is considered a low-level automation feature, as it requires the lead truck driver to remain fully engaged with the task of driving, as well as keeping in mind the additional vehicle in the follow position (i.e., when overtaking slower vehicles). The driver of the follow truck, typically only relinquishes control of longitudinal maneuvers (i.e., braking and acceleration) while still maintaining control of the lateral maneuvers (i.e., steering). He/she must still be able to resume braking and/or acceleration at any given time, and remain fully engaged in all other driving tasks at all times. However, subsequent systems could allow the driver to cede control of lateral maneuvers in the near or mid-term. In the mid/long-term, the following truck driver may be able to relinquish total control of the truck and occupy the sleeper berth, thereby potentially complying with HOS regulations while the vehicle is in motion. Again, while this can generally be seen as an improvement in freight operations, there may be issues that could arise.

One of the issues already identified by FDOT for DATP operations involves bridge sufficiency ratings for platooning trucks. Bridge engineers were concerned that axle spacing, and their respective per-axle loads, of two trucks (with 5+ axles each) had not been taken into account when bridge design standards were developed. An initial concern was the spacing of the two



trucks, which was presumed to be 30 feet apart (last axle of the lead truck to the first axle of the follow truck), may be too close to comply with FHWA Bridge Formula load ratings. Based on an assumed weight of 80,000 pounds for each truck, six bridges in Florida were found to be 'insufficient' to handle these loading dynamics. For trucks with an assumed weight of 88,000 pounds, 22 bridges were found to be 'insufficient' to handle these loading dynamics. However, after coordination with DATP developers, it was found that the optimal spacing between two trucks is 65 feet, which largely quelled bridge engineers concerns. The limiting factor for the minimum truck following distance is related to a lack of airflow for the following trucks' cooling system leading to overheating of the engine. However, it may be prudent to develop policy or regulations indicating where and/or when platooning operations must temporarily disengage. This could be executed by either an electronic file of geo-fenced areas or by CAV RSUs, and may not need to be limited to bridges of concern.

Alternative Fuels

Alternative fuels (AFs) for commercial vehicles will likely outpace market adoption compared to AFs for personal vehicles. The return on investment and narrow profit margins will drive this trend. Alternative fuels include electricity, Compressed Natural Gas (CNG), biodiesel, ethanol, propane and hydrogen.¹¹ To date, biodiesel and CNG are the most widely adopted AFs, as it is relatively easy to convert a traditional diesel engine to operate on these fuels. While there are many positive outcomes associated with AFs, such as reduced emissions, reduced operating and maintenance costs, and improved hauling performance, there are a few issues for public agencies to consider as well.

Infrastructure for charging or refueling stations will largely remain a private industry issue. However, co-locating AF stations, specifically for electric vehicles (EVs), at public parking facilities (i.e., rest areas) may increase the utilization of these existing assets and infrastructure for both passenger and commercial vehicle operations. The primary issue with co-location stems from federal limitations related to commercial operations of retail and other revenue generating activities at rest areas. Electrification of commercial vehicles is rapidly approaching, as developers are announcing plans for commercial availability and fleet operators are showing interest and demand for electric trucks. Additionally, rest area electrification (using on-board power infrastructure) for truck parking spaces could also be offered as an incentive for drivers to better utilize these locations.¹² This can allow sleeper berth trucks to power down diesel engines while retaining power for electrical equipment. This not only reduces emissions, but also addresses community concerns and ordinances that prohibit overnight idling. The primary issue

¹¹ USDOT – Fuels and Vehicle Technology, <https://www.transportation.gov/sustainability/climate/fuels-and-vehicle-technology>

¹² California Air Resources Board – Idle Reduction Technologies for Sleeper Berth Trucks - <https://ww3.arb.ca.gov/msprog/cabcomfort/cabcomfort.htm>

with electrification of rest area truck parking spaces is the same as for co-locating EV charging stations at rest areas. Providing these services is best contracted out to third party vendors, which is not explicitly allowed under current federal regulations (MAP-21, section 1531).

Another eminent issue stemming from AFs involves a reduction in funding for Florida's State Transport Trust Fund (STTF) resulting from declining revenue generation from fuel use and sales taxes. For more information on the transportation tax structure in Florida, please refer to the footnote below.¹³ As AFs improve fuel efficiency and dependence on petroleum-based fuels, the existing tax structure will not adequately sustain the STTF. Continuation of funding the STTF is commensurate with transportation roadway users contributing their fair share for the use of public assets (roadways). Potential solutions to this issue include; 1) annual registration fees for AF vehicles, 2) tax structure for AFs, similar to existing (petroleum-based) fuel taxes, or 3) mileage-based user fees. However, the last option has proven difficult for a majority of the public to accept in places where pilot projects are on-going.¹⁴

Blockchain

Publicly available data sources for transportation planning analyses are limited in scope, especially for freight planning purposes. For example, FHWA's Freight Analysis Framework (FAF) does not allow for commodity flow analyses at the corridor-level. More disaggregated data is needed to identify what commodities are moving, where and when, on certain routes. This level of insight can be used to better allocate funding investments and policy decisions. In turn, these decisions can support existing critical industries and attract more freight volume to Florida ports for value-added and manufacturing processes to then export to markets outside of Florida. This could also reduce truck empty back haul and make Florida a more attractive market for securing a load upon leaving Florida.

One way to achieve this level of insight is through the extraction of pertinent data from Bill of Lading documentation. However, the issue is that this data can be very difficult for state DOTs to obtain in a usable format. Proprietary and Personally-Identifiable Information (PII) is not necessary for these analyses, in fact, state DOTs are not interested in those data attributes. The useful data is limited to location of port of entry, date, time, commodity, weight, and value as well as freight origin and destination.

Blockchain is an emerging technology that provides a platform for transactional data to be used by all actors within a supply-chain. It is being developed as a secure, seamless and transparent way to exchange everything from Bill of Lading documentation, to contracts and proof of

¹³ FDOT – Florida's Transportation Tax Sources (2017) - https://fdotwww.blob.core.windows.net/sitefinity/docs/default-source/content/comptroller/pdf/gao/revmanagement/tax-primer.pdf?sfvrsn=f1eadaf7_0

¹⁴ Oregon's OReGO program - <http://www.myorego.org/>



insurance, and certificates of origin.¹⁵ The healthcare and financial industries have spearheaded the development and application of Blockchain technology. The transportation (freight, logistics and supply-chain) industry has already begun to adopt Blockchain technology.¹⁶ There are multiple levels of actors (or access privileges) within a Blockchain, for which a state DOT may be able to be granted read-only with limited access for data extraction. Specific information such as account numbers, PII, etc. can be redacted from public viewing so as to maintain confidentiality but also provide enhanced transparency for all actors involved.

Last-Mile Package Delivery Devices

Florida Statute (316.2071) explicitly allows for the operation of Personal Delivery Devices (PDDs) (i.e. Delivery Robots) on sidewalks along Florida roads. Autonomous Ground Vehicles (AGVs) are designed to operate in dense urban areas to deliver retail goods, parcels and food within a short distance of their operating base. As one-hour, or less, guaranteed deliveries continue to grow in popularity, this is one solution the e-commerce industry may turn to.

One potential issue for FDOT to consider includes establishing provisions to ensure that AGVs do not negatively impact capacity and/or safety for the travelling public on state-owned roadways. From quickly traversing a designated crosswalk to ensuring they stay on the sidewalk (i.e., not inadvertently entering the roadway), adequate paint or other roadway design feature(s) may be necessary for the safe and effective operation of these new transportation technologies. Additionally, FDOT could effectively prohibit PDDs from entering traffic lanes by providing an electronic geo-fenced dataset for which PDD developers must incorporate into their Operational Design Domain (ODD). Lastly, curb management strategies may need to be explored with municipalities to ensure safe operation leading up to their final point of delivery (doorsteps).

Electronic Logging Devices

Electronic Logging Devices (ELDs) were first mentioned as part of MAP-21, and officially went into effect as required equipment in December of 2017. The requirement provides transparency between driver, fleet operator and law enforcement, and reduces paperwork while drivers are on the clock. However, they also pose hours of service (HOS) complications for drivers by removing the ability to round their time by a quarter hour. This was a key strategy employed by drivers to maintain HOS compliance while spending the final 15 to 30 minutes of a trip finding safe and authorized parking. Another issue ELDs pose arises when documentation must be provided to law enforcement as there are compatibility incongruences with other parties such as weigh stations and law enforcements. There are many manufacturers of ELDs and equipment deployed by state agencies may not be compatible with the newest product offerings. For this reason

¹⁵ [www.Export.gov - https://2016.export.gov/logistics/eg_main_018121.asp](https://2016.export.gov/logistics/eg_main_018121.asp)

¹⁶ IBM – Blockchain for Supply Chain - <https://www.ibm.com/blockchain/industries/supply-chain>



interoperability standards need to be adopted more quickly to allow law enforcement to review electronic documentation in a more efficient manner.

Freight Rail

Florida's freight rail system is comprised of more than 15 railroads that traverse over 2,800 miles of track. Based on stakeholder input, the greater needs/issues for Florida's freight rail system are precision railroading, on-dock rail, intermodal transport, technology/infrastructure, highway/rail grade crossing separations, and on-dock rail improvements.

Precision Scheduled Railroading (PSR)

Since the last FMTP was completed, the Class I railroads have largely adopted a new operations model – Precision Scheduled Railroading (PSR). Under this new model, maintaining an on-schedule service is the main operational focus. PSR railroads operate like an airline. If a passenger is late for a flight, they miss the flight and must be re-booked. In the railroads case, if a shipper is late for their delivery window, the train will pass them by.

Generally speaking, velocity (train speed) and volume (train length) are still important, but the PSR model focuses on moving rail cars. The PSR concept manifests into better utilization of rail cars and for customers, more liable, consistent, and reliable service. While this creates efficiencies and improved revenue for the railroads, it requires shippers to have little margin of error in their supply chain and/or to maintain buffer inventory to hedge against a missed shipment.

Rail Bottlenecks and On-Dock Rail

The previous FMTP identified on-dock rail needs and increasing rail access to ports as major potential rail bottlenecks. To address those concerns, PortMiami completed development of on-dock rail in the South Florida Container Terminal, and JAXPORT completed a new Intermodal Container Transfer Facility at Dames Point.¹⁷ JAXPORT also has on-dock rail service at the Blount Island Marine Terminal.

In 2016, Port Tampa Bay announced it is partnering with a local developer through a public-private partnership to finalize the financing of an on-dock cold storage facility. Moreover, the Port of Pensacola updated its on-dock rail service served by three different rail providers in 2016.¹⁸ As freight volumes increase at Florida's ports, on-dock rail capacity should continue to be monitored and improved.

¹⁷ The 2013 FMTP cited that Governor Scott committed millions toward new Intermodal Container Transfer Facilities (ICTFs) at JAXPORT and Port Everglades to restore or provide new on-dock rail service to terminals and facilitate the direct transfer of containers between ships and trains.

¹⁸ Railroads include CSX Transportation, BNSF Railway, and Rail America.

Further, the 2019 Florida Rail System Plan identified two major rail bottlenecks that need to be addressed:

- **Missing Double Track Section at the Miami River:** The double tracking project that was completed in 2007 left one section of South Florida Rail Corridor (SFRC) single track in the vicinity of the Miami River. This project will fill in the gap, adding capacity and addressing an operational bottleneck for Tri-Rail, Amtrak and CSX freight operations. It will also improve access to the Miami Intermodal Center (MIC).
- **CSX – FEC Rail Connection at Pompano Beach:** A third east-west connection between the Florida East Coast Railway (FEC) and SFRC will be at Pompano Beach. This will provide for freight rail connection to/from Port Everglades.

Positive Train Control

Perhaps the most visible technological issue impacting Florida's railroads is the shift towards Positive Train Control (PTC). PTC is an automated system that brings a train to a controlled stop, if its operator exceeds operating conditions (i.e. excess speed, missed signals, etc.). Federal law required PTC to be installed on, "Class I railroad main lines (i.e., lines with over 5 million gross tons annually) over which any Poisonous- or Toxic-by-Inhalation (PIH/TIH) hazardous materials are transported; and, on any railroad's main lines over which regularly scheduled passenger intercity or commuter operations are conducted."¹⁹

While initially required by 2018, the widespread adoption of PTC has been hindered by PTC supplier issues and funding challenges. In Florida, CSX and Norfolk Southern have implemented PTC along 94 percent and 74 percent of its track, respectively.²⁰ Furthermore, the FRA has issued a time extension to complete PTC implementation on the Central Florida Rail Corridor (owned by FDOT).

Supply Chain Visibility

Stakeholders mentioned that a major impediment to shifting their shipments to rail was their inability to track shipments once loaded onto a train. This issue will become increasingly important as consumers' rapid fulfillment expectations grow and challenges with trucking such as increased congestion, driver shortage and increased operational costs potentially drive more freight volume to rail.

¹⁹ <https://www.fra.dot.gov/Page/P0358>

²⁰ "PTC Implementation Status by Railroad: Q4 Oct 1. – Dec 31, 2018," Federal Railroad Administration. Available at www.fra.dot.gov/app/ptc/. Also, PTC implementation in Florida for CSX and Norfolk Southern is not available.



Railroad Grade Crossings

Florida has over 3,700 highway/railroad at-grade crossings. From a freight perspective, grade crossings create a delay and safety issue – especially in areas with freight intensive industries. *NCHRP Report 755: Comprehensive Costs of Highway-Rail At-Grade Crossing Crashes* calculated that the cost (delay, risk, etc.) associated with railroad crossings (individually) can reach \$40-100 million. While there have been significant improvements to crossings in South Florida, sustained investments will be required to reduce delays and improve safety and quality of life for Florida's residents.

Due to the relatively high number of crossings in Florida, the state receives the fourth largest USDOT Railway-Highway Crossings Program allocation annually. Nationally, Florida has the sixth most train/vehicle collisions and the greatest share of related fatalities (13 percent). Given that half of all collisions occur when arms are down and active (lights flashing), Florida (and the railroads) should explore increased use of quadrant gates and roadway channelization near crossings.²¹

Maritime

Florida's 15 seaports serve as a global gateway for the Southeastern U.S. Additionally, JAXPORT serves as a point of embarkation for the U.S. military. Because of industry and global market trends, there is an increasing need to address port access channel depths, inland distribution capacity and modal choice, technology, emissions, and international market share.

Port Access Channel Depth

Over the past decade, ports along the East Coast have focused on preparing for the completion of the Panama Canal and accommodating larger "Post-Panamax" ships. These larger ships can have a depth (draft) of 55 feet versus what was previously considered a "Panamax" ship with a draft of about 40 feet. While JAXPORT, PortMiami and Port Tampa will have 47, 43, and 50-foot controlling access depth, respectively, the success of Florida's seaports is a much larger story.

Like the air cargo industry, Florida's ports serve as the nation's gateway to the Americas. While ports serving this market do not typically require 50-foot channels, Florida still has maritime needs. These include greater depth at the Port of Pensacola to compete with the Port of Mobile, the development of inland intermodal facilities in Western Florida to capture market share from Georgia, and technology such as truck reservation systems integrated with mapping technology ("assistive intelligence") to help provide the ports the ability to move goods quicker and easier (and therefore at less cost) to inland markets and destinations.

²¹ Source: Operation Lifesaver, Inc.



Inland Distribution

The majority of Florida's ports are located in urban areas. As such, truck trips generated at/near the port are impacted by and create increasing levels of congestion. To help alleviate these issues, stakeholders have identified the need for increased inland distribution options – including the development of an inland port. This inland port would allow containers to be shuttled between the ports and an area of the state with less highway congestion and lower land/operating costs.

On a larger scale, Florida has the potential to help support over-the-water container moves between Coatzacoalcas, Mexico and a proposed freight logistics zone near the Port of Pensacola. This improved facility could generate increased over-the-water moves that are currently destined for Mobile, Alabama.²² See Figure 1.

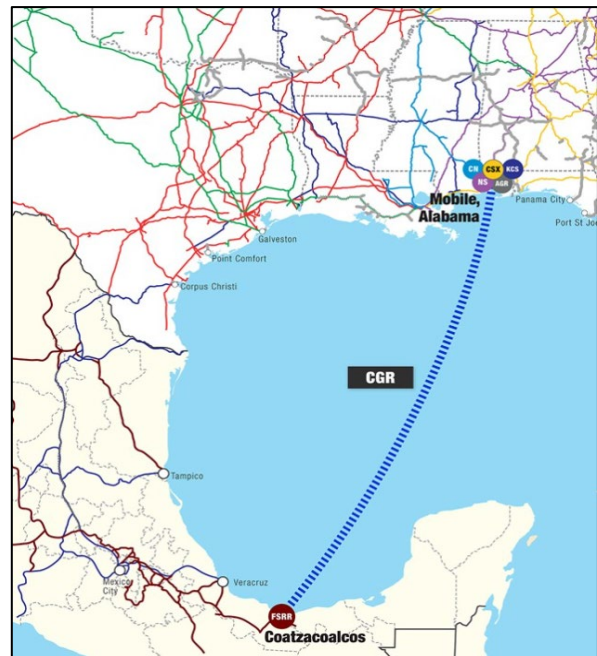


Figure 1 | MX-U.S. Railbarge Service

Marine Terminal Technology

As marine terminal volumes increase, technological improvements can help mitigate the impact of the resultant truck surge and congestion outside marine terminals. For example, the Ports of Los Angeles/Long Beach (PierPass) and New York/New Jersey have employed truck reservation systems. These systems have allowed port authorities to mitigate surge and spread out truck arrivals over a given period of time. More recently, PortMiami has employed the use of PierPass to help organize truck traffic through their gate(s). JAXPORT's Talleyrand Terminal has a similar project in the pipeline. Inside the fence, technology can help Florida's ports move cargo more efficiently, including container staging and continued investment in terminal operating systems (port automation).

Emissions

Marine vessel emissions have fallen as a result of several domestic and international regulations (North American Emission Control Area and the International Maritime Organization (IMO 2020)) enforcing limitations on sulfur content in ship's fuel. Furthermore, eleven major banks will include emissions in their consideration to issue ship-building loans.

²² The service is operated by SeacoHoldings, Inc. and Genessee & Wyoming, Inc. Also, see FS 311.03 for "Designation of state freight logistics zones."



In addition, marine terminals are switching from diesel to electric gantry cranes and Liquefied Natural Gas (LNG) while changing terminal equipment to alternative fuels such as Compressed Natural Gas (CNG).²³ These and other efforts including recent development of the first natural gas pushboat highlight the focus within the marine industry to reduce emissions.²⁴

Resiliency

According to the National Oceanic and Atmospheric Administration (NOAA), the average global sea level has increased 2.6 inches between 1993 and 2014. While, this growth is around one-eighth inch annually, NOAA identifies a more telling figure - nuisance flooding is estimated to be from 300 percent to 900 percent more frequent within U.S. coastal communities than it was just 50 years ago.²⁵ It should be noted this issue affects all freight modes, as many roadways, rail lines and runways are located near coast lines and at sea level.

Any increase in sea levels impacts infrastructure – whether it is nuisance flooding or increased vulnerability to storm surge. All modes are impacted by sea-rise, but ports (because of their vicinity to the sea) are particularly at risk. Additionally, there is a need to address utility infrastructure that supports facilities moving cargo. Examples include protecting crane power transfer and rail switching stations; raising emergency generators, fuel tanks, and air conditioning; and ensuring grade separated roadways accessing marine terminals have adequate flood control equipment.

International Market Share and Port Investment

Border congestion at the Ports-of-Entries between the United States and Mexico are a multinational trade issue. Trucks often sit at the border in a five-mile queue for over 10 hours. While, a more viable solution could be Florida – located only 13 hours (by sea) from Mexico. The Journal of Commerce estimated that transit from Latin America via PortMiami to Atlanta can save up to two days and \$2,500 compared to an all-truck route.²⁶ Cargo volume for two Port of

²³ Source: "H-Energy to Develop LNG Terminal at India's Kakinada Port," World Maritime News, September 9, 2019. This implies the possibility of an LNG terminal at JAXPORT, given the facility there fueling Crowley Ships that operate along the East Coast and for its Caribbean service.

²⁴ Source: "Robert Allan Ltd. And MTU team up to develop first natural gas fueled shallow draft pushboat," gCaptain, August 20, 2019.

²⁵ Source: "Is sea level rising?" National Oceanic and Atmospheric Administration, Accessed September 6, 2019. Available at <https://oceanservice.noaa.gov/facts/sealevel.html>.

²⁶ "US East Coast reaps gains from rise in Mexico ro-ro," Journal of Commerce, August 12, 2019. Available at https://www.joc.com/maritime-news/short-sea-shipping/us-east-coast-reaps-gains-rise-mexican-ro-ro_20190812.html.



Tampa routes to Mexico that initially started in 2016 increased dramatically – 232 percent in 2017 and another 90 percent in 2018.²⁷

In addition, freight rail is being affected by slow interchanges along the rail crossings between Texas and Mexico. The results has been self-imposed embargoes of grain products (used for Florida poultry production), by Union Pacific Railroad (UPRR) and Burlington Northern-Santa Fe (BNSF). This is the result of slow interchanges with Mexico rail carriers including Kansas City Southern de Mexico (KCSM) and Ferromex (FXE).²⁸

Aviation

Florida has 20 commercial service airports that enplanes and deplanes approximately 10 percent of U.S. air cargo. Miami International Airport accounts for over 80 percent of Florida's air cargo volume and serves as the nation's global air gateway to the Americas. Florida has four large hub airports (Orlando, Tampa, Miami and Ft. Lauderdale) – the most of any state. Primary issues include land use, freight access (ground/truck access), the international market, and the aviation manufacturing industry.

Land Use Conflicts

While most large airports were originally developed away from residential land uses, residential developments have encroached on airports and nearby supporting land uses, affecting noise requirements for flight paths and the future location of new commercial/industrial land uses. To create long-term economic development, air cargo reliant industries should be given precedent when allocating land uses near major airports.

Effect of Highway Congestion

By their nature, air cargo shipments are very time-sensitive. Congestion on key highway routes that access airports and nearby freight centers are counter to the long-term growth of this freight sector in Florida. While large investments are made or planned for large airports like Miami, smaller airports like Lakeland Airport are also seeing significant air cargo growth.

Spaceports

The 2011 conclusion of National Aeronautic Space Administration 's (NASA) Space Shuttle program led to 10,000 Floridian job losses. While that is a significant figure, the Space Coast Economic Development Commission believes more than 8,700 new jobs have been created by

²⁷ Source: "US importers from Mexico ramp up ocean routing to avoid land border," Journal of Commerce, August 17, 2018. Available at https://www.joc.com/port-news/us-ports/us-importers-mexico-ramp-ocean-routing-avoid-land-border_20180817.html.

²⁸ "Grain Transportation Report," U.S. Department of Agriculture, May 7, 2019. Available at <https://www.ams.usda.gov/sites/default/files/media/GTR10112018.pdf>.



50 new space-related projects since 2011. For Florida, its ideal location and industry employment highlights the importance of continued investment in its space industry.

International Competition

While the U.S. (and Florida in particular) have been leaders in the space industry, competition is increasing globally, with over 40 known space launch sites around the world.²⁹ However, Florida offers an ideal location, industry support, and state and federal financial mechanisms in a competitive (free market) environment. New companies including Firefly, Blue Origin and SpaceX have located in-state to develop space-related vehicles and infrastructure, creating jobs and therefore public dollars for reinvestment. However, these efforts are often not visible to the general public. Therefore the public is generally less aware of state and regional efforts in support of the industry, and the state must be vigilant in remaining competitive in this industry.

Public-Private Partnerships

NASA leverages public-private partnerships (P3s) to share risk due to the nature of the space industry. While Florida's space industry success is already rooted in partnership – there is a potential opportunity to leverage FDOT's success in undertaking P3 projects. This input has the potential to benefit economic development statewide and even beyond state lines. Guidance provided by the state could be incorporated into the Florida Spaceport Improvement Program Project Handbook and the Cape Canaveral Development Manual – providing guidance and information to the private sector.

Pipelines

Interstate pipelines are governed by the federal government. In Florida, intrastate pipelines are governed by the Florida Public Service Commission. While FDOT has no formal role in pipeline governance, pipelines do and could play a greater role in the movement of Florida's liquid and natural gas.

Florida imports up to 40 percent of its energy for the residential, commercial/industrial and transportation markets. While Florida residents use less than one percent of petroleum products for heating, 90 percent is used by the transportation sector. Despite Florida's 1,400 oil wells and supply of U.S. crude oil reserves, the state imports fuel oil by water from refineries in the Caribbean and the Gulf Coast of the United States.³⁰

²⁹ In contrast to other modes, the spaceport industry is uniquely international.

³⁰ There are currently more than 1,400 permitted wells in Florida; and Congress constitutionally banned offshore drilling within 12 nautical miles of the shoreline until 2022.



There is a petroleum pipeline from Bainbridge, Georgia and two in-state respectively from Port Tampa to Orlando and Port Everglades to Miami.³¹ In addition, existing natural gas pipelines include “Gulfstream” across the Gulf of Mexico from Mississippi and Alabama; “Florida Gas” from Texas through Louisiana, Mississippi and Alabama; and the Sabal line from Alabama to Florida via Georgia. A portion of this natural gas goes to Jax LNG and Eagle LNG which supply marine vessels at JAXPORT by barge and truck.

In 2017, almost three million gallons entered Florida via short sea service from the Gulf Coast while 538 gallons were imported (mostly by water) and then moved domestically again by water (63 percent), truck (35 percent), and rail (two percent). In addition, 16.6 million tons of fuel oil was moved from other states to Florida by truck.³² Assuming an average capacity of 20 tons (carried per truck), 828,000 trucks were attributable to fuel oil on Florida’s roadway network. If pipeline capacity was improved or expanded (beyond current projects and development plans), the state could see improvements in roadway development and maintenance costs, less reliance on ports given sea level rise, and greater resilience for energy demand, given projected population growth in 2045.

Multimodal

While there are clearly distinct, individual modal needs and issues, there are also issues that cut across modes.

Freight Optimization

The largest firms in the freight industry (Wal-Mart, Amazon, UPS, FedEx, etc.) have access to the most advanced freight technology. They use data analytics to process their cargo in real-time and are able to employ advanced sensors/bar codes/RFIDs to track packages. They also have access to software which optimizes routes for their truckers.

Smaller owner-operator trucking companies often do not have the same resources that enhance efficiency. FMTP stakeholders argue that publicly providing optimization software and data across the trucking industry would provide a better return on investment than direct capacity improvements that improve efficiency for only a short time.

³¹ Source: “Today in Energy,” U.S. Energy Information Administration. Available at <https://www.eia.gov/todayinenergy/detail.php?id=15651>.

³² Source: Freight Analysis Framework



Cargo Theft

In 2017, Florida was the fourth highest state regarding cargo theft and had the highest share of food and drink theft – 29 percent.³³ Given the economic cost to deter cargo theft, FDOT would benefit from being a member of the Florida Commercial Vehicle and Cargo Theft Task Force.

Environmental Stewardship and Community Concerns

While, Florida meets the 2015 EPA 8-Hour Ozone Nonattainment standards, it is still important to limit the impact of point source emissions along freight corridors. Balancing resident's livability and freight mobility is important, given the continued growth of the State's population.

Trade Barriers (and Agreements)

Trade barriers are an historical issue to global trade and have impacted the movement of cargo, since global sea-going trade began. Today, the growing shift from global (offshoring) manufacturing to regional (re-shoring) has changed trade and corresponding job growth, which could bring more freight to Florida because of its proximity to Mexico, the Caribbean, and Latin America. However, if trade barriers expand to Latin America, facilities like JAXPORT could see an 18 percent drop in imported/exported vehicle throughput.³⁴

Land Use

Freight Forum participants identified a need for the freight planning conversation to be extended to the land use planning community. In each forum, stakeholders identified how local land use decisions impacted the transportation network. While FDOT has no statutory authority over land use, stakeholders felt FDOT could help facilitate the larger discussion.

Communication/Collaboration/Partnerships

Getting the right people to the table is difficult, especially across the public/private sector divide. One inhibitor is planning timelines. Private industry plans for the more immediate future, while the public sector tends to plan with much longer horizons. There is a perception that the freight industry should not be bothered because they are dealing with their own issues, when the reality is that these issues are all interwoven.

Funding

Funding is needed across the board. The Districts need more money for local project matches and the ability to more wisely spend the currently existing money. There tends to be a lack of prioritization for freight policy – with both projects and funding. There should be a more robust

³³ Source: "2018 Miami-Dade County Freight Plan Update," Miami-Dade Transportation Planning Organization, June 2018. Available at <http://www.miamidadetpo.org/library/studies/freight-plan-update-2018-06.pdf>.

³⁴ Source: "In search of the promised land," Automotive Logistics, July 8, 2019. Available at <https://www.automotivelogistics.media/home/in-search-of-the-promised-land/38642.article>.



FDOT SIS Quick Fix program, and public service announcements to highlight improvements and where the money is being invested.

Scenario Planning

As the future becomes increasingly uncertain, traditional planning methods – which use past data trends to predict the future – become less useful. Scenario planning provides an alternative process, which instead focuses on preparing for hypothetical but plausible future scenarios.

Scenario planning uses qualitative and quantitative analyses to explore what plausible freight-related futures could mean for Florida. More importantly, the process identifies specific steps the state could undertake to capitalize on opportunities and mitigate future challenges.

According to the FHWA, “scenario planning helps transportation agencies work with stakeholders and the public to establish a vision and implement a strategic plan for success in uncertain times. Well-crafted scenarios inspire critical thinking about issues and events that could significantly affect a region’s economy, environment, and quality of life. In addition to using modeled forecasts based on historical trends or formulas, scenarios typically use words, pictures, and numbers to describe complex data analyses in the form of holistic, plausible illustrations of future conditions. Scenario planning typically includes both qualitative and quantitative analyses to illustrate the tradeoffs between different futures and their relative impacts on different community goals.”³⁵ See Figure 2.

³⁵ Source: “Supporting Performance-Based Planning and Programming through Scenario Planning,” U.S. Department of Transportation, Federal Highway Administration, June 2016.

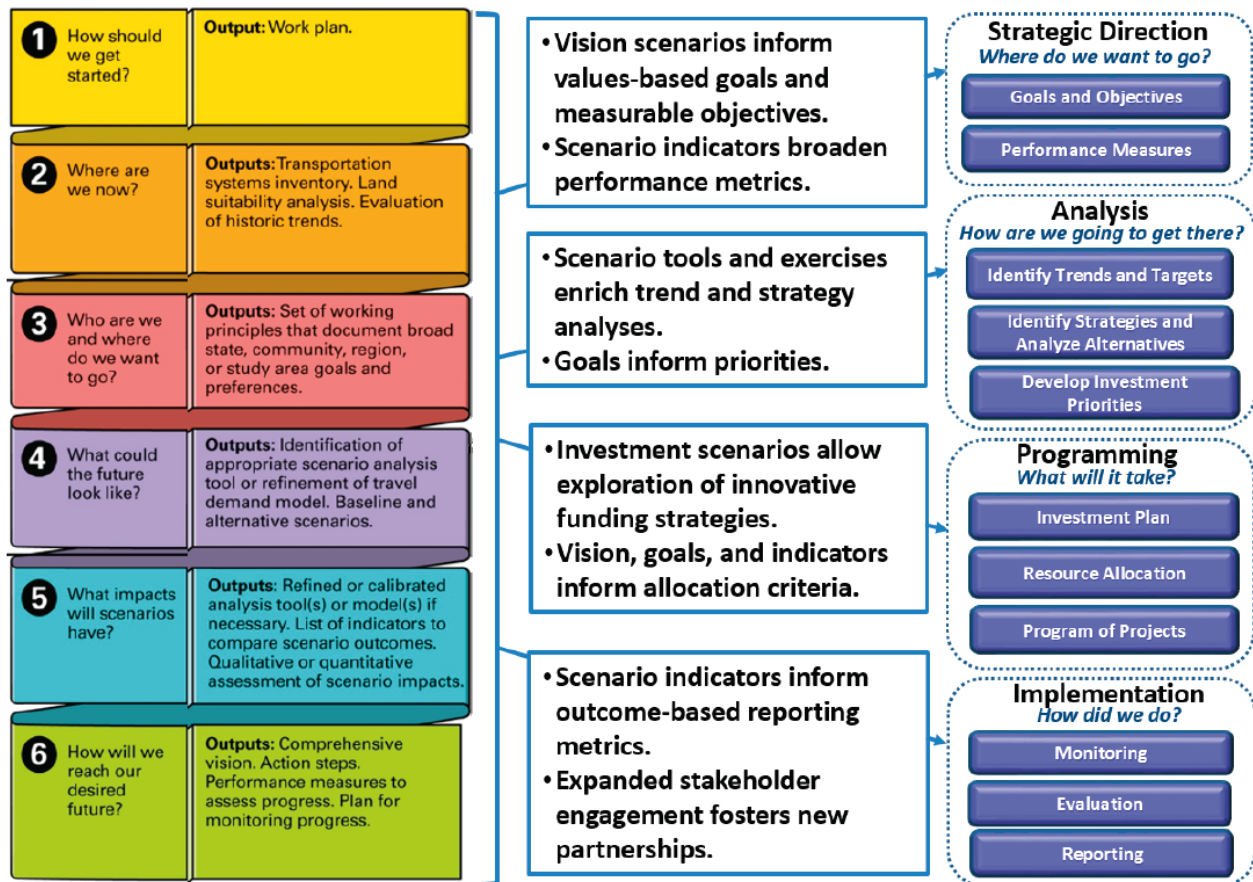


Figure 2 | Application of Scenario Planning to Performance-Based Planning and Programming (FHWA, 2016)

For the 2019 FMTP, the following three scenarios address (1) Resiliency, (2) Technology, and (3) Enhanced Economic Growth. These three scenario topics were selected due to their cross-cutting nature. The FTP identifies that resilience, technology, and the economy are topics that impact each of their goals. These three topics were discussed and agreed upon as cross-cutting with all stakeholders.

The purpose of this section is to consider plausible freight conditions for the future year of 2045. The current state of technological advancements, susceptibility to natural disasters, and relatively stronger economic growth will be accounted for, and assumptions will be made for the context of following discussions. Further (and as applicable) the scenarios will be introduced, defined, and quantified using previous Strategic Intermodal System (SIS) network modelling efforts. Finally, these scenarios will be used to identify recommendations for FMO to consider for policy and programming decisions to proactively achieve specific positive outcomes and limit potentially negative situations.



Scenario 1: Infrastructure and Supply-Chain Resiliency through Climate Change

Introduction

The scenario addresses the multimodal nature of goods movement across the supply-chain and considers the four phases of emergency management (EM); 1) mitigation, measures to prevent and/or minimize future events, 2) preparedness, plans or preparations to handle an impending emergency, 3) response, action taken during an emergency, and 4) recovery, actions taken after an emergency. This scenario will focus on maintaining efficient and effective supply-chain operations year-round with an emphasis on creating resilient infrastructure - consistent with FDOT's primary mission to provide safe, efficient transportation facilities through physical assets, operational strategies and financial investments.

This scenario defines plausible environmental conditions for the year 2045 and provides a discussion on implications for infrastructure that can sustain the movement of freight in, out, and within Florida, based on the state being more susceptible to storm-related events given climate change. Further, recommendations are offered to ensure Florida remains a freight hub regardless of climate and natural disaster challenges for the year 2045. However, the first phase (mitigation) will be the focus for defining the scenario and subsequent recommendations.

Scenario Defined

By 2045, average temperatures in Florida have increased by 4 degrees Fahrenheit while sea levels have risen by nearly 12 inches along most of Florida's coastline.³⁶ Some coastal communities and downtown Jacksonville, Miami and Tampa have had to reinforce and expand seawalls and bulkheads to reduce Sea Level Rise (SLR) impacts to freight movement and daily life. Due to atmospheric warming, rising surface sea temperatures have resulted in greater frequency and strength of hurricanes and associated storm surges. Flooded roadways due to SLR and hurricanes have deteriorated roadway base layers and pavement on many state roads immediately adjacent to the coast and in some cases inland. These impacts have resulted in significant FDOT investments in pervious pavement, ultra-high strength concrete, roadway elevation projects, bio swales, pumping/lift stations and other washout prevention strategies. Additionally, due to higher water tables near coastal communities, septic tanks have become a top environmental concern (including for algae blooms) and potable water wells have become useless due to saltwater intrusion. For communities that cannot afford desalination plants, pipelines have been built for the transmission of potable water.

Total annual precipitation has decreased, primarily in south and central Florida, which has led to an increase in the frequency and duration of drought conditions. Inland, the water table of the Floridian aquifer has shrunk due to reduced rainfall and increased depletion caused by residents,

³⁶ NOAA National Center for Environmental Information: [State Climate Summaries - Florida](#)



visitors, and commercial activities. Water supply for commercial agriculture and wildfire management have also become top priorities for the Florida Department of Agriculture and Consumer Services. To make matters worse, extreme rainfall events (>4 inches/event) have increased, resulting in more severe flooding and stormwater runoff. These climatic events perpetuate negative impacts from SLR on transportation facilities, especially for infrastructure that must support the weight associated with the movement of freight.

The amalgamation of these climatic realities pose serious challenges for uninterrupted freight movement, especially near coastal urban cores and seaports. Significant resources have been allocated to “push-button (on-call) contracts” to rapidly deploy supplies to storm-affected areas, in addition to regulation waivers regarding HOS, vehicle weight and other factors for emergency management operations. Other operational strategies include readying on-call truck drivers and pre-positioning of commercial vehicles, police escorts, coordination with ports and other bulk storage facilities, and subsidies for retail fuel stations to position temporary back-up generators for post-storm operations. Waiving truck weight restrictions in the days leading up to and immediately following a major storm has proven effective for re-positioning idle inventory to protect it from storm impacts. Additionally, diversifying the modal split for high-demand post-storm commodities from warehouse to rail, as part of emergency preparedness strategies, has proven effective as an alternative temporary storage location that can quickly mobilize these goods when highway operations are limited due to storm surge and debris removal efforts.

Regular, daily freight operations rely more heavily on parallel corridors and freight bypass routes, which has increased the SIS network and expanded the National Highway Freight Network within Florida. Once considered a viable option for only high-value commodities, aviation for freight movement is now common for mid-value commodity movement within and out of Florida. Perishable goods are also more commonly seen on rail as a result of refrigerated containers and the use of photovoltaic cells to fuel the refrigeration units.

It is industry knowledge that natural disasters cause numerous shock and stress factors for logistics providers and freight carriers throughout the supply-chain and across all modes. Prior planning (i.e., emergency preparedness) to import necessary supplies such as fuel, potable water, and food need to be coordinated so they are in strategic locations for rapid delivery post-storm. This requires ample, and appropriate, storage facilities, available truck drivers, and provisions for maintenance of traffic and pre-determined alternative routes to prioritize the movement of these goods to the areas of impact. In order for these operational strategies to be implemented, hardened infrastructure (i.e., emergency mitigation) has been built and/or deployed in order to meet the demands of these system shocks and stresses.

A prime example is the supply-chain resiliency of fuel (petroleum products) used for transportation and back-up generators (i.e., emergency recovery). Prior to a storm, fuel retailers

benefit from having push-button contracts with fuel wholesalers to ensure their supply can keep pace with demand. Also, any fuel retailer within five miles of an evacuation route is equipped with the necessary wiring and transformer capabilities to handle adequate power from back-up generators to keep all fueling stations operational. This does not mean that permanent back-up generators are necessarily installed on-site, but rather that they could be hauled to fuel retailers ahead of a storm as a storm preparation activity. In order to keep up with retailer demand, adequate reserves are imported at the beginning of each hurricane season to appropriate bulk-storage facilities and rack-terminals. Additionally, a denser network of smaller rack-terminals have been developed to more quickly satisfy regional and/or local (in dense urban areas) fuel demand needs.

As a result of the increased adoption of electric passenger and commercial vehicles, roadside photovoltaic cells and inductive charging loops embedded in the roadway have been deployed to ensure vehicles stay charged during emergency evacuations. During evacuations, this is a free service for all highway users but during normal operations they serve as a new source of revenue generation for the state and is offered as an optional service.

Quantified Implications for Freight Infrastructure Resiliency in 2045

According to FDOT's Resiliency Primer, state and local agencies can no longer rely on static historical records to help determine future conditions. Extreme weather events are becoming stronger and more frequent. Significant resources must be allocated to address historic levels of flooding and storm surge impacts. While the private industry and public agencies are attempting to address resiliency through studies, legislation, regulations, programs and executive orders, there is still inherent risk in planning for the unknown.

The FDOT 2018 Risk Assessment on SIS Facilities study "was intended to analyze the Strategic Intermodal System (SIS) highway network to identify critical infrastructure, network risks and vulnerabilities due to impacts of flooding and lay the groundwork for pre-disaster mitigation planning as it relates to all SIS facilities, including retrofitting, adapting or diversifying infrastructure to promote resilience; pre-disaster emergency response planning, and emergency response operations immediately following a flood-event; and longer-term restoration of affected infrastructure."³⁷ The following figures (Figures 3 – 5) and tables (Tables 2 – 4) from the Resiliency Primer illustrate the conditions depicted in this scenario.

³⁷ FDOT – Risk Assessment on SIS Facilities (2018)

http://www.floridatransportationplan.com/pdf/FDOT-SIS_ResiliencePhaseI-TechMemo_wApp_8-22-18.pdf

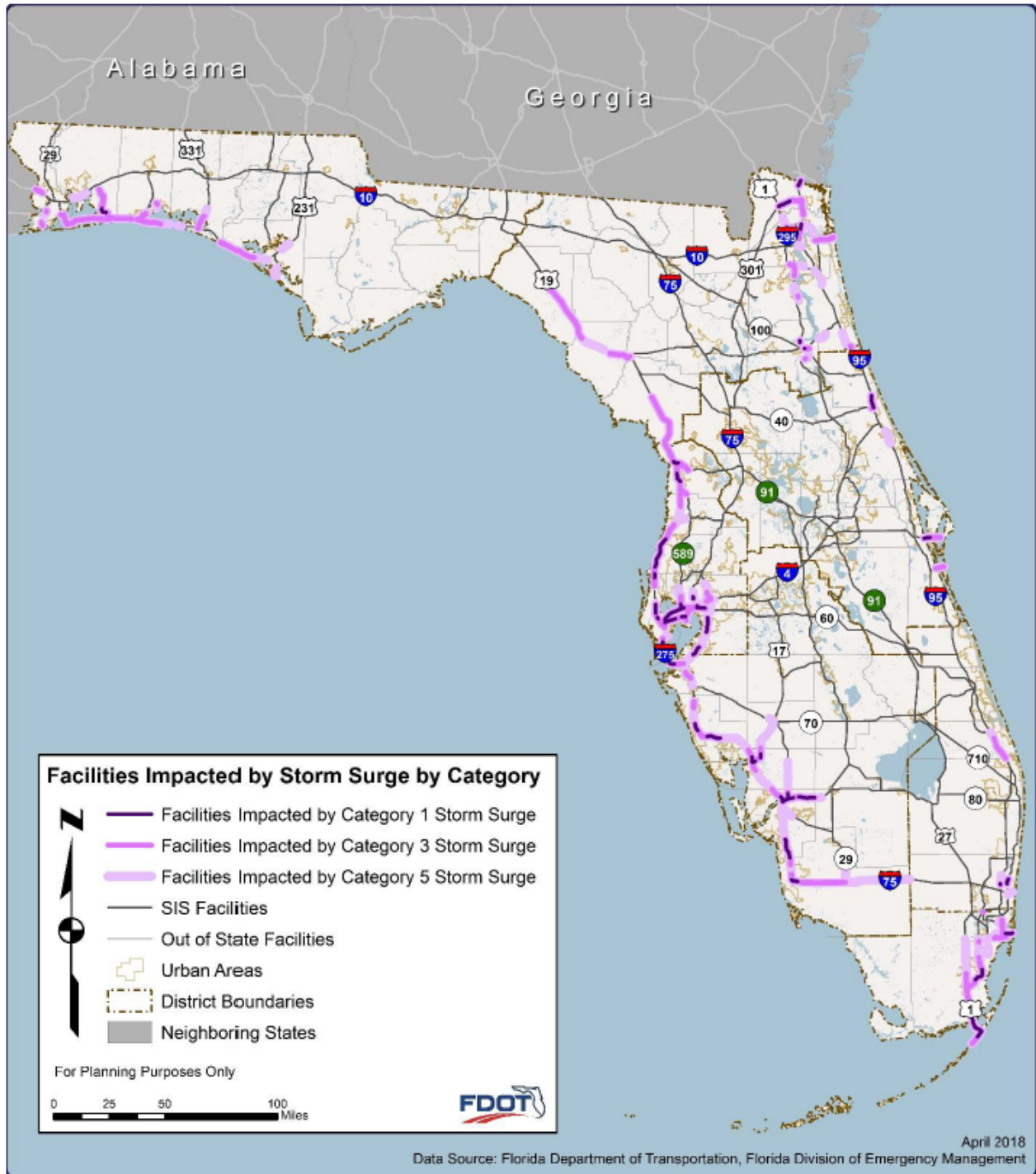


Figure 3 | SIS Facilities Impacted by Storm Surge

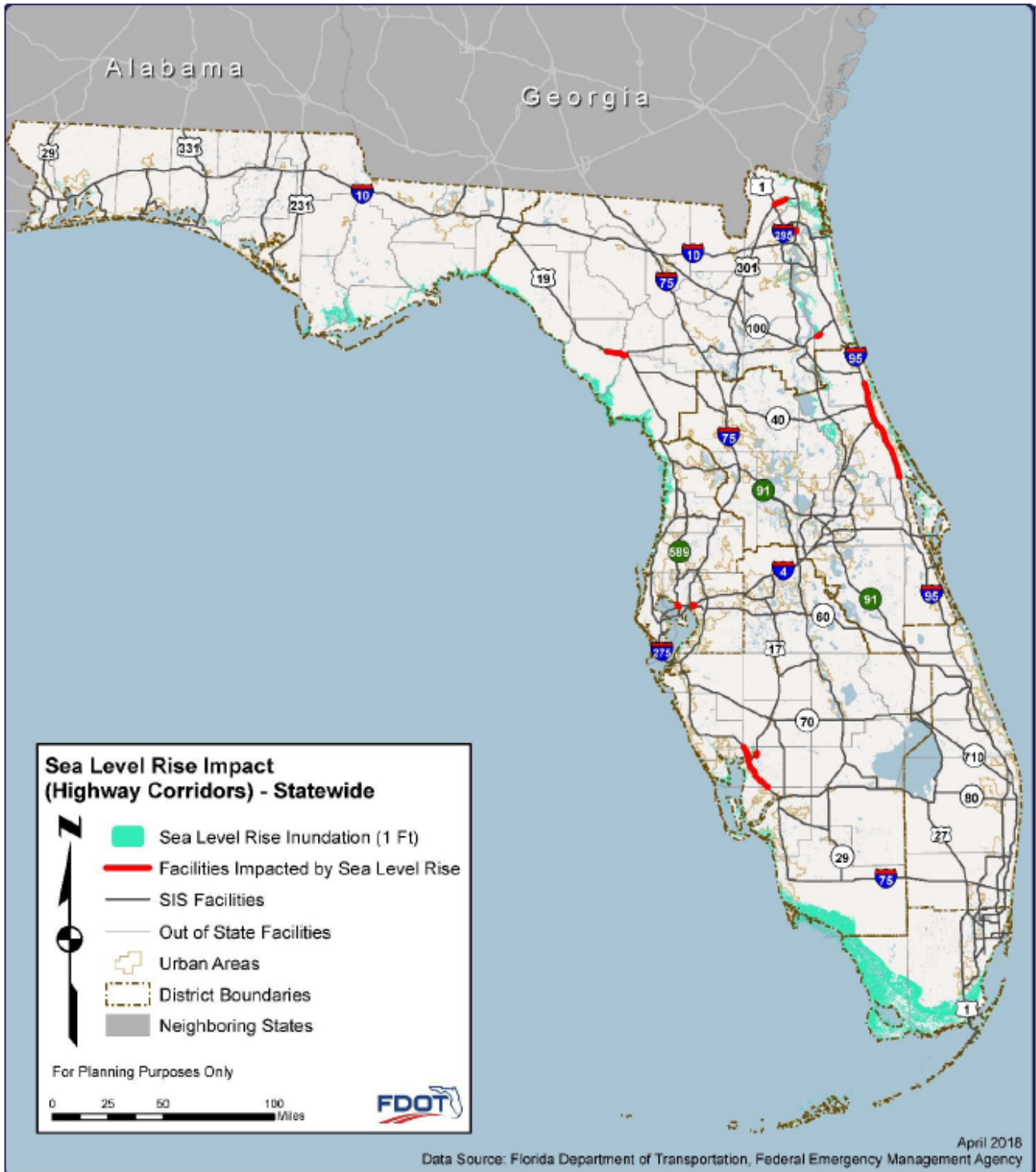


Figure 4 | SIS Facilities Impacted by 1 foot SLR



Table 2 | SIS Facilities Impacted by 1 foot SLR (FDOT SIS 2018)

Name	County	From	To	Centerline	DVMT*
SR 207	St. Johns	Main St	SR 206	1.87	35,041
SR A1A/SR 200	Nassau	Alligator Creek	Griffin Rd	5.59	48,068
I-95/SR 9	Duval	Tallahatch Ave.	Zoo Parkway	1.37	147,698
I-95/SR 9	Volusia	Brevard/ Volusia County Line	Old Dixie Highway	13.94	926,852
I-95/SR 9	Volusia	Granada Blvd.	US 1	1.71	86,135
I-95/SR 9	Volusia	N of Canal St.	Taylor Rd.	1.92	77,949
I-75/SR 93	Charlotte	Duncan Rd.	S. of Harborview Rd.	0.76	49,490
US-17/SR 35	Charlotte	Washington Loop Rd.	Washington Loop Rd.	0.51	5,457
I-75/SR 93	Charlotte	Charlotte/Lee County Line	Charlotte/Desoto County Line	6.70	435,630
US 19/SR 55/ SE US-19	Dixie	300th St.	Dixie/Gilchrist County Line	2.92	35,043
I-4/SR 400/SR 618/ Connector	Hillsborough	E. of 39th St.	11th Ave.	1.38	19,085
SR 60	Hillsborough	W. John F. Kennedy Blvd.	S. of SR 60/ Courtney Campbell Causeway	0.52	73,170

*Daily Vehicle-Miles Travelled

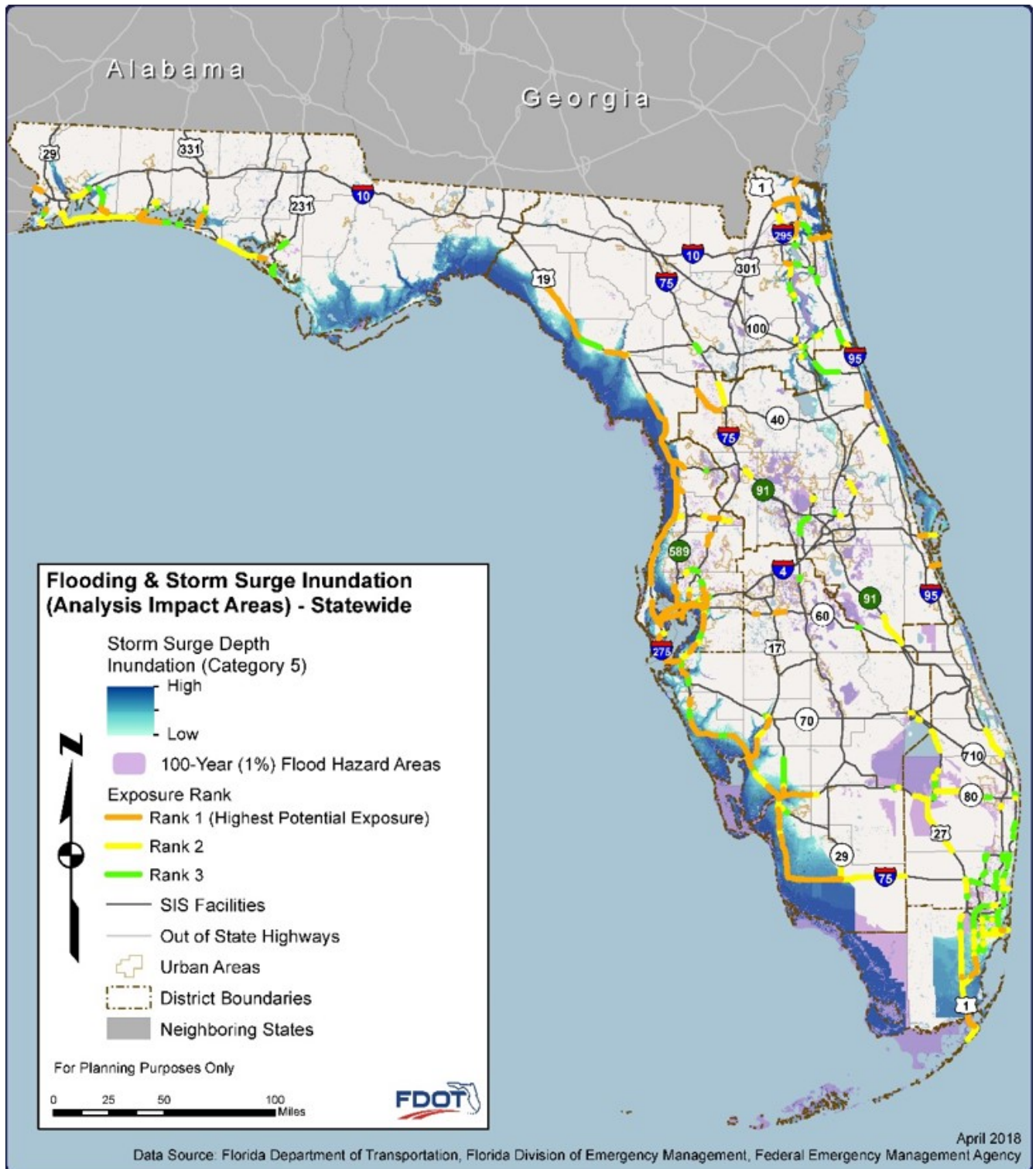


Figure 5 | Flooding & Storm Surge Inundation (FDOT SIS 2018)

Table 3 | SIS Highway Corridors Impacted by Rank (FDOT SIS, 2018)

Rank	Centerline	DVMT	Centerline (%)	DVMT (%)
Rank 1	513	23,924,222	10.8%	11.1%
Rank 2	461	18,663,512	9.7%	8.7%
Rank 3	283	18,973,279	5.9%	8.8%

Table 4 | SIS Bridges Impacted by Rank (FDOT SIS 2018)

Rank	Centerline	DVMT	Centerline (%)	DVMT (%)
Rank 1	64	3,126,645	38.7%	42.4%
Rank 2	11	465,060	6.4%	6.3%
Rank 3	12	613,675	7.3%	8.3%

Significant funding has been provided to remediate damage sustained by the SIS network as a result of hurricanes and other natural disasters. Despite FEMA's assessment that every dollar spent on hurricane surge protection saves \$7, the impacts of climate change will result in additional unknown costs. In addition, since 1989, FEMA has spent more than \$1.23 billion on pre-storm event costs of which more than \$8.73 million was obligated for roads including culvert repair or replacement.³⁸

Economic Case Study: Hillsborough County MPO Vulnerability Assessment and Adaptation Pilot Project

On the Gulf-shore of Florida, critical transportation assets are particularly vulnerable to impacts from sea level rise and storm surge. Several critical roadway and railway links in the SIS network would be under water during a Category 3 storm surge with 2040 projected sea level rise. The Hillsborough County Metropolitan Planning Organization conducted a climate change vulnerability assessment in partnership with the FHWA to identify cost-effective strategies to mitigate and manage risks of coastal and inland inundation for incorporation into their general transportation decision-making processes in addition to informing the county's 2040 Long Range Transportation Plan and its Post-Disaster Redevelopment Plan. The project examined several critical infrastructure assets in the region and evaluated the mobility and economic impacts of scenarios that would involve closing these facilities.

³⁸ Source: "Natural Hazard Mitigation Saves," Federal Emergency Management Agency, January 2018. Available at https://www.fema.gov/media-library-data/1528727738945-e9805d8703ed4a1b02c5e2861b7ac65a/MitigationSaves_FEMA_180611_508.pdf.



One of the links evaluated in this project included a key evacuation route from adjacent Pinellas County to access the Gandy Bridge. Currently, a Category 1 (weakest storm in the five-level scale) storm surge would block this link for approximately 1 week while a Category 3 storm surge would require closure for approximately four weeks. The assessment returned a recommendation to spend approximately \$1.9 M on various adaptation strategies to allow the facility to continue operations compared to the \$3 M cost of facility replacement.³⁹

FMTP Recommendations on Planning for Resilient Infrastructure

Resiliency planning for Florida's critical infrastructure and services is a responsibility shared across many different state, regional, and local agencies, in collaboration with FDOT and a variety of other state and federal agencies. A share of this responsibility falls to FDOT and is addressed through a variety of policy and planning mechanisms. The FMTP is one of those mechanisms, specialized and optimized for freight, and is a component of a larger universe of FDOT initiatives. The challenge for the FMTP is to define a resiliency planning strategy that is specifically oriented and focused to benefit freight movement and advance the goals of the FMTP, consistent with this larger planning and policy universe.

FMTP Recommendation Area #1: Pre-Planning for Resilient Infrastructure

- 1.1. Capacity, Choice and Connectivity. Prioritize policies and investments that ensure the long-term availability of freight handling capacity for Florida's freight shippers, receivers and communities. Promote the choice of multiple freight transportation modes for freight shippers, receivers, and communities, and in cases where service by multiple modes cannot be provided, promote the availability of multiple routes and corridors for the mode that is available. Prioritize policies and investments that promote and enhance the interconnectivity and interoperability of different freight transportation modes, maximizing the chances that transportation services and complex supply chains can be maintained under conditions of stress.
- 1.2. Critical Freight Network (CFN) Identification. Work with partners at the national, state, regional, and local levels to identify a limited core network of the most critical freight transportation infrastructure and facilities for "hardening" – e.g., construction to highly resilient standards or retrofitting/improvement to such standards. This could be the SIS, or a subset of the SIS, or some blend of SIS and non-SIS facilities (including different modes), and should achieve the intent of Recommendation 1.1. The CFN should represent the "minimum operating network" to keep Florida well-served during periods of potentially sustained disruption.

³⁹ Hillsborough County MPO, (2014). Vulnerability Assessment and Adaptation Pilot Project. http://www.planhillsborough.org/wp-content/uploads/2013/10/NoAppendix_Hillsborough-MPO_FHWA-Pilot-Final-Report.pdf



- 1.3. CFN Design Standards. Work with modal system and intermodal facility partners from the public and private sectors to prepare specific definitions of 'highly resilient standards' to implement Recommendation 1.2.
- 1.4. Reduce Future Risk. Encourage investments in freight network or facility improvements in known low-risk areas, when the larger context allows it, except where consistent with Recommendations 1.1 and 1.2 and the CFN Design Standards of Recommendation 1.3.
- 1.5. Focus Federal Freight Funding on Resiliency Enhancements. Coordinate and focus the use of FAST Act freight funds on projects that achieve Recommendations 1.1 through 1.4. Where the state has multiple opportunities to sponsor or support discretionary grant applications for freight projects, support and sponsor projects that are consistent with recommendations 1.1 through 1.4 as a first priority.
- 1.6. Facilitate Multi-Level Program Coordination. Work to establish the achievement of Recommendations 1.1 through 1.5 as priority factors in the preparation of state, regional, and local government investment work programs, plan preparation, project studies, funding applications, supporting the consistent application of resiliency efforts across all layers of government in a collaborative and mutually beneficial way.

FMTF Recommendation Area #2: Pre-Planning for Critical Supply Chain Continuity during Disruptions

- 2.1. Critical Supply Chain (CSC) Identification. Define critical supply chains that must be maintained during and immediately after periods of disruption, prior to full restoration of services. These supply chains include, but are not necessarily limited to, the movement of: fire and life safety protective equipment; food and potable water; fuel and power generating equipment; shelter and building materials; medical, sanitation and comfort necessities; telecommunications and electrical system repair/restoration equipment; personal/property security equipment; and equipment and supplies necessary for immediate clean-up (sandbags, pumps, etc.).
- 2.2. Marshaling, Prepositioning and Move Planning. Identify locations throughout the state, and possibly other states, to marshal and/or pre-position the full range of CSC commodities and equipment. Identify primary and secondary routes and modes between these CSC hubs and areas within Florida where the CSC commodities and equipment could potentially be needed. Identify 'contingency' routes or modes to be used in cases where the primary and secondary options are unavailable. Contingency services could include temporary water operations (via tug/barge or feeder vessel), airlift services where possible, etc. Plan for the procurement of transport equipment to provide such services when needed from federal, state, regional, and private sector partners. Secure the commitment of private transportation service providers where necessary to operate the identified services and supporting facilities and networks.



Recommendation Area #3: Pre-Planning for Rapid Service Restoration after Disruptions

- 3.1. Restoration of Services. Effectively implementing Recommendations 2.1 and 2.2 to accommodate Critical Supply Chain movements will provide impacted regions with immediate resources for emergency operations and construction. Depending on conditions, CSC movements may need to be maintained for weeks via the emergency/alternative routes and modes, although in the best case scenarios, normal routes and modes will become operable for freight movement within days. Construction materials, equipment, and labor necessary to effect rapid repairs to normal routes and modes should be identified, designated for use in areas potentially impacted by disruptions, and – in the case of foreseeable disruptions – made ready for pre-positioning in advance of anticipated events.
- 3.2. Budgeting and Programming. To the extent that effective preparation to implement Recommendation 3.1 may require the acquisition of additional equipment, materials, and labor capabilities, FDOT should identify the budget impacts and work with policy makers to meet potential shortfalls.

Table 5 | Summary of Freight Resiliency Strategies and Adaptations -

Strategy	Pre or Post	Strategy Type	Examples	Stakeholders*
Vulnerability Assessments	Pre	Planning/ Policy	Conducting quantitative analysis of potential impacts of climate changes and other challenges during asset management process.	Local/ State/ Federal
Mitigation measures used in concert with adaptation to reduce climate risks	Pre	Planning Policy	Coordinating land use and transportation infrastructure; supporting innovative technologies; promoting less carbon-intensive freight modes	Local/State
Harden core protected network of critical links and nodes against disaster and flood risk	Pre	Physical Infrastructure	Flood catchment vaults; raise road/rail profile; salt-resistant drainage pumps; levees; raise causeways and stabilize buffer slopes; water plazas and vegetated flood catchment basins; redesign bridge elevations above highest storm surge forecasts; install seawalls; armor erosion-prone slopes; marsh restoration; wave attenuation devices (WADs); enhance roadway base	Local/ State / Federal
Incorporate climate-related risks into the location of future transportation projects	Pre	Planning/ Policy and Physical Infrastructure	Establishing redundancy in transport networks; avoid construction and development of roads and rails in areas vulnerable to floods and storm surges	Local/ State



Strategy	Pre or Post	Strategy Type	Examples	Stakeholders*
Leverage logistics knowledge of transportation companies	Pre	Planning/ Policy	Establish public-private cooperative agreements to engage major freight carriers to plan disaster mitigation, adaptation, and response strategies	State
Evaluate damages caused and costs for repair and compare to other alternatives	Post	Planning/ Policy	Conduct a benefits-costs assessment of repairing or retreating from the infrastructure	Local/ State/ Federal
Develop post-disaster eval. framework for infrastructure performance during & after event	Post	Planning/ Policy	Require measurement and evaluation process of infrastructure performance in disaster recovery and incorporate that into planning and development of repairs or expansion of new facilities	Local/ State/ Federal
Coordinate with utility providers for adaptation of infrastructure put into place functions during preparation and recovery efforts	Both	Planning/ Policy and Physical Infrastructure	Pipeline and other power transmission infrastructure is important to continued operations of intermodal hubs, bascule bridges, and adaptation infrastructure like pumps installed to improve roadway/railway drainage	Local
Plan and implement multi-modal contingency plans for freight transport of emergency materials after disaster events	Post	Planning/ Policy	Using barges to transport emergency materials to areas inaccessible by other modes due to flooding or inundation events	State/ Federal

* Local stakeholders including municipal and county government agencies. State stakeholders include FDOT and FDEM. Finally, Federal stakeholders include FHWA, FRA/PHMSA (e.g., transport of emergency materials) and FEMA.



Scenario 2: Technology Facilitates Higher-Frequency Freight Movements

Introduction

The Internet of Things (IoT) and mobile connectivity will enable purchases and transactions, travel decisions, and work/life balances to be conducted more quickly, and more frequently, than at any point in history. These decisions will enable how individuals interact with society at a micro-temporal scale.

App-based services such as retail purchasing platforms (Amazon), (potentially automated) Transportation Network Companies (TNCs) (i.e. UBER and LYFT), universal mobile fare payment options, on-demand pickup and delivery services, and urbanization will contribute to how/when/why/ where these transactions occur. By 2045, the digital infrastructure and societal behavior will have profound impacts for the freight industry across all modes. To gain insight into a plausible future which accounts for these technological possibilities, the following planning scenario is presented to spur discussion and identify freight planning needs.

Scenario Defined

By 2045, this planning scenario assumes near ubiquity of the aforementioned app-based services. This scenario will focus on the behind the scenes production that enables real-time and dynamic purchasing options and the freight factors that will become significantly more frequent.

Guarantees of one-hour delivery windows require exhaustive amounts of prior planning, research, infrastructure investment, and logistics, all of which is based on business models that are reliant upon highly time-sensitive freight operations. Fulfillment Centers (FCs) are located closer to the consumers within a market area and are specialized by commodity type, rather than retailer (as was the practice in 2019). Locally focused FCs have resulted in more urban warehousing and value-added packaging facilities to satisfy on-demand consumers with a 95 percent delivery reliability.

Following the supply chain, these regional DCs, value-added packaging facilities, urban warehouses, and FCs will be more numerous in every major urbanized area within Florida, while each facility is smaller and more automated than they were in 2019.

On-Demand Pickup and Delivery Services (ODPDS) are the preferred transactional option which has reduced the amount of traditional retail locations, and increased prevalence of FCs. These are the locations where the ODPDS providers assemble individual orders to be delivered to end consumers. The remaining retail locations have converted vast amounts of parking spaces into curb-side management and operations for commuters who choose to pick up orders on their way home from work.

Just-in-Time inventory management and 3D printing capabilities have enabled micro-local production facilities, which results in the transportation of more raw commodities over the road and through ports. This results in a shift within the freight transportation industry to use larger, heavier long-haul trucks to transfer goods from regional DCs to local FCs. Cargo containers have also increased freight movement via maritime and rail modes, allowing heavy trucks to focus on the middle-mile and drayage operations within the supply chain.

Many of these last-mile delivery services rely on Highly Automated Trucks (HATs) which operate nearly non-stop. Tractor-trailer combinations are limited to limited-access facilities, divided highways and connectors leading to DCs and industrial land uses. The frequency of freight deliveries, public acceptance of rideshare platforms, and vehicle platooning technologies has enabled widespread acceptance of truck-only lanes and/or dedicated facilities.

Environmental challenges, diminishing availability of fossil fuels and societal preference has resulted in mass adoption of electric vehicles. Increases in battery performance, including range and recharge times, lower maintenance costs, density of charging stations, and on-demand torque has led the trucking industry to move away from diesel engines. The annual operational cost savings per EV truck over a traditional diesel truck provided a smooth transition from fuel (petroleum) sales tax to the state adoption of an EV recharge sales tax (per kWh). This transition has also significantly reduced community concern about overnight truck idling at truck stops and rest areas. Due to the prevalence of EVs (cars and trucks), nearly every freight facility and truck parking location has installed photovoltaic cells to supply energy for EV charging stations.

New industries have emerged to support these business models. High-tech companies have shifted away from Silicon Valley and global companies operate more on a regional level, allowing for services to be highly adaptable to various societal preferences, trends and demands. Companies that utilize HATs have transportation management and operations centers to monitor their vehicles and remotely operate (via telematics) them under certain conditions. Repair and maintenance technicians require advanced education and training to keep the sensors and computers in good repair. Advanced technology suppliers of all industries, such as sensor manufacturers, require more highly trained staff to keep pace with industry development which also boosts academic institutions. Blockchain, artificial intelligence, and machine learning have become commonplace within freight and logistics operation centers that require computer and data science professionals, which was only being developed in 2020.

By 2045, Florida's [High-Tech Corridor](#) has become a global attraction for innovative research and development while south Florida is established as the nucleus for implementing innovative work/life balance. Freight professionals in the public sector that took heed of these potential changes identified in 2020 were able to adapt and not only reduce governmental lag, but help



set the tone, to keep pace with the private sector for how freight moves in, out and through Florida.

Quantified Implications for Transportation System (SIS) Capacity and Safety in 2045

The following capacity, mobility and safety analyses were conducted for the SIS-led project. The SIS analyses for projected capacity and safety implications were for SIS facilities, statewide, and looked as far as the year 2060. In Figures 6, 7, 8, and 9, the Red vertical line highlights the year 2045, for which this scenario planning is focused. These analyses are not specific to freight-only vehicles, but the underlying assumptions account for a shift of heavy vehicle versus passenger vehicle VMT, e-commerce, and other freight factors. These analyses were also the first look into realistic, plausible expectations of CAV-related impacts on capacity and safety for the State of Florida's highest priority system – The SIS.

The capacity analysis indicates that substantial improvements, given the existing SIS network, can be expected as CAVs enter, and saturate, the U.S. vehicle fleet. These improvements may likely be realized first, and most drastically, within Florida on SIS facilities given the geometric, operational, and geographic attributes of these facilities. The mobility analysis provides insight into alternative capacity impacts that further supports previous scenario planning alternatives, but includes quantification of impacts as evidenced by national CAV research, new technological trends, and observed transportation data on SIS facilities. As the following graphs (Figures 6 – 9) indicate, there will likely be a slight degradation of mobility in the 10-15 year planning horizon, but as CAV adoption increases beyond the 50 percent market threshold (between the years of 2035-2045), positive benefits start to accrue that yields additional capacity as a result of the technologies.

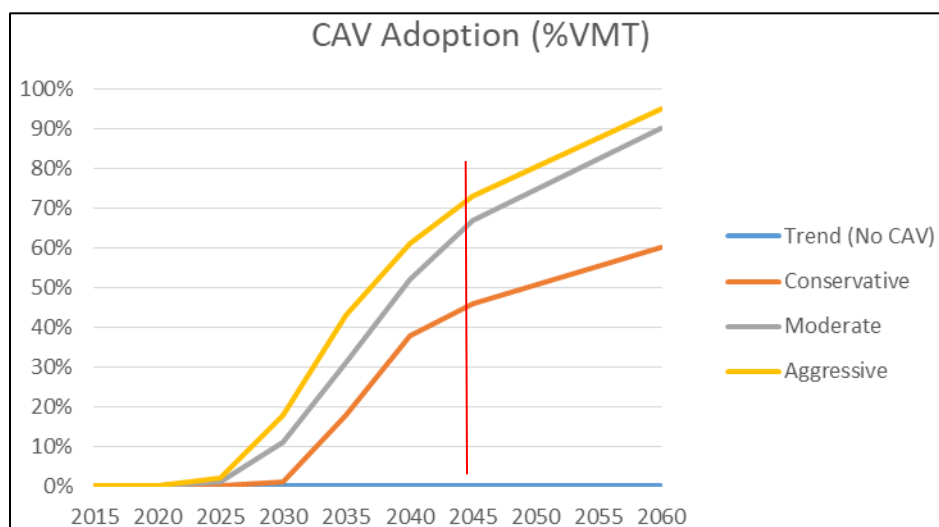


Figure 6 | National CAV Adoption as Percent of Vehicle Miles Traveled (VMT)

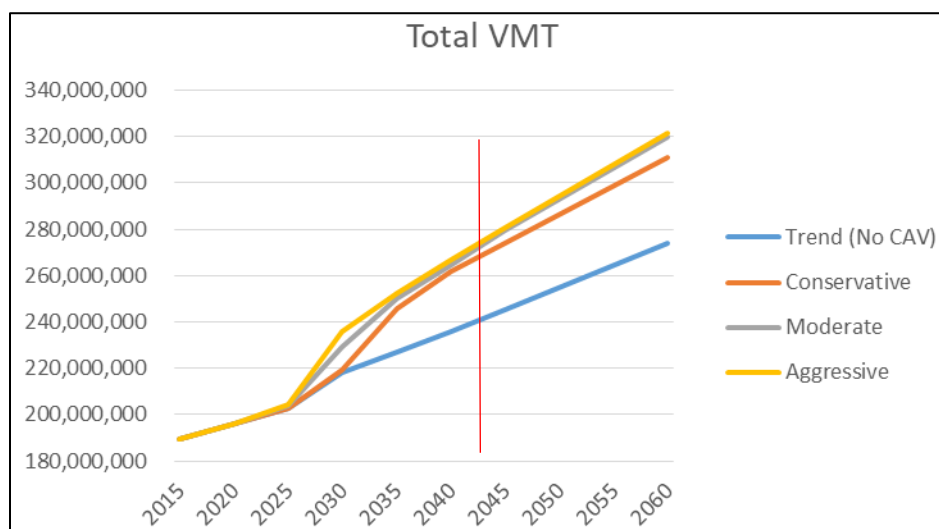


Figure 7 | SIS System-wide Total Vehicle Miles Traveled Projected

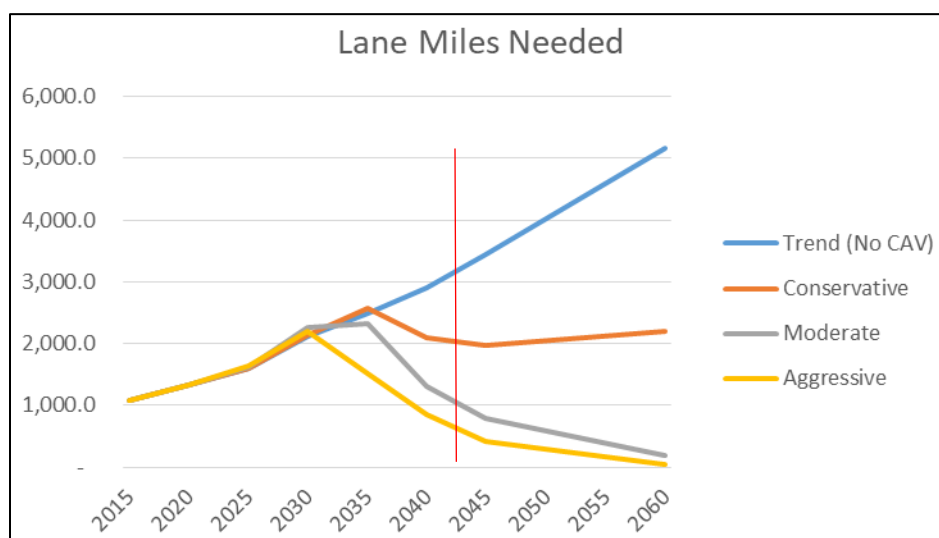


Figure 8 | SIS System-wide Lane Miles Needed

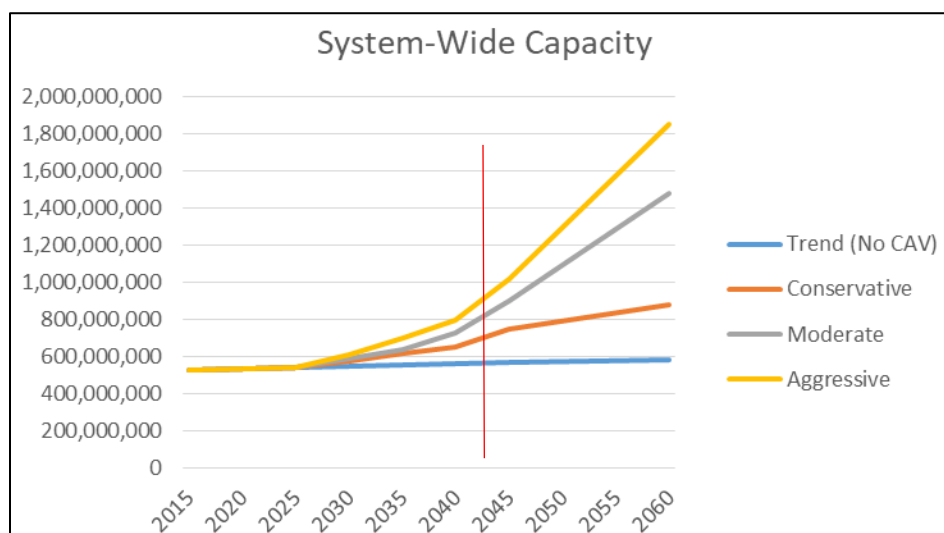


Figure 9 | SIS System-Wide Capacity Projections

If moderate adoption of CAVs is realized, it is expected that system-wide capacity will significantly increase due to improved efficiencies and reduced crashes as a result of advanced vehicle technologies operating on SIS facilities. A significant reduction in crashes will increase traffic throughput since non-recurring congestion associated with crashes will be reduced, effectively increasing capacity. In such a scenario, traditional capacity added to the system by way of additional lane miles may be not necessary and such investments may not be the best use of public resources. Rather, improving roadway characteristics and deploying smart infrastructure will enhance advanced vehicle technology effectiveness, thereby resulting in additional capacity gains.

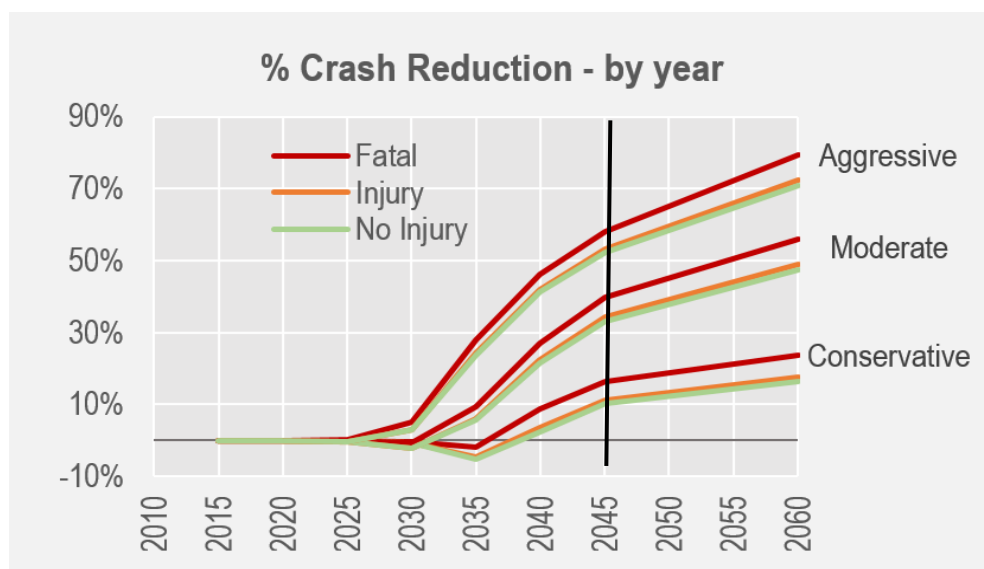


Figure 10 | SIS System-wide Crash Reductions by Year with CAV Factors Incorporated

As depicted in Figure 10, the safety analysis indicates that, with conservative adoption of CAVs, the annual reduction in fatal crashes is approximately 15 percent by 2045. Forty percent of all fatal crashes annually could be prevented by 2045 with a moderate adoption rate of CAVs. Finally, approximately 60 percent of all annual fatal crashes could be prevented by 2045 assuming an aggressive, yet plausible, adoption rate of CAVs. The assumptions and parameters for safety and CAV are defined in Figure 11.



Basic Safety Trend Assumptions (User may modify)			
	Conservative	Moderate	Aggressive
Ultimate reduction factor for crash RATE expected with CAVs (vs. FL benchmark) [100% = no change]	50%	35%	20%
How far toward the ultimate rate CAVs will be by 2060 ("nearl y ultimate" rate)	99%	99%	99%
Initial reduction factor (or increase if >100%) in crash rate when CAVs first introduced (vs. benchmark)	120%	100%	80%
Trillions of miles CAVs will need to travel in the US before the "nearly ultimate" crash rate is reached	10.0	10.0	10.0
Likelihood that CAV fleet already deployed in a given future year will be able to adopt/evolve to that year's model CAVs' ("state of the art") safety characteristics	5%	20%	50%
How much each crash type will increase/ decrease in response to CAVs, compared to the average			
K - Fatalities	70%		
A - Incapacating Injuries	80%		
B - Noncapacating Injuries	90%		
C - Possible Injury	100%		
O - No Injury	100%		

Figure 11 | Basic Safety Trend Assumptions/ Parameters



FDOT identified several transportation impacts and action items to help prepare Florida for a future that resembles this scenario (Table 6).

Table 6 | Technology Scenario Action Items

Transportation Impacts	Potential Action Items/Needs
Dedicated lanes/facilities for trucks	Signage Striping (for CAVs) Policy
More frequent last-mile delivery vehicles	Enhanced curb-side management strategies
Highly Automated Vehicles create the need for CAV-Ready infrastructure	Pavement markings, signage, traffic signal contrast, etc. for effective machine-vision recognition of roadways in all conditions C-V2X RSUs and adequate signal controllers, and supporting backhaul communications (fiber optic cabling, wireless radios, etc.) to enable the exchange of safety critical Basic Safety Messages (BSMs) for Infrastructure-to-Vehicle (I2V) applications More frequent inventory of roadway characteristics for asset monitoring and maintenance HD mapping to support Highly Automated Vehicles and locational reference markers (to supplement GPS accuracy)
Highly Automated Vehicles wide-spread use results in reduced demand for truck parking locations, as automated trucks do not meet FMCSA HOS requirements	Do not overbuild truck parking spaces. Re-purposing stranded assets in the future should be a consideration in the planning process.
More, smaller production facilities located closer to urbanized areas	Increase in SIS Highway Connectors May need to consider lower functionally classified roadways for SIS eligibility
Urban warehouses to support on-demand delivery services	Curbside management strategies
Drone delivery	Service providers may opt to implement use of drones in lieu of paying roadway user fees



Scenario 3: Export Growth and Productivity-Enhanced Economy

Introduction

This scenario focuses on economic resiliency by enhancing productivity-oriented strategies for the State of Florida. The scenario defines how Florida could position itself to be a major pass-through and value-added logistics hub for the year 2045.

Scenario Defined

This scenario discusses the nature of Florida's economic drivers, and how further diversification of its freight portfolio can enhance economic resiliency over the long term. Florida is primarily a consumer state, given the imbalance of goods entering the state versus the volume leaving. Truck empty back haul is identified as a major issue facing the freight industry within the state. In addition to traditional means of improving productivity and, therefore, growing the economy – the attraction of value-added and mid-level manufacturing facilities could increase exports (and imports) to establish Florida as a pass-through hub across multiple supply chains. Another primary mission of FDOT is to enhance economic prosperity, which can be achieved by reducing bottlenecks and challenges in the freight industry.

Background

To envision the improved alternative scenario, it is instructive to briefly review some of the historical experience and forecasted future baseline trends in Florida's economic indicators. (See Table 7 for summary growth rates.)

While the Sunshine State has historically enjoyed relatively strong growth and achieved high levels across different socioeconomic metrics,⁴⁰ these key indicators show that in the future, while still projected to grow through 2045, Florida's maturing economy is expected to

do so at a decelerated pace. This slower growth, combined with other factors, will have impacts on freight movement in Florida, and presents an opportunity for investments in the state to steer its future onto a desirable prosperity path.

Table 7 | Summary Economic Growth Rates (Florida)

	1990-2018 Annual Growth Rate	2019-2045 Annual Growth Rate Forecast
Gross State Product	3% ¹	2.1% ¹ to 2.6% ¹
Employment	2.1% ¹	1.1% ¹ to 1.5% ¹
Visitors (Tourism)	4.1% ¹	3.4% ¹
Population	1.8% ¹	1% ¹

⁴⁰ For instance, Florida's GSP is currently fourth largest among the American States, and 17th in the World when compared to national economies, according to the U.S. BEA, and Florida Chamber of Commerce.



Components - Potential Investments for More Robust Economic Growth

Freight movement is correlated with economic growth, which is driven by increased productivity (Rodrigue & Notteboom, 2019). In turn, productivity is determined by the labor force - fundamentally determined by human capital, physical capital, technological progress, and entrepreneurship (Mankiw, Romer, & Weil, 1992; and McConnell, Brue, & Flynn, 2018). Changes in productivity largely dictate what businesses can afford to compensate their workers, which impacts consumer expenditures and influences living standards. Ultimately this will affect freight movement and business revenues and profits (Van Ark & McGuckin, 1999). By influencing the factors behind productivity, and labor force growth will determine future performance of the Florida economy and its related freight needs.

Human Capital/Employed Labor Force

Employed labor force is a function of persons employed, which in turn depends on population size.⁴¹ Florida's future population is expected to grow, but at a slower pace. To keep the state's population growing may entail various strategies, such as providing access to quality healthcare and educational facilities, as well as clean environment, and public safety and security, complemented by varied employment opportunities, and creative out-of-state marketing to potential target audiences. This all translates to a "healthier economy."

Technology

Technological progress is where Florida can shine. This will, however, entail consistent investments in innovation technologies and related Research and Development (R&D). Such R&D could pertain to citrus fruit-related disease eradication, healthcare (particularly related to the elderly, given the aging demographics in the state), higher education, robotics, 3D printing, ACES (Autonomous, Connected, Electric, and Shared) vehicle technologies, supply chain logistics for brick-and-mortar and e-commerce, and tourism. Strong technological progress and education are closely intertwined as highly educated labor force makes development and implementation of innovation into productive uses and growth inducement possible (McConnell, Brue, & Flynn, 2018).

Physical Capital

Increased stock of physical capital⁴² will need to be in place to support and accommodate higher economic growth and freight movement. This would include advanced transportation networks/hubs across all the modes, including Space Travel cluster around Cape Canaveral, with well-integrated multimodal/intermodal connections within the state and from/to origins and

⁴¹ Labor force includes persons 16 years of age or older that are employed or are unemployed and seeking work (McConnell, Brue, & Flynn, 2018).

⁴² Physical capital refers to machinery, equipment, and other capital means including infrastructure used in producing goods and services (McConnell, Brue, & Flynn, 2018).



destinations out-of-state. Other infrastructure, such as water resources, telecommunications, and energy will also need to be developed and functioning at a higher level of technology and accessibility to business and consumers. Such advanced infrastructure systems will be agile and resilient to a wider spectrum of shocks, making the cost of doing business and living more affordable, increasing attractiveness of Florida for economic activity.

Value Added Manufacturing

By focusing investments in this area – with the target on applying this capacity on goods destined for export - the State has an opportunity to increase overall exports globally and to other states.

Institutional/Entrepreneurial Arrangements

Various growth-supportive institutional arrangements will be in place to bolster entrepreneurial spirits and overall dynamism of the Florida economy. These will include:

1. *Fortified property rights* to build trust and encourage ownership and maintenance of private property and the related returns on investment;
2. *Greater free trade* stimulating efficient specialization and dissemination of new ideas inducing innovation leading to faster growth;
3. *Strengthened patent and copy rights processes* to encourage inventors and entrepreneurs to create and sell their innovative ideas from Florida;
4. *Expanded efficient financial sector* supporting flows of savings into productive investments through various markets including bonds, equities, venture capital, real estate, other innovative capital funding and financing; as well as
5. *Improved business climate* including streamlined regulations, tax structures, growth-targeted government expenditures within the balanced budget constraint, and various productive public-private partnerships to stimulate investments and incremental growth (Florida Chamber of Commerce, 2017; Florida Chamber Foundation, 2017; McConnell, Brue, & Flynn, 2018).

Recommendations

Based on the conditions outlined in this economic scenario, it is recommended for the state to support investments in:

1. *Human Capital* includes education at all levels from K through graduate school. Retraining the labor force is necessary for the advanced production processes of the 21st century and globalizing the knowledge economy. State agencies could also make concerted efforts to attract the best and the brightest talent from out of state to settle in Florida and productively apply their skillsets to contribute to the state's economic



performance. Such efforts would entail investments and maintenance of the various natural resource/amenities that have made Florida a very attractive place to visit and reside in decades past.

2. *Physical Capital* in the form of expanded and enhanced infrastructure. Firstly, transportation networks and hubs need to be modernized to accommodate the expected future freight (and passenger) movements. This will encompass the different modal facilities serving all kinds of movements from interstate and international cargo movements to the last mile and parking. Incorporating ACES technologies, where Florida is already among the national leaders, should be an important part of this larger investment to modernize freight movements in Florida. Additionally, support for investments in other infrastructure such as advanced telecommunications, water infrastructure, and strong and sustainable energy supplies will be needed.
3. *Innovative technologies* through fostering research and development, particularly as it pertains to the industry clusters of opportunity (Florida Chamber Foundation, 2017), including: Aerospace and Aviation, Life Sciences, and Tourism where Florida has been in the leadership position, and can further boost its advantages to spill into the larger freight and overall future economic activity.
4. *Institutional arrangements* to promote dynamic, competitive forces to elevate economic growth. This should include minimizing red tape while maximizing property rights, as well as copyright and patents protection. Additionally, casting export tentacles wider through increased trading relationships domestically as well as internationally, particularly in Florida's natural sphere of trade in Latin America, and the Caribbean, including eventual liberalization of Cuba, would be beneficial to bolstering freight, innovation, and larger economic activity expansion.
5. *Advanced Manufacturing and Export Development*. By leveraging and capitalizing on Florida's strengths as an advanced manufacturing center and global gateway, the state can not only create jobs that add value to exported goods, but increase Florida's share of U.S. exportation overall.

Support in the form of partnerships and various incentives in all these growth-contributing factors is likely to yield positive return on investment in both the freight sector and overall economy of Florida.

While the focus of this scenario is on the improved economic performance in the long-term, there will inevitably be business cycle-related fluctuations (recessions, slowdowns, and recoveries) and other challenges that residents and commercial entities in Florida will encounter. Also, some of the developments, such as more open trade may prove to be controversial as adjustments and reallocations take place; however, globalization/open trade has been a very



powerful source that has improved economies and people's lives. Further, globalization can lead to larger productivity gains and choice improvements with overall benefits outweighing the costs (Gerber, 2011). Freight and trade are tightly interwoven, and enhanced partnerships with Florida's existing and potential domestic and foreign trade partners will have overall positive spillovers onto freight movement and economic growth. It should also be acknowledged here that while the various Florida agencies and decision makers will have critical roles in shaping the enhanced productivity scenario and its impacts on freight, a number of drivers, such as federal fiscal and monetary policies, as well as various geopolitical events will remain largely outside of Florida's sphere of control.

Nevertheless, the state decision makers can chart an elevated growth trajectory, combined with a well-functioning freight system, for sustainably enhanced prosperity of Floridians for generations to come.

SWOT Analysis

A Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis was conducted based on the comprehensive reviewed outlined in Technical Memos 2, 3, 4 and 5. This SWOT analysis started with the 2019 objectives outlined in Technical Memo 1 (reiterated in Table 8) and helped determine the FMTP recommendations outlined above.

Table 8 | 2019 FMTP Objectives

Issue	Objectives
Safety and Security	<ul style="list-style-type: none">• Leverage multisource data and technology to improve freight system safety and security.
Agile, Resilient, Quality	<ul style="list-style-type: none">• Create a more resilient multimodal freight system.• Ensure the Florida freight system is in a State of Good Repair.
Efficient & Reliable Mobility	<ul style="list-style-type: none">• Drive innovation to reduce congestion, bottlenecks and improve travel time reliability.
Transportation Choices	<ul style="list-style-type: none">• Remove institutional, policy and funding bottlenecks to improve operational efficiencies and reduce costs in supply chains• Improve last mile connectivity for all freight modes.
Economic Competitiveness	<ul style="list-style-type: none">• Continue to forge partnerships between the public and private sectors to improve trade and logistics.• Capitalize on emerging freight trends to promote economic development.
Quality Places	<ul style="list-style-type: none">• Increase freight-related regional and local transportation planning and land use coordination.
Environment & Conserve Energy	<ul style="list-style-type: none">• Promote and support the shift to alternatively fueled freight vehicles.



The team reviewed the systems and assets Florida has to offer and subsequent performance and conditions, respectively outlined in Technical Memos 2 and 3. The team then examined freight transportation industry trends and issues/needs Florida experiences, respectively outlined in Technical Memos 4 and 5.

The team subsequently conducted a comprehensive qualitative analysis of current strengths and weaknesses based on state and federal transportation policy/funding priorities and general goods movement/transportation challenges; e.g., economic development, funding, technology, environment/sustainability, population/quality of life, and the state's current state of transportation infrastructure. The team also considered external opportunities and threats based on current issues throughout the United States and specific to Florida (e.g., sea level rise and truck parking).

A comprehensive list of issues by type (e.g., economic development) was developed and collaboratively vetted, given the foci of comprehensively considering issues including "Resilience" as a strength and "Climate Change" as a threat. The alternative, complimentary issue was to avoid duplicating issues between internal strengths and weaknesses such as "Freight Priority/Funding Focus" and a lack of transportation funding when infrastructure investment is typically considered a critical issue. The result of this analysis and the vetting process is outlined in Table 9.⁴³

⁴³ The 2019 FMTP and resulting SWOT analysis support the FDOT mission to ensure the mobility of people and goods, enhanced economic prosperity, and preserve the quality of environment and communities.



Table 9 | Florida Freight SWOT Analysis

Strengths	Weaknesses
<ol style="list-style-type: none">1. Strategic Intermodal System (SIS)2. Freight leadership and foresight3. Multimodality and connectivity4. Resiliency5. Proximity to Latin America6. Industry diversity7. Legacy of Public-Private Partnership8. Culture of technological innovation9. Freight Priority/Funding Focus10. Environmental Stewardship	<ol style="list-style-type: none">1. Truck Parking2. Growing, Aging Population3. Domestic Freight Imbalance4. Roadway Congestion
Opportunities	Threats
<ol style="list-style-type: none">1. Advanced Manufacturing2. Automated Vehicle (AV) Technology3. Alternative Fuels4. Advanced ITS5. Airport/Seaport Expansion6. Trade Growth	<ol style="list-style-type: none">1. Climate Change2. Trade Barriers3. Driver Shortage

Strengths

These ten strengths can support Florida's freight system. They also highlight the state's ability to be a leader in maintaining, modernizing, and expanding Florida's freight system to support industries, economic development, and quality of life needs. See Table 9 below for a description of each strength.

Table 9 | Florida Freight Strengths

Strength	Description
Strategic Intermodal System (SIS)	Florida is the only state to have legislatively designated a "Strategic Intermodal System," supporting critical facilities on the multimodal system. The SIS includes highways, railroads and terminals, airports, seaports, and Florida's spaceport.
State leadership and foresight	The state has a proactive approach on goods movement issues that involve all modes - seaports, highway, freight rail, aviation and spaceports. Efforts include developing funding programs, applying for federal funding to address challenges such as truck parking, and focusing on natural gas to supply energy.



Strength	Description
Multimodality & Connectivity	Florida serves as an air cargo and maritime global gateway to the Americas. The State is a multimodal leader, based on having 15 ports that serve different markets throughout the world and commodity/cargo types. It also has three internal primary north-south highway corridors including I-95, I-75 and the Florida Turnpike that help comprise 122,000 miles of roadway. Further, it has 15 freight rail providers using 3,000 miles of track.
Resiliency	The State has been focused on improving the reliability, recoverability and durability of transportation infrastructure due to its experience with 48 storm events since 1980. Most recently, the development of the 2018 "Transportation Resilience Primer" highlights the state's focus on resiliency.
Geographic proximity to Latin America	The State's location and expansive coastline provide it an inherent strength to leverage seaport market share and expeditiously handle goods entering the Southeast United States. It also offers good highway and freight rail access to the Midwest consistent with current efforts to provide deeper draft access to Miami and JAXPORT.
Industry diversity	The State economy relies on six primary industries to support jobs and goods movement to serve its population growth. These include tourism, agriculture, international trade, aerospace and aviation, life sciences (e.g., pharmaceuticals and R&D), and financial services.
Public-Private Partnerships	Florida has been a national leader in the development of P3 transportation projects. This includes I-4 Ultimate, the PortMiami Tunnel, and multiple projects along or in the I-95 Corridor.
Culture of technological innovation	FDOT has implemented transportation technology to increase capacity, throughput, and safety; e.g., the state's Truck Parking Availability System.
Freight Priority/Funding Focus	In 2003, the state developed the Strategic Intermodal System, a high priority network of transportation facilities supporting the state economy. The state also funds freight infrastructure development through eight other programs including the Strategic Port Investment Initiative, Intermodal Development Programs, Economic Development Funding, Intermodal Logistics Center Infrastructure Support, Transportation Regional Incentive, P3, State Infrastructure Bank, and Economic Development Transportation Fund Programs.



Strength	Description
Environmental Stewardship	In 2017, Florida Power & Light closed its last coal-fired plant to provide energy to residential, commercial and industrial (transportation-sector) customers. It has subsequently replaced coal with natural gas moved by pipeline. Further, the state has ensured that mangroves and manatees are protected, including in the middle of a large economic generator (Port Everglades). Moreover, FDOT has prioritized the development of express lanes to help reduce congestion and vehicle emissions. Finally, it has worked with Florida Highway Safety and Motor Vehicles (FLHSMV) to issue HOV decals and allow Inherently Low Emission Vehicles (ILEV) and Hybrid vehicles certified by the U.S. Environmental Protection Agency drive in HOV lanes at any time regardless of their occupancy.



Weaknesses

There are four weaknesses affecting Florida's freight system. Table 10 shows the weaknesses and respective descriptions.

Table 10 | Florida Freight Weaknesses

Weakness	Description
Truck parking	While the State has been instituting the real-time Truck Parking Availability System, demand exceeds available parking along I-4 and along I-95.
Shrinking workforce capacity	Florida's median age has steadily increased from 40.7 to 42.9 years old since 2010. ⁴⁴ This is based on a net in-migration (growing population) of permanent residents to the state as well as a national trend in which older adults are projected to outnumber children (aging population) by 2035. ⁴⁵ This trend could translate to future workforce availability challenges.
Domestic freight imbalance	Based on the increasing State population, inbound goods movement outweighed outbound goods movement in 2015 by more than 75,000 tons. ⁴⁶ According to the Weigh-In-Motion (WIM) data, more than half of trucks entering Florida in 2015, 2016, and 2017 were full while only 38 percent leaving the state were fully laden.
Roadway Congestion	Roadway congestion has a significant impact on cargo movement. For example, trucks in Miami experienced 11,000 hours of wasted time in traffic resulting in \$593 million in lost productivity and wasted fuel, and 21.9 million gallons of excess fuel due to congestion.

⁴⁴ Source: U.S. Census Bureau. Available at

<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk#>.

⁴⁵ Source: "Stats for Stories: National Senior Citizens Day: August 21, 2019." Newsroom, U.S. Census Bureau. Available at <https://www.census.gov/newsroom/stories/2019/senior-citizens.html>.

⁴⁶ Source: "Freight Analysis Framework," Federal Highway Administration, August 13, 2019.



Opportunities

There are five opportunities that Florida can further leverage to foster job growth and support its economy. Table 11 shows the opportunities and respective descriptions with the suggested timing to advance initiatives.

Table 7 | Florida Freight Opportunities

Opportunity	Description
Advanced Manufacturing	Florida's 19,000 manufacturers employ more than 330,000 employees. Almost 70 percent of manufacturing employees hold an Associate's degree or higher. ⁴⁷
Develop new sustainable energy sources	The state has actively supported alternatively fueled vehicles – including liquefied natural gas, solar energy and electric vehicles.
AV Technology	Connected and automated vehicles have the potential to reduce crashes, emissions and alleviate the truck driver shortage.
Advanced ITS	ITS solutions have the potential to increase operational capacity and safety of the transportation network.
Airport/Seaport Expansion	Florida's position as a gateway to the Americas can be expanded with further development of seaport and air cargo related airport expansion.

⁴⁷ Source: "Manufacturing," Enterprise Florida. Available at <https://www.enterpriseflorida.com/wp-content/uploads/brief-manufacturing-florida.pdf>.



Threats

There are three threats facing Florida that it should address. Table 12 shows the threats and respective descriptions with strategies for consideration to minimize impacts.

Table 82 | Florida Freight Threats

Threat	Description
Climate Change	Florida has experienced severe weather events at a more frequent rate. Furthermore, these storm events have been consistently more severe than in the past. This has required periodic delays to goods movement based on the occurrence of natural hazard events with greater effects in Florida. Rising sea levels threaten seaports and other infrastructure including rail lines and roadway networks.
Trade Barriers	Trade barriers are a significant threat to Florida economy. Florida is the 17th largest economy in the world, ⁴⁸ and 232,300 Floridian jobs relied on exports in 2016. ⁴⁹ No matter the current status of trade agreements, Florida can mitigate this long-term threat by diversifying their trading partners.
Workforce shortage	Florida's logistics industry is facing a workforce shortfall. Most visibly, the trucking industry is experiencing a shortfall of available, qualified drivers and mechanics. Florida is reliant on the trucking industry for many critical goods (e.g., fuel, food, etc.), so a driver and mechanic shortage can impact the availability and cost of many inputs and finished goods.

⁴⁸ Florida Chamber of Commerce, 2017.

⁴⁹ Source: "Jobs Supported by State Exports, 2016," International Trade Administration, Office of Trade and Economic Analysis - Industry and Analysis, December 2017. Available at https://www.trade.gov/mas/ian/build/groups/public/@tg_ian/documents/webcontent/tg_ian_005558.pdf.



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Freight Mobility and Trade Plan

Technical Memorandum 6
Project Prioritization and Selection

April 2020



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Project Prioritization and Selection

The freight project selection and prioritization process is the foundation of the FMTP investment element. The process for selecting, prioritizing, and programming freight projects for funding through sources in FDOT’s Freight and Multimodal Operations (FMO) Office adheres to two guiding principles. First, the methodology needs to be objective, consistent, data-driven, and transparent to all involved in the process. Second, the methodology needs to have the flexibility to align with several facets and tenets that characterize freight mobility and freight system user needs. The FMTP freight project methodology is defined in several steps as described in Figure 1. This methodology allows FMO and other FDOT modal offices to retain control in determining how and when to program and implement specific freight projects pursuant to federal and state funding programs. The complete process provides structure, flexibility, and integrity which equips FMO and the other FDOT modal offices with a decision-making process that ensures projects with the greatest benefit to the state freight system are advanced.

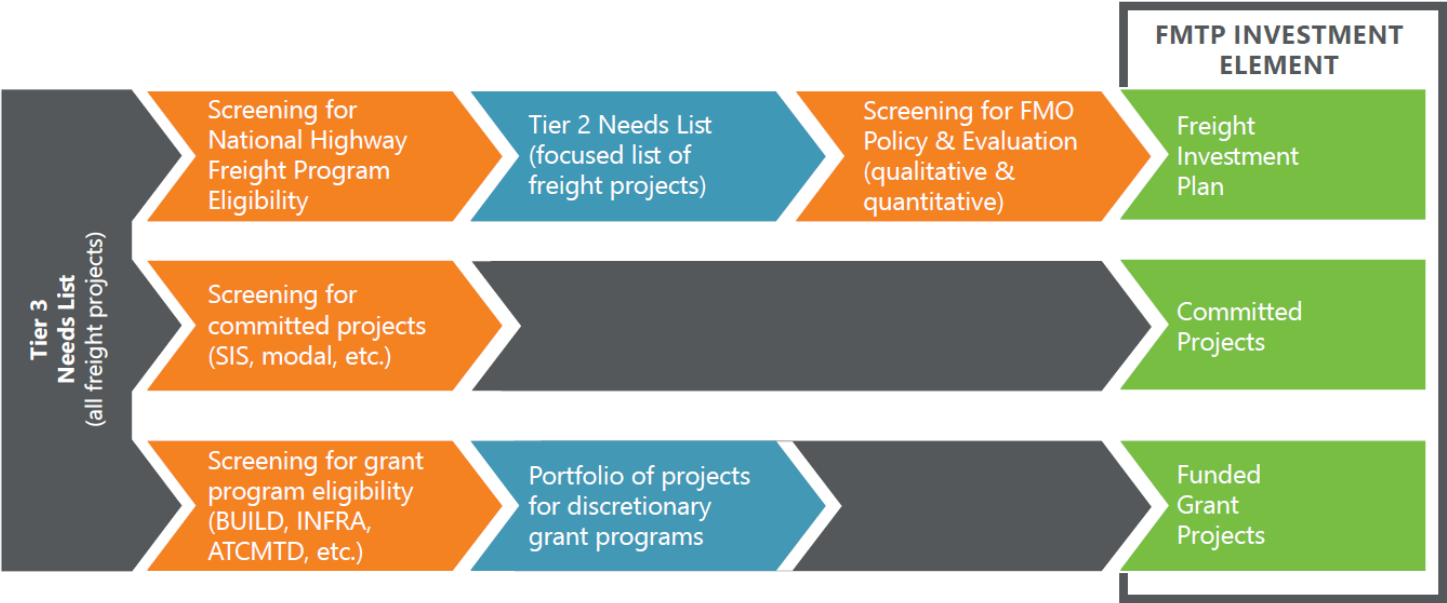


Figure 1 | Visualization of Prioritization Process

The freight project selection and prioritization process was developed in late 2019 as part of the FMTP update. FMO will transition to this process over the next fiscal year. During the one-year transition, FMO will partially implement the process with only the quantitative analysis of projects. Rather than a call for projects in FY19, FMO will utilize the existing Tier 1 project list.



Step 1: Identification of Projects

The process begins with a call for freight projects by FMO. This request is disseminated to the FDOT Districts, MPOs, local jurisdictions, the FLFAC, and other freight stakeholders. FMO also conducts statewide data-driven analysis of issues and needs to identify projects. A Tier 3 Needs List is compiled based on statewide analysis and input from all parties involved. For the purposes of this plan update, a list of freight projects were developed from existing sources - Five Year Work Plan, JACIP, FDOT Rail Plan, NHFP FMO project list, MPOAC project list, SIS First Five, SIS Second Five, SIS Cost Feasible Plan, and the SIS Multimodal Unfunded Needs list. This consolidated list of all freight projects in the state is the Tier 3 list of projects (refer to Appendix A).

Step 2: Project Classification and Funding Eligibility Screening

FMO screens the Tier 3 Needs List and advances committed projects to the Investment Plan. Additionally, projects which show significant potential as a federal discretionary grant contender are grouped in a portfolio and advanced to the Investment Plan as they are funded. Remaining projects are screened for National Highway Freight Program funding eligibility, resulting in a Tier 2 Needs List.

Subsequently, the Tier 2 Needs list will be further screened using the FMO policy framework as described in Table 1. The Tier 2 list of projects are included in Appendix B.

In addition, freight projects funded by FMO should align with the following criteria:

- NHFP fund allocation should not exceed more than \$20 million per project per year
- Projects must be ready to implement within 36 months.
- Projects must be completed within 6 years.
- Projects must be located on the National Highway Freight Network.
- Clearly identify the need(s) and develop the business case to justify project selection
 - i. A project need must support the freight needs of the state
 - ii. The project should include information and data that describes what problem and issue the project will solve
 - iii. Where multiple issues exist, a series of projects may be considered as the projects could be mutually supporting. However, each project must have independent utility.



Table 1 | FMO Project Screening Policy - Eligible Project Types

NHFP Eligible Project Types	
	<u>Project Type</u>
i.	Development phase activities including planning, feasibility analysis, revenue forecasting, environmental review, preliminary engineering and design work, and other preconstruction activities.
ii.	Construction, reconstruction, rehabilitation, acquisition of real property (including land relating to the project and improvements to land), construction contingencies, acquisition of equipment, and operational improvements directly relating to improving system performance.
iii.	ITS or other technology to improve the flow of freight.
vi.	Railway-highway grade separation.
vii.	Geometric improvements to interchanges and ramps.
viii.	Truck-only lane
xi.	Truck parking facilities (as were eligible under MAP 21 section 1401).
xii.	Real-time traffic, truck parking, roadway condition, and multimodal transportation information systems.
xviii.	Intelligent transportation systems that would increase truck freight efficiencies inside the boundaries of intermodal facilities.
xix.	Additional road capacity to address highway freight bottlenecks.
xxii.	A highway or bridge project to improve the flow of freight on the National Highway Freight Network (beyond those scopes already previous described).
xxiii.	Any other surface transportation project to improve the flow of freight into, or out of, one of the following facilities:
	a. Public or Private freight rail facilities.
	b. Public or Private water facilities (including ports).
	c. Intermodal facilities.



Step 3: Qualitative and Quantitative Evaluation

The next step focuses on an evaluation of the qualitative and quantitative aspects of projects. An eligible freight project must support one or more of the state's freight objectives as identified in the FMTP. The prioritization methodology is designed to align and prioritize projects to solve freight system needs. FDOT will use multiple data sources, freight performance metrics, and input from the FLFAC and the freight industry to evaluate the current freight network's ability to meet FMTP objectives. This process will be data led and stakeholder informed to set the conditions for consistency, objectivity, and transparency.

FMO will undertake a process to quantify the potential effectiveness of submitted projects in achieving the FMTP Objectives. FDOT may opt to weigh the freight objectives based upon the importance of the freight objectives to the state's freight mobility needs and input from the FLFAC.

The quantitative analysis will be data driven and tied to the freight performance measures of the FMTP. Table 2 shows the quantitative and qualitative assessment frameworks.

The quantitative prioritization methodology has been developed to be consistent with the Florida Transportation Plan (FTP) goals and the corresponding Freight Mobility Trade Plan (FMTP) objectives. This methodological framework determines locational prioritization for highway projects based on criteria outlined in the 'Performance Measures' and 'Systems and Assets' technical memorandums. This methodology is applicable only to evaluating the existing conditions of the given roadway project limits. Criteria are identified for measuring each of the FMTP objectives based on the most recent available data. Appendix D summarizes the description and overview of each measure and the corresponding score range. Scores for each measure are determined based on natural breaks in the datasets.



Table 2 | Analysis Framework

FTP GOAL	FMTP OBJECTIVE	QUANTITATIVE EVALUATION		QUALITATIVE EVALUATION		WEIGHT
		CRITERIA	SCORE RANGE	CRITERIA	SCORE RANGE	
Safety and security for residents, visitors, and businesses	Leverage multisource data and technology to improve freight system safety and security	(Truck Injuries/Truck VMT)*1000	0-100	Does this project implement safety or security enhancements?	0-100	25%
		(Truck Fatalities/Truck VMT)*1000		Does this project improve the State's data gathering efforts?		
		Crime Index				
Agile, resilient, and quality transportation infrastructure	Create a more resilient multimodal freight system.	Roadways within 100 year flood zones	0-100	Does this project address the environmental or economic resiliency of the freight system?	0-100	15%
	Ensure the Florida freight system is in a State of good repair	Presence of structurally deficient bridges		Does this project optimize the functionality and efficiency of existing roadways?		
		Presence of poor pavement condition segments		Does this project preserve the existing State Highway system?		
Connected, efficient, and reliable mobility for people and freight	Drive innovation to reduce congestion, bottlenecks and improve travel time reliability	Roadways with top bottlenecks	0-100	Does this project address Truck Parking?	0-100	25%
		Truck AADT		Does this project create a grade separation?		
Transportation choices that improve accessibility and equity	Remove institutional, policy and funding bottlenecks to improve operational efficiencies and reduce costs in supply chains	Not Applicable	0-100	Is this a technology driven or TSM&O project?	0-100	20%
	Improve last mile connectivity for all freight modes	Vicinity to Hubs		Does this project improve multimodal freight connectivity?		
		Roadways within freight intensive areas				
Transportation solutions that strengthen Florida's economy	Continue to forge partnerships between the public and private sectors to improve trade and logistics	Not Applicable	0-100	Does this project use Public/Private Partnerships?	0-100	10%
	Capitalize on emerging freight trends to promote economic development	Labor Force Size (Ratio of Labor force by County Population relative to average state wide ratio)		Does this project capitalize on emerging freight trends?		
		County GRP level (relative to the average county GRP level in FL)				
		Transportation and Warehousing Industry Share of Total Employment				
	Increase freight-related regional and local transportation planning and land use coordination**	County Population Density (relative to the average county-level population density in FL)		Is this project on the MPOAC freight project list?		
Transportation solutions that protect Florida's environment	Promote and support the shift to alternatively fueled freight vehicles	On designated Alternative Fuel Corridors	0-100	Does this project promote the use of LNG/CNG/electric vehicles?	0-100	5%
		Number of alternative fueling stations within 1 mile of roadway				

*The score for each criteria will be revised every year to reflect current priorities

**Objectives 5, 7 and 9 were evaluated qualitatively only



Grade-Crossing projects are evaluated separately using a prioritization scoring methodology, 'Systematic Evaluation and Prioritization of Rail-Highway Grade Separation' (April 2019) developed by FMO. Additionally, Truck Parking projects are also evaluated separately using a prioritization scoring methodology based on the outcomes of the Statewide Truck Parking Study.

After each project is given a quantitative score and a qualitative score corresponding to each objective, a weighted average score is computed. The weights were determined by the FLFAC.

Projects are ranked by their total score, qualitative and quantitative, as determined in assessing the projects against the supporting FMTP objectives and freight performance measures. Projects are then discussed in an internal FDOT coordination process and categorized in priority groups of high, medium, and low.

The priority projects will then be considered for potential NHFP funding annually. Freight projects already programmed in years 1 through 4 will be reviewed and validated, annually, for purpose, need, cost, and timing. Those projects that have significant changes, i.e. cost increase of 10% and/or \$500K, whichever is more; additional time to implement or complete (more than 1 year), or other significant changes may be removed from the list. The preliminary prioritization results of existing unfunded freight projects is included in Appendix C, which will be refined as part of the next funding cycle.

Appendix A: Tier 3 List (All Freight Projects)

GRADE SEPARATION PROJECTS				
District	Crossing ID	Project Name		Source
2	627514R	CSX Transportation at SE 144th St / Mullins Grade (Starke) Crossing	Grade Separation	SIS Multi-Modal Unfunded Needs
2	620901J	CSX Transportation at CR-28 / Wells Rd (Orange Park)	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272386A	Florida East Coast Railway at Northlake Blvd. / CR-809	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272386A	Florida East Coast Railway at Belvedere Rd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272437H	Florida East Coast Railway at Woolbright Rd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272484R	Florida East Coast Railway at Linton Blvd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272497S	Florida East Coast Railway at SR 811 (Palmetto Park)	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272509J	Florida East Coast Railway at Hillsboro Blvd. / SR 810	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272512S	Florida East Coast Railway at Atlantic Blvd. / SR 814	Grade Separation	SIS Multi-Modal Unfunded Needs
1	908366B	CSX Transportation at SR 60 (Mosaic, Crossing #908366)	Grade Separation	SIS Multi-Modal Unfunded Needs
3	339800C	CSX Transportation at S Main St. / SR 85	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272377B	Florida East Coast Railway at Indiantown Rd. / SR 706	Grade Separation	SIS Multi-Modal Unfunded Needs
1	624525T	CSX Transportation at SR 60 (West of Mulberry, Crossing #624525T)	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272517B	Florida East Coast Railway at Sample Rd. / SR 834	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272537M	Florida East Coast Railway at Commercial Blvd. / SR 870	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272544X	Florida East Coast Railway at Oakland Park Blvd. / SR 816	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272549G	Florida East Coast Railway at Sunrise Blvd. / SR 838	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272556S	Florida East Coast Railway at W Broward Blvd. / SR 842	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272567E	Florida East Coast Railway at SW 24th St. / SR 84	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272592M	Florida East Coast Railway at Hallandale Beach Blvd. / SR 858	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272910W	Florida East Coast Railway at Glades Rd. / SR 808	Grade Separation	SIS Multi-Modal Unfunded Needs
4	621437X	South Florida Rail Corridor at McNab Rd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	621538J	South Florida Rail Corridor at NW 33rd St.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628095Y & 628096F	South Florida Rail Corridor at Northlake Blvd. / CR-809A	Grade Separation	SIS Multi-Modal Unfunded Needs

GRADE SEPARATION PROJECTS				
District	Crossing ID	Project Name		Source
4	628118D	South Florida Rail Corridor at Palm Beach Lakes Blvd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628135U	South Florida Rail Corridor at Belvedere Rd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628139W	South Florida Rail Corridor at Forest Hill Blvd. / SR 882	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628155F	South Florida Rail Corridor at Atlantic Ave. / SR 806	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628160C	South Florida Rail Corridor at Linton Blvd. / SR 782	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628163X	South Florida Rail Corridor at SE Yamato Rd. / SR 794	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628168G	South Florida Rail Corridor at NW 36th St. / Sample Rd. / SR 834	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628169N	South Florida Rail Corridor at Copans Rd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628183J	South Florida Rail Corridor at NW 62nd / Cypress Creek	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628191B	South Florida Rail Corridor at Oakland Park Blvd. / SR 816	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628272B	South Florida Rail Corridor at New Griffin Rd. / SR 818	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628281A	South Florida Rail Corridor at Hollywood Blvd. / SR 820	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628282G	South Florida Rail Corridor at Pembroke Rd. / SR 824	Grade Separation	SIS Multi-Modal Unfunded Needs
1	622866E	CSX Transportation at Kathleen Rd. (Crossing #622866E)	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628165L	South Florida Rail Corridor at Palmetto Park / CR-798	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628126V	South Florida Rail Corridor at Okeechobee Blvd. / SR 704	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628167A	South Florida Rail Corridor at Hillsboro Blvd. / SR 810	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628177F	South Florida Rail Corridor at Atlantic Blvd. / SR 814	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628186E	South Florida Rail Corridor at Commercial Blvd. / SR 870	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628274P	South Florida Rail Corridor at Stirling Rd. / SR 848	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628290Y	South Florida Rail Corridor at Hallandale Beach / SR 858	Grade Separation	SIS Multi-Modal Unfunded Needs
1	624508C	CSX Transportation at SR 60 (Armour, Crossing #624508)	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272500X	Florida East Coast Railway at Yamato Rd. / SR 794	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272353M	Florida East Coast Railway at Monterey Rd. / SR 714	Grade Separation	SIS Multi-Modal Unfunded Needs
1	624304R	CSX at County Line Rd at US 92 (Crossing #624304-R)	Grade Separation	SIS Multi-Modal Unfunded Needs
1		CSXT at SR 655 / Recker Highway	Grade Separation	SIS Multi-Modal Unfunded Needs
1	6245419N	CSXT at SR 60 (West of Lake Wales, Crossing #625419-N)	Grade Separation	SIS Multi-Modal Unfunded Needs

GRADE SEPARATION PROJECTS				
District	Crossing ID	Project Name		Source
1	625426Y	CSXT at SR 60 W Lk Wales, Central Ave, Crossing #625426-Y	Grade Separation	SIS Multi-Modal Unfunded Needs
1	625420H	SR 60 from W of Scenic Park Rd. / W of Lake Wales Rd. to	Grade Separation	SIS Multi-Modal Unfunded Needs
1	624304R	SR 60 GRADE SEPARATION OVER CSX RAILROAD	Grade Separation	FRE
1	625419N	SR 655/RECKER HWY CONSTRUCT A BRIDGE SPANNING CSX RR TRACK IN POLK CO	Grade Separation	FRE
1	625419N	SR 60 GRADE SEPARATION OVER CSX RAILROAD	Grade Separation	FRE
1	624525T	SR 655/RECKER HWY	Grade Separation	FRE
1	908367H	US92/COUNTY LINE RD - GRADE SEPARATION	Grade Separation	FRE
1	908367H	US 441/PARROTT AVE - GRADE SEPARATION	Grade Separation	FRE
1	628062L	US 441/PARROTT AVE - GRADE SEPARATION	Grade Separation	FRE
1	628062L	SR 60/NICHOLS - GRADE SEPARATION	Grade Separation	FRE
1	623082F	SR 60/MOSAIC - GRADE SEPARATION	Grade Separation	FRE
1	623082F	SR 60/MOSAIC - GRADE SEPARATION	Grade Separation	FRE

HIGHWAY Projects			
District	Project Name	Project Type	Source
5	Orlando International Airport	Highway	JACIP
5	Daytona Beach International Airport	Highway	JACIP
5	Melbourne International Airport	Highway	JACIP
2	Northeast Florida Regional Airport	Highway	JACIP
5	Orlando International Airport	Highway	JACIP
3	I-10 and SR 95 (US 29) Interchange	Highway	MPOAC 2019
3	SR 8 (I-10) Interchange West of Crestview	Highway	MPOAC 2019
4	SR-5/US-1 southbound on ramp to west bound I-595	Highway	MPOAC 2019
4	SR-9/I-95 at Oslo Rd Interchange	Highway	MPOAC 2019
6	SR 25/Okeechobee Rd from E of NW 116 Way to E of NW 87 Ave	Highway	MPOAC 2019

HIGHWAY Projects			
District	Project Name	Project Type	Source
6	SR 25/Okeechobee Rd from E of NW 107 Ave to E of NW 116 Way	Highway	MPOAC 2019
7	I-275 (SR 93) & SR 60/Memorial Hwy (Westshore Area) Interchange	Highway	MPOAC 2019
3	SR 8 (I-10) E OF ALABAMA STATE LINE TO W OF SR 95 (US 29)	Highway	NHFP Prioritization, Aug 2019
2	SR 105 WB@ I-295	Highway	NHFP Prioritization, Aug 2019
3	SR 8 (I-10) @ SR 10 (US 90) WEST 9 MILE ROAD INTERCHANGE	Highway	NHFP Prioritization, Aug 2019
4	I-595 Project Ramp from SB US-1 to EB I-595	Highway	NHFP Prioritization, Aug 2019
5	SR 948/NW 36 ST FROM SR 826/PALMETTO EXPY TO SR 5/ US1	Highway	NHFP Prioritization, Aug 2019
9	Advanced Freight Mobility Solutions	Highway	NHFP Prioritization, Aug 2019
2	US301(SR200) @ Starke Truck Route (SR223) (N)	Highway	NHFP Prioritization, Aug 2019
4	I-95 and SR 68 Improvements	Highway	NHFP Prioritization, Aug 2019
7	I-4 @ County Line Road	Highway	NHFP Prioritization, Aug 2019
2	I-10@ SR 121	Highway	NHFP Prioritization, Aug 2019
4	US-27 ITS Improvements from MP 0.000 to 25.854	Highway	NHFP Prioritization, Aug 2019
4	I-95 Interchange at 45th Street	Highway	NHFP Prioritization, Aug 2019
4	I-595 / SR-84 Ramps to NB SR-7	Highway	NHFP Prioritization, Aug 2019
4	SR 84 at Weston	Highway	NHFP Prioritization, Aug 2019
5	I-95 INTERCHANGE AT PIONEER TRAIL	Highway	NHFP Prioritization, Aug 2019
7	I-75 / SR 93A at Gibsonton Drive	Highway	NHFP Prioritization, Aug 2019
3	SR 8 (I-10) FROM GADSDEN CO LINE TO WEST OF SR 263 CAPITAL CIRCLE	Highway	NHFP Prioritization, Aug 2019
7	I-75 / SR 93A SB from S of Tampa Bypass Canal to S of Fowler	Highway	NHFP Prioritization, Aug 2019
7	I-75 / SR 93A NB from S of Tampa Bypass Canal to N of US 301	Highway	NHFP Prioritization, Aug 2019
7	WB I-4 Aux lane MLK to 50th Street	Highway	NHFP Prioritization, Aug 2019
7	EB I-4 2-lane I-75 Exit Ramp	Highway	NHFP Prioritization, Aug 2019
7	WB I-4 Aux Lane Weigh Station to McIntosh Rd	Highway	NHFP Prioritization, Aug 2019
7	WB I-4 Aux Lane Extension from Branch Forbes Road On Ramp	Highway	NHFP Prioritization, Aug 2019
7	EB I-4 Aux Lane extension to Branch Forbes Rd Exit Ramp	Highway	NHFP Prioritization, Aug 2019

HIGHWAY Projects			
District	Project Name	Project Type	Source
2	Bowden Intermodal Entrance	Highway	Rail Plan
4	West Palm Beach Intermodal Center - SIS Connector from I-95 to West Palm Beach Intermodal Center	Highway	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce SIS Connector from I-95 to Port of Fort Pierce	Highway	SIS Multi-Modal Unfunded Needs
4	SR 710 from Martin Powerplant Rd. to SR 76 Connector Ramps	Highway	SIS Multi-Modal Unfunded Needs
4	SR 80 from US 27 to US 441	Highway	SIS Multi-Modal Unfunded Needs
4	US 27 from I-75 to Broward / Palm Beach County Line	Highway	SIS Multi-Modal Unfunded Needs
4	US 27 from Milepost 12.4 to SR 80	Highway	SIS Multi-Modal Unfunded Needs
4	US 27 from Broward / Palm Beach County Line to Milepost 12.4	Highway	SIS Multi-Modal Unfunded Needs
4	US 27 from SR 80 to Palm Beach / Hendry County Line	Highway	SIS Multi-Modal Unfunded Needs
4	US 27 from Miami-Dade / Broward County Line to I-75	Highway	SIS Multi-Modal Unfunded Needs
7	CSX Transportation at US 41 (Rockport) NGCN: 624802A	Highway	SIS Multi-Modal Unfunded Needs
2	SR 200 / SR A1A from at Yulee to	Highway	SIS Multi-Modal Unfunded Needs
5	SR 401 - new high level bridge from SR 528 to Port Canaveral to SIS Connector & MAF	Highway	SIS Multi-Modal Unfunded Needs
5	Indian River Bridge NASA Causeway from SR 405/US 1 interchange to NASA Parkway	Highway	SIS Multi-Modal Unfunded Needs
2	First Coast Expressway / SR 23 from Shands Bridge to	Highway	SIS Multi-Modal Unfunded Needs
7	CSX Transportation at US 41 / 50th St., NGCN: 624368C	Highway	SIS Multi-Modal Unfunded Needs
7	CSX Transportation at SR 60 / Adamo Dr., NGCN: 624820X	Highway	SIS Multi-Modal Unfunded Needs
4	45th St. from I-95 to Port of Palm Beach	Highway	SIS Multi-Modal Unfunded Needs
4	Ft. Laud/Hollywood Int'l Airport (FLL) Connector from I-95 to Northside FLL delivery entrance	Highway	SIS Multi-Modal Unfunded Needs
4	Port of Palm Beach/Blue Heron Blvd SIS Connector from I-95 to Port of Palm Beach at US1	Highway	SIS Multi-Modal Unfunded Needs
1	US 17 from Palmetto Ave. to SR 70 / Hickory St.	Highway	SIS Multi-Modal Unfunded Needs
1	US 17 from SR 70 / Hickory St. to SR 35 / DeSoto Ave.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 82 / Dr. MLK Jr. Blvd. from Michigan Ave. to CR 865 / Ortiz Ave.	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from at I-295 to Birmingham Gate	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
8	Turnpike Mainline / SR 91 from SR 408 (MP 265) to SR 429 (MP 267A)	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from CR-220 to Creighton Rd.	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from Creighton Rd to Elbow Rd.	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from Elbow Rd to SR 224 (Kingsley Ave)	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from SR 224 (Kingsley Ave) to Wells Rd.	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from Wells Rd to Duval County Line	Highway	SIS Multi-Modal Unfunded Needs
7	SR 60 (Brandon Blvd.) from I-75 to Kings Ave.	Highway	SIS Multi-Modal Unfunded Needs
7	SR 60 (Brandon Blvd.) from Kingsway Rd. / Bryan Rd. to Valrico Rd.	Highway	SIS Multi-Modal Unfunded Needs
5	I-75 from Sumter County Line to Urban Boundary	Highway	SIS Multi-Modal Unfunded Needs
5	I-75 from Florida's Turnpike to SR 44	Highway	SIS Multi-Modal Unfunded Needs
5	I-75 from SR 44 to Marion County Line	Highway	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Capital Circle NE to Buck Lake Rd	Highway	SIS Multi-Modal Unfunded Needs
3	US 319 / Thomasville Rd. from I-10 to Killarney Way	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from CR-210 to Duval County Line	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from SR 20 to SR 100	Highway	SIS Multi-Modal Unfunded Needs
5	I-75 from Florida's Turnpike to SR 44	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from N 1st St to SR 20	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from CR 760 to DeSoto / Highlands County Line	Highway	SIS Multi-Modal Unfunded Needs
1	SR 29 from South of Agriculture Way to CR 846	Highway	SIS Multi-Modal Unfunded Needs
3	Transmitter Rd. from US 98 to US 231	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from Volusia County Line to S of Crescent City	Highway	SIS Multi-Modal Unfunded Needs
2	SR 100 from Clay County Line to Starke	Highway	SIS Multi-Modal Unfunded Needs
1	US 98 / 441 from 18th Terrace to 38th Ave.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from NW 38th Terrace to US 98	Highway	SIS Multi-Modal Unfunded Needs
7	Columbus Dr. from I-4 to CXS Intermodal Yard	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from Lorraine Rd. to CR 675 / Waterbury Rd.	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
1	SR 710 from 59th Blvd. to Okeechobee / Martin County Line	Highway	SIS Multi-Modal Unfunded Needs
4	SR 710 from Okeechobee / Martin County Line to Martin Powerplant Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 29 from I-75 to Oil Well Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 29 from New Market Rd. / Westclox Rd. to SR 82	Highway	SIS Multi-Modal Unfunded Needs
1	SR 29 from SR 78 to CR 74	Highway	SIS Multi-Modal Unfunded Needs
1	SR 64 from Hardee / Highlands County Line to Olivia Dr. / Avon Estates Blvd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 64 from Old Town Creek Rd. / CR 671 / Parnell Rd. to Hardee / Highlands County Line	Highway	SIS Multi-Modal Unfunded Needs
1	SR 64 from Avon Estates Blvd. / Olivia Dr. to US 27	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from SR 72 to West of Peace River	Highway	SIS Multi-Modal Unfunded Needs
1	SR 29 from Collier / Hendry County Line to CR 832 / Keri Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 By-Pass Georgia Ave. Extension from Lewis Blvd. to US 27	Highway	SIS Multi-Modal Unfunded Needs
3	Blue Angel Parkway from US 98 to Pine Forrest Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 60 from East of CR 630 to Polk / Osceola County Line	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from East of SR 31 to CR 760	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from Pine Level St. to CR 661A / Bunker Ave.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from DeSoto / Highlands County Line to US 27	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from US 27 to Highlands / Okeechobee County Line	Highway	SIS Multi-Modal Unfunded Needs
2	Forsyth St. from Lee St to Cleveland St	Highway	SIS Multi-Modal Unfunded Needs
2	SR 100 from E City Limit (NE 8th Ave) to SR 231	Highway	SIS Multi-Modal Unfunded Needs
2	SR A1A / SR 200 / 8th St. from Lime St to Centre St / Atlantic Ave.	Highway	SIS Multi-Modal Unfunded Needs
2	SR 26 / Newberry Rd from CR-337 / SW 266th St to SR 45	Highway	SIS Multi-Modal Unfunded Needs
2	US 41 from Guerdon St to I-10	Highway	SIS Multi-Modal Unfunded Needs
2	SR 100 from Bradford County Line to Putnam County Line	Highway	SIS Multi-Modal Unfunded Needs
2	SR 100 from SR 26 to CR 216	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from S of Crescent City to N of Crescent City	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
2	US 17 from N of Crescent City to S of Pomona Park	Highway	SIS Multi-Modal Unfunded Needs
2	US 17 from S of Pomona Park to N of Pomona Park	Highway	SIS Multi-Modal Unfunded Needs
7	SR 45 (Nebraska Ave) from SR 60 (Kennedy Blvd) to Cass St / Nuccio Parkway	Highway	SIS Multi-Modal Unfunded Needs
5	SR 15 / US 17 from Washington Ave to CR 305 / Lake George Rd	Highway	SIS Multi-Modal Unfunded Needs
5	SR 15 / US 17 from CR 305 / Lake George Rd to Putnam County Rd	Highway	SIS Multi-Modal Unfunded Needs
5	SR 100 from US 1 / SR 5 / SR 100 to Commerce Parkway	Highway	SIS Multi-Modal Unfunded Needs
5	Division Ave. from Kaley St to Columbia St.	Highway	SIS Multi-Modal Unfunded Needs
5	Boggy Creek Rd from Landstreet Rd to SR 528	Highway	SIS Multi-Modal Unfunded Needs
5	SR 326 from SR 25 / US 301 to OLD US 301 / CR 200A	Highway	SIS Multi-Modal Unfunded Needs
5	SR 326 from Old US 301 / CR 200A to NE 36th Ave Rd (Approx. Urban Boundary)	Highway	SIS Multi-Modal Unfunded Needs
5	Ellis Road from I-95 to W Of Wickham	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from CR 675 to DeSoto County Line	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from Manatee County Line to Pine Level St.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from CR 661A / Bunker Ave. to SR 72	Highway	SIS Multi-Modal Unfunded Needs
1	SR 29 from CR 74 to US 27	Highway	SIS Multi-Modal Unfunded Needs
1	SR 636 from SR 64 to CR 671 / Parnell Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 64 from US 17 to SR 636	Highway	SIS Multi-Modal Unfunded Needs
1	SR 710 from Interceptor Creek to 59th Blvd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 70 from Highlands County Line to NW 38th Terrace	Highway	SIS Multi-Modal Unfunded Needs
1	SR 29 from Oil Well Rd. / CR 658 to Sunniland Nursery Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 29 from Sunniland Nursery Rd. to South of Agriculture Way	Highway	SIS Multi-Modal Unfunded Needs
1	SR 29 from CR 832 / Keri Rd. to F Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 29 from Hendry County Line / Whidden Rd. to SR 78	Highway	SIS Multi-Modal Unfunded Needs
1	SR 31 from SR 80 to SR 78	Highway	SIS Multi-Modal Unfunded Needs
1	SR 31 from SR 78 to CR 78/River Road	Highway	SIS Multi-Modal Unfunded Needs
5	SR 60 from Polk County Line to SR 15 / US 441	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
5	SR 60 from US 441 to Florida's Turnpike	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 from SR 12 to West of US 90	Highway	SIS Multi-Modal Unfunded Needs
3	SR 85 from SR 123 to I-10	Highway	SIS Multi-Modal Unfunded Needs
3	US 19 / US 27 from US 19 / SR 57 to Jefferson / Madison County Line	Highway	SIS Multi-Modal Unfunded Needs
3	SR 263 from Springhill Rd. / CR 2203 to Orange Ave.	Highway	SIS Multi-Modal Unfunded Needs
3	US 231 from SR 20 to I-10	Highway	SIS Multi-Modal Unfunded Needs
3	US 319 from North of Bannerman Rd. to Florida / Georgia State Line	Highway	SIS Multi-Modal Unfunded Needs
1	SR 80 from SR 31 / Arcadia Rd. to Buckingham Rd.	Highway	SIS Multi-Modal Unfunded Needs
3	SR 79 from SR 388 to I-10	Highway	SIS Multi-Modal Unfunded Needs
3	Eglin Parkway and John Sims Parkway from SR 123 to Eglin Blvd.	Highway	SIS Multi-Modal Unfunded Needs
3	SR 388 from SR 79 to Airport Entrance	Highway	SIS Multi-Modal Unfunded Needs
3	US 98 Tyndall Parkway from Transmitter Rd. to Tyndall Dr.	Highway	SIS Multi-Modal Unfunded Needs
3	US 98 / Miracle Strip Parkway from Eglin Parkway to Cody Ave.	Highway	SIS Multi-Modal Unfunded Needs
3	Eglin Parkway from Richburg Ave. / 12th Ave. to SR 123	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 from Walton / Holmes County Line to Holmes / Washington County Line	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 from Holmes / Washington County Line to Washington / Jackson County Line	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 from Washington / Jackson County Line to Jackson / Gadsen County Line	Highway	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from City of Waldo to Alachua / Bradford County Line	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 from Jackson / Gadsden County Line to SR 12	Highway	SIS Multi-Modal Unfunded Needs
7	SR 597 (Dale Mabry Hwy) from Van Dyke Rd. to Calusa Trace Blvd.	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 from East of US 319 to US 19	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 from US 19 to Jefferson / Madison County Line	Highway	SIS Multi-Modal Unfunded Needs
7	SR 50 from California St. to CR 485 / Cobb Rd.	Highway	SIS Multi-Modal Unfunded Needs
4	SR 710 from Martin / Palm Beach County Line to Northlake Blvd.	Highway	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from Bradford / Clay County Line to Clay / Duval County Line	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
2	US 301 / SR 200 from Alachua / Bradford County Line to CR 227 (Starke bypass south interchange)	Highway	SIS Multi-Modal Unfunded Needs
3	US 98 from Old US 98 alignment to Walton / Bay County Line	Highway	SIS Multi-Modal Unfunded Needs
7	Big Bend Rd. from US 41 to Covington Garden Dr.	Highway	SIS Multi-Modal Unfunded Needs
7	SR 44 from CR 491 to County Landfill Access	Highway	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from Marion County Line to Waldo	Highway	SIS Multi-Modal Unfunded Needs
1	US 17 from Copley Dr. to North of CR 74 / Bermont Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 from Glades / Highlands County Line to SR 70	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from SR 710 (MP 107) to Kissimmee-St Cloud South (MP 242)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from Campbell Dr. (MP 2) to Bicsayne Dr. (MP5)	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 from Okaloosa / Walton County Line to Walton / Holmes County Line	Highway	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from CR 233 (Starke Bypass North Interchange) to Bradford / Clay County Line	Highway	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from Clay / Duval County Line to I-10	Highway	SIS Multi-Modal Unfunded Needs
1	SR 60 from Bonnie Mine Rd. to CR 555 / Agricola Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 60 from SR 60A / Van Fleet Dr. to SR 25 / US 27	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 from Palm Beach / Hendry County Line to Old US 27	Highway	SIS Multi-Modal Unfunded Needs
3	SR 77 from SR 390 to Bay County Line	Highway	SIS Multi-Modal Unfunded Needs
1	SR 60 from 12th Ave. to Bonnie Mine Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 from CR 832 / Owens Ave. to SR 80	Highway	SIS Multi-Modal Unfunded Needs
3	US 331 from SR 20 to I-10	Highway	SIS Multi-Modal Unfunded Needs
7	US 19 from Hernando / Citrus County Line to West Green Acres St.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 60 from Hillsborough / Polk County Line to CR 676 / Nicholas Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 60 from CR 676 / Nicholas Rd. to Church Ave.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 60 from Church Ave. to 12th Ave.	Highway	SIS Multi-Modal Unfunded Needs
3	US 231 from I-10 to Alabama State Line	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects				
District	Project Name	Project Type	Source	
3	SR 77 from Bay County Line to I-10	Highway	SIS Multi-Modal Unfunded Needs	
3	23rd St SR 368 from US 98 / SR 368 Int. to SR 390	Highway	SIS Multi-Modal Unfunded Needs	
3	I-10 from SR 281 / Avalon Blvd. to Okaloosa / Walton County Line	Highway	SIS Multi-Modal Unfunded Needs	
3	US 19 from US 19 / US 27 to Georgia State Line	Highway	SIS Multi-Modal Unfunded Needs	
3	US 331 from US 98 to SR 20	Highway	SIS Multi-Modal Unfunded Needs	
3	SR 123 from SR 85 South to SR 85 North	Highway	SIS Multi-Modal Unfunded Needs	
1	US 17 (S. L. Holland) from Mann Rd. to Main St.	Highway	SIS Multi-Modal Unfunded Needs	
3	SR 390 from SR 77 to US 231 SR 75	Highway	SIS Multi-Modal Unfunded Needs	
3	US 98 SR30 from Tang-O-MAR Dr. to Bay County Line	Highway	SIS Multi-Modal Unfunded Needs	
3	I-10 from Santa Rosa County Line to Walton County Line	Highway	SIS Multi-Modal Unfunded Needs	
5	SR 3- New Connector from SR 528 to NASA Causeway	Highway	SIS Multi-Modal Unfunded Needs	
5	Cape Canaveral from NASA Causeway West (Gate3) to Space Commerce Parkway	Highway	SIS Multi-Modal Unfunded Needs	
7	SR 60 from Valrico Rd. to Dover Rd.	Highway	SIS Multi-Modal Unfunded Needs	
7	SR 60 from Dover Rd. to SR 39	Highway	SIS Multi-Modal Unfunded Needs	
7	SR 60 from SR 39 to Hillsborough / Polk County Line	Highway	SIS Multi-Modal Unfunded Needs	
2	Pritchard Rd. from Pritchard Rd to I-295	Highway	SIS Multi-Modal Unfunded Needs	
2	SR 100 from E. City Limit (NE 8th Ave) to SR 231	Highway	SIS Multi-Modal Unfunded Needs	
2	SR 222 / 39th Ave from W of I-75 Ramps to NW 83rd St	Highway	SIS Multi-Modal Unfunded Needs	
2	SR 222 / 39th Ave from NW 83rd St to NW 43 St	Highway	SIS Multi-Modal Unfunded Needs	
2	SR 222 / 39th Ave from NW 43 St to SR 121 / NW 34 St	Highway	SIS Multi-Modal Unfunded Needs	
2	SR 222 / 39th Ave. from SR 121 / NW 34 St to US 441 / NW 13 St.	Highway	SIS Multi-Modal Unfunded Needs	
2	US 17 from SR 16 East to SR 16 West	Highway	SIS Multi-Modal Unfunded Needs	
2	US 17 from SR 16 West to N City Limit (.09 miles N of Governor St)	Highway	SIS Multi-Modal Unfunded Needs	
3	US 98 / SR 30 from US 331 / SR 83 to Bay County Line	Highway	SIS Multi-Modal Unfunded Needs	
3	US 29 from Nine 1/2 Mile Rd to state line	Highway	SIS Multi-Modal Unfunded Needs	
3	US 90 / Mahan Dr. from Riggins Rd to Capital Circle NE	Highway	SIS Multi-Modal Unfunded Needs	

HIGHWAY Projects			
District	Project Name	Project Type	Source
3	US 90 / Mahan Dr. from Blair Stone Rd to Riggins Rd	Highway	SIS Multi-Modal Unfunded Needs
3	US 90 / Tennessee St from Monroe St to Magnolia Dr.	Highway	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Magnolia Dr. to Blair Stone Rd	Highway	SIS Multi-Modal Unfunded Needs
7	US 19 from W Ashburn Ln / 2nd St to W Emerald Oaks Dr.	Highway	SIS Multi-Modal Unfunded Needs
7	SR 50 from Suncoast Parkway (NB Ramps) to California St.	Highway	SIS Multi-Modal Unfunded Needs
7	SR 50 from Brooksville By-Pass to Lockhart	Highway	SIS Multi-Modal Unfunded Needs
7	US 92 (Gandy Bridge) from West end of Gandy Bridge to East end of Gandy Bridge	Highway	SIS Multi-Modal Unfunded Needs
7	US 41 / SR 45 from CR 672 (Big Bend Rd.) to Pembroke Rd. (Port Redwing Entrance)	Highway	SIS Multi-Modal Unfunded Needs
7	South 20th St. / Causeway Blvd. from South of 22nd St. / Maritime Blvd. to US 41	Highway	SIS Multi-Modal Unfunded Needs
7	SR 60 from Kennedy Blvd at Channelside Dr. to Channelside Dr. at Adamo Dr.	Highway	SIS Multi-Modal Unfunded Needs
7	SR 573 (South Dale Mabry Hwy) from MacDill Air Force Base Entrance to US 92 / SR 600 (Gandy Blvd.)	Highway	SIS Multi-Modal Unfunded Needs
7	I-275 (Sunshine Skyway Bridge) from Begin New Skyway Bridge to End of New Skyway Bridge	Highway	SIS Multi-Modal Unfunded Needs
5	SR 482 from SR 528 to End of SIS Connector	Highway	SIS Multi-Modal Unfunded Needs
5	SR 600 US 17 / 92 from CR 531 / Donegan to Osceola Parkway	Highway	SIS Multi-Modal Unfunded Needs
5	Hoagland Blvd. from Merlin Dr. to Vine St / US 192	Highway	SIS Multi-Modal Unfunded Needs
5	SR 500 / US 27 from 60th Ave to SR 93 / I-75	Highway	SIS Multi-Modal Unfunded Needs
5	SR 25 / US 27 from CR 561A to Causey Rd / Urban Boundary	Highway	SIS Multi-Modal Unfunded Needs
5	SR 25 / US 27 from Causey Rd / Urban Boundary to Urban Boundary E. Of SR 19	Highway	SIS Multi-Modal Unfunded Needs
5	SR 25 / US 27 from Urban Boundary E OF SR 19 to Florida's Turnpike Northern Ramps	Highway	SIS Multi-Modal Unfunded Needs
4	SR 84 from I-95 to I-595	Highway	SIS Multi-Modal Unfunded Needs
1	US 19 from I-275 Ramp to Skyway Br. Hillsborough County Line	Highway	SIS Multi-Modal Unfunded Needs
1	US 17 from Main St. to SR 60A / Auto Zone Ln	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 from Old US 27 to CR 832 / Owens Ave.	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 from South of Skipper Rd. to US 98	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
1	SR 82 from SR 739 / Fowler Ave. to Veronica Shoemaker Blvd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 82 from Veronica Shoemaker Blvd. to Michigan Link Ave.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 82 from Alabama Rd. to Homestead Blvd.	Highway	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Buck Lake Rd to Thornton Rd	Highway	SIS Multi-Modal Unfunded Needs
3	US 90, Mahan Dr. from Thornton Rd to I-10	Highway	SIS Multi-Modal Unfunded Needs
5	SR 417 from International Dr. to Boggy Creek Rd	Highway	SIS Multi-Modal Unfunded Needs
5	SR 417 from Boggy Creek Rd to SR 528	Highway	SIS Multi-Modal Unfunded Needs
5	SR 429 from Seidel Rd to CR 535	Highway	SIS Multi-Modal Unfunded Needs
5	SR 429 from CR 535 to SR 50	Highway	SIS Multi-Modal Unfunded Needs
5	SR 429 from SR 50 to SR 414	Highway	SIS Multi-Modal Unfunded Needs
5	SR 528 from SR 417 to Innovation Way	Highway	SIS Multi-Modal Unfunded Needs
5	SR 528 from Innovation Way to SR 520	Highway	SIS Multi-Modal Unfunded Needs
5	SR 40 from Breakaway Trail to Williamson Blvd	Highway	SIS Multi-Modal Unfunded Needs
2	US 19 from Taylor-Madison County line to Jefferson County Line	Highway	SIS Multi-Modal Unfunded Needs
2	US 19 from Perry to Madison County Line	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 from US 27 / Monroe St. to US 319 / Thomasville Rd.	Highway	SIS Multi-Modal Unfunded Needs
7	I-275 from 54th Ave. South to South of Gandy Blvd.	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from Flagler / St. Johns County Line to SR 206	Highway	SIS Multi-Modal Unfunded Needs
7	US 19 from New York Ave. to Pasco / Hernando County Line	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 from South of B Moore Rd. to CR 547 / Sanders Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 from I-4 to Polk / Lake County Line	Highway	SIS Multi-Modal Unfunded Needs
2	I-75 from Marion / Alachua County Line to Williston Rd	Highway	SIS Multi-Modal Unfunded Needs
3	US 98 from Okaloosa / Walton County Line to Walton / Bay County Line	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 from US 29 to Scenic Highway / US 90	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 from North of Kokomo Rd. to South of B. Moore Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 from CR 547 / Sanders Rd. to I-4	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
2	I-95 from SR 15 / US 17 to SR 122 (Golfair Ave)	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 122 (Golfair Ave) to SR 115 (Lem Turner Rd)	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 115 (Lem Turner Rd) to SR 111 (Edgewood Ave)	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 111 (Edgewood Ave) to SR 105 (Heckscher Dr)	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 102 (Airport Rd) to Pecan Park Rd	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from Pecan Park Rd to Nassau County Line	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from Duval County Line to SR A1A / SR 200	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from US 17 / SR 5 to Georgia State Line	Highway	SIS Multi-Modal Unfunded Needs
2	SR 26 / Newberry Rd from NW 76th Blvd to I-75	Highway	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Capital Circle NE to Buck Lake Rd	Highway	SIS Multi-Modal Unfunded Needs
7	CR 672 (Big Bend Rd.) from US 41 to I-75	Highway	SIS Multi-Modal Unfunded Needs
7	US Bus 41 / SR 45 (20th St) from Maritime Blvd to Lee Roy Selmon Expressway	Highway	SIS Multi-Modal Unfunded Needs
7	SR 585 (22nd St.) from Lee Roy Selmon Expressway to 21st St.	Highway	SIS Multi-Modal Unfunded Needs
7	SR 580 (Hillsborough Ave) from SR 589 (Veterans Expressway) to Cargo Rd.	Highway	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from SR 686 (E Bay Dr.) to Central Ave.	Highway	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from Central Ave. to Druid Rd.	Highway	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from Druid Rd. to SR 60 (Gulf to Bay Blvd.)	Highway	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from SR 60 (Gulf to Bay Blvd) to CR 576 (Sunset Point Rd)	Highway	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from CR 576 (Sunset Point Rd) to SR 580 (Main St.)	Highway	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from SR 580 (Main St.) to SR 586 (Curlew Rd.)	Highway	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from SR 586 (Curlew Rd.) to CR 813 (Alderman Rd.)	Highway	SIS Multi-Modal Unfunded Needs
5	SR 530 / US 192 from Hoagland Blvd to Thacker Ave.	Highway	SIS Multi-Modal Unfunded Needs
5	SR 600 / US 17 / 92 from Emmett St to US 192 / Vine St.	Highway	SIS Multi-Modal Unfunded Needs
5	I-95 from SR 518 to CR 509 / Wickham Rd	Highway	SIS Multi-Modal Unfunded Needs
5	I-75 from CR 318 to Alachua County Line	Highway	SIS Multi-Modal Unfunded Needs
5	I-75 from SR 326 to CR 318	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
1	SR 82 from CR 865 / Ortiz Ave. to I-75	Highway	SIS Multi-Modal Unfunded Needs
1	SR 82 from I-75 to Buckingham Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 82 from Buckingham Rd. to Gateway Blvd.	Highway	SIS Multi-Modal Unfunded Needs
1	SR 82 from Michigan Link Ave. to CR 865 / Ortiz Ave.	Highway	SIS Multi-Modal Unfunded Needs
3	US 90 / Tennessee St from Greyhound Bus Station to Monroe St	Highway	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Thornton Rd to I-10	Highway	SIS Multi-Modal Unfunded Needs
3	US 319 / Thomasville Rd from I-10 to Killarney Way	Highway	SIS Multi-Modal Unfunded Needs
3	US 319 / Thomasville Rd. from Killarney Way to Velda Dairy Rd.	Highway	SIS Multi-Modal Unfunded Needs
3	US 319, Thomasville Rd. from Velda Dairy Rd to Bannerman Rd.	Highway	SIS Multi-Modal Unfunded Needs
5	SR 528 from SR 436 to SR 417	Highway	SIS Multi-Modal Unfunded Needs
5	I-95 from Palm Coast Parkway to Flagler/St. Johns County Line	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from Pasco / Hillsborough County Line to SR 56	Highway	SIS Multi-Modal Unfunded Needs
4	I-95 from Becker Rd. to SR 70	Highway	SIS Multi-Modal Unfunded Needs
4	I-75 from Miramar Parkway to Royal Palm Blvd.	Highway	SIS Multi-Modal Unfunded Needs
5	Poinciana Parkway from Marigold Avenue to CR 54 / US 17/92	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from North of SR 52 to Pasco / Hernando County Line	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from CR 54 to SR 52	Highway	SIS Multi-Modal Unfunded Needs
7	SR 60 (Brandon Blvd.) from Kings Ave. to Kingsway Rd. / Bryan Rd.	Highway	SIS Multi-Modal Unfunded Needs
2	SR 100 from SR 21 to E. City Limit (Lakeview Dr.)	Highway	SIS Multi-Modal Unfunded Needs
2	SR 100 from NW City Limit (1800' NW of SR 21) to SR 21	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 from County Line Rd. to West of SR 570 / Polk Parkway	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 from Moccasin Wallow Rd. to Manatee / Hillsborough County Line	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from Moccasin Wallow Rd. to SR 674	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 from East of US 27 / SR 25 to Polk / Osceola County Line	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from S of US 301 to N of SR 60	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from N of Fletcher Ave. to Bruce B. Downs Blvd.	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
7	I-75 from SR 56 to CR 54	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from North of SR 60 to North of I-4	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from North of I-4 to North of Fletcher Ave.	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from N of I-75 / I-275 Apex to SR 56	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 from CR 886 (Goldengate Pkwy) to CR 846 (Immokalee Rd)	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 from CR 846 (Immokalee Rd) to SR 884/Colonial Blvd	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 from SR 884/Colonial Blvd to SR 80	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 from River Rd. to SR 681	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 from University Parkway to 19th St / US 301 / SR 43	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 from 19th St / US 301 / SR 43 to I-275 Off Ramp	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from SR 674 to Big Bend Rd.	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from Big Bend Rd. to US 301	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 from Bruce B. Downs Blvd. to N of I-75 / I-275 Apex	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 from I-275 Off Ramp to CR 6 / Moccasin Wallow Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 from SR 681 to SR 758/Bee Ridge Road	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 from SR 758/Bee Ridge Road to University Parkway	Highway	SIS Multi-Modal Unfunded Needs
2	I-10 from Madison / Suwannee County Line to Suwannee / Columbia County Line	Highway	SIS Multi-Modal Unfunded Needs
2	I-10 from Columbia / Baker County Line to CR 125	Highway	SIS Multi-Modal Unfunded Needs
2	I-10 from I-75 to Columbia / Baker County Line	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from North of Fuller Warren Bridge to SR 104 / Dunn Ave	Highway	SIS Multi-Modal Unfunded Needs
2	I-295 from Southside Connector / SR 113 to JTB / SR 202	Highway	SIS Multi-Modal Unfunded Needs
2	I-10 from Suwannee / Columbia County Line to I-75	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Osceola County Line (MP 249) to SR 408 (MP 265)	Highway	SIS Multi-Modal Unfunded Needs
2	I-10 from Jefferson / Madison County Line to Madison / Suwannee County Line	Highway	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway / SR 417 from SR 434 to Rinehart Rd.	Highway	SIS Multi-Modal Unfunded Needs
8	Suncoast Parkway / SR 589 from Van Dyke Rd. (MP 14) to SR 52 (MP 27)	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
8	Turnpike Mainline / SR 91 from SR 429 (MP 267A) to SR 50 (MP 272)	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 206 to CR 13A / International Golf Parkway	Highway	SIS Multi-Modal Unfunded Needs
4	I-95 from Linton Blvd. to Indiantown Rd.	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Jupiter / Indiantown Rd. to SR 714 / Stuart	Highway	SIS Multi-Modal Unfunded Needs
4	SW 10th St. from Turnpike to I-95	Highway	SIS Multi-Modal Unfunded Needs
8	Cape Canaveral from SR 407 (SR 528 to SR 405) - Add 2 Lanes to Build 4 to	Highway	SIS Multi-Modal Unfunded Needs
7	I-275 from South of Gandy Blvd. to North of 4th St. N	Highway	SIS Multi-Modal Unfunded Needs
6	SR 826 Improvements from NW 154th St to NW 103rd St.	Highway	SIS Multi-Modal Unfunded Needs
6	SR 836 Managed Lanes from NW 87th Ave. to HEFT	Highway	SIS Multi-Modal Unfunded Needs
6	SR 836 Managed Lanes from East of SR 826 to West of SW 27 Ave	Highway	SIS Multi-Modal Unfunded Needs
6	SR 826 Managed Lanes from SR 836 to US 1	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 from I-10 to SR 139 / US 23 (Kings Rd)	Highway	SIS Multi-Modal Unfunded Needs
2	I-75 from SR 121 (Williston Rd) to SR 222 (NW 39th Ave)	Highway	SIS Multi-Modal Unfunded Needs
2	I-75 from SR 222 (NW 39th Ave) to US 441 (Alachua)	Highway	SIS Multi-Modal Unfunded Needs
2	I-75 from US 441 (Alachua) to Alachua / Columbia County Line	Highway	SIS Multi-Modal Unfunded Needs
2	I-75 from Alachua / Columbia County Line to I-10	Highway	SIS Multi-Modal Unfunded Needs
2	I-75 from I-10 to Columbia / Suwannee County Line	Highway	SIS Multi-Modal Unfunded Needs
2	I-75 from Columbia / Suwannee County Line to Suwannee / Hamilton County Line	Highway	SIS Multi-Modal Unfunded Needs
2	I-75 from Suwannee / Hamilton County Line to Georgia State Line	Highway	SIS Multi-Modal Unfunded Needs
2	I-10 from SR 23 to I-295	Highway	SIS Multi-Modal Unfunded Needs
2	I-295 from SR 9B to I-95 South Int.	Highway	SIS Multi-Modal Unfunded Needs
4	SR 80 from Royal Palm Beach Blvd. to I-95	Highway	SIS Multi-Modal Unfunded Needs
4	SR 80 from Lion Country Safari Rd. to Royal Palm Beach Blvd.	Highway	SIS Multi-Modal Unfunded Needs
2	I-295 from W of US 17 (Collins / Blanding CDs) to S of SR 134 / 103rd St.	Highway	SIS Multi-Modal Unfunded Needs
2	I-295 from W of US 17 to S of SR 134 / 103rd St.	Highway	SIS Multi-Modal Unfunded Needs
2	I-295 from SR 13 to SR 21	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
8	Beachline East Expressway from SR 520 (MP 31) to Industry Rd. (MP 45)	Highway	SIS Multi-Modal Unfunded Needs
8	Beachline West Expressway from I-4 (MP 0) to International Dr. (MP 1)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from Caribbean Blvd (MP 12) to Quail Roost Dr. (MP 13)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from Biscayne Dr. (MP 5) to Hainlin Mill Dr. (MP 11)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from Kendall Dr. (MP 20) to Bird Dr. (MP 23)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from Bird Rd (MP 23) to SW 8th St (MP 25)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from SW 8th St (MP 25) to SR 836 (MP 26A)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from NW 41st St. (MP 29) to NW 74th St. (MP 31)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from NW 106th St (MP 34) to Okeechobee Rd. (MP 35)	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Golden Glades (MP 0X) to Dolphin Center (MP 2X)	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Homestead Extension (MP 47) to Griffin Rd. (MP 53)	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from I-595 (MP 54) to Sunrise Blvd. (MP 58)	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Sunrise Blvd (MP 58) to Boynton Beach Blvd. (MP 86)	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Lake Worth (MP 93) to SR 710 (MP 107)	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline/SR 91 from CR 468 (MP 300) to Interstate 75 (MP 309)	Highway	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway from Central Florida Greeneway (MP 33) to SR 434 (MP 44)	Highway	SIS Multi-Modal Unfunded Needs
8	Western Beltway/SR 429 from Interstate 4 (MP 0) to Seidel Rd. (MP 11)	Highway	SIS Multi-Modal Unfunded Needs
8	Veterans Expressway/SR 589 from Independence Parkway (MP 2B) to Linebaugh Ave (MP 7)	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline (SR 91) from Minneola (MP 279) to CR 468 (MP 300)	Highway	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway from SR 434 (MP 44) to Interstate 4 (MP 55)	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 at SR 570 / Polk Parkway (Eastern End)	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at SR 80	Highway	SIS Multi-Modal Unfunded Needs
1	US 27 at US 17 / 92	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at SR 82	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at CR 896 / Pine Ridge Rd.	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
1	I-75 at North Jones Loop Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at CR 769 / Kings Highway	Highway	SIS Multi-Modal Unfunded Needs
4	I-75 at Sawgrass Expressway	Highway	SIS Multi-Modal Unfunded Needs
2	I-10 at I-75	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 at CR 54	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at SR 681	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at I-275	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at Moccasin Wallow Rd.	Highway	SIS Multi-Modal Unfunded Needs
7	I-275 at 31st St. South	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 at Gibsonton Dr.	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 at Big Bend Rd.	Highway	SIS Multi-Modal Unfunded Needs
7	I-75 at SR 674	Highway	SIS Multi-Modal Unfunded Needs
7	I-275 at 38th Ave.	Highway	SIS Multi-Modal Unfunded Needs
7	I-275 at Gandy Blvd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at Jacaranda Blvd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at Laurel Rd.	Highway	SIS Multi-Modal Unfunded Needs
2	I-10 at I-295	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 at University & Bowden	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 at Emerson	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at Luckett Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 at Socrum Loop Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 at SR 33	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 at SR 539	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 at US 27 / SR 25	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 at County Line Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at CR 846 / Immokalee Rd.	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
2	US 301 / SR 200 at SR 24 (Waldo)	Highway	SIS Multi-Modal Unfunded Needs
2	I-95 at US 1 and SR 206	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at SR 78	Highway	SIS Multi-Modal Unfunded Needs
2	I-75 at SR 26 / Newberry Rd	Highway	SIS Multi-Modal Unfunded Needs
2	I-75 at SR 24 / Archer Rd	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at US 17 / SR 35	Highway	SIS Multi-Modal Unfunded Needs
7	I-275 at Ulmerton Rd. / SR 688	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 at Commercial Blvd.	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 at Beachline West Expressway / SR 528	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at CR 776 / Harbor View	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at Bonita Beach Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 at US 98 / SR 35 / 700	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 at SR 570 / Polk Parkway (Western End)	Highway	SIS Multi-Modal Unfunded Needs
1	I-4 at SR 546 / Memorial Blvd.	Highway	SIS Multi-Modal Unfunded Needs
6	I-75 / HEFT Int. CD Rd Miami Gardens Dr.	Highway	SIS Multi-Modal Unfunded Needs
6	SR 90 at I-95	Highway	SIS Multi-Modal Unfunded Needs
6	I-75 at NW 138th St	Highway	SIS Multi-Modal Unfunded Needs
6	I-75 / SR 826 Int. I-75 SR 826	Highway	SIS Multi-Modal Unfunded Needs
6	SR 826 / NW 154th St. Int. SR 826 NW 154th St.	Highway	SIS Multi-Modal Unfunded Needs
6	SR 826 / Okeechobee Rd Int. SR 826 US 27/Okeechobee Rd.	Highway	SIS Multi-Modal Unfunded Needs
3	I-10 Int. at Thomasville Rd.	Highway	SIS Multi-Modal Unfunded Needs
2	I-10 at US 301	Highway	SIS Multi-Modal Unfunded Needs
5	I-95 at US 1	Highway	SIS Multi-Modal Unfunded Needs
5	I-95 at SR 44	Highway	SIS Multi-Modal Unfunded Needs
5	I-75 at US 27	Highway	SIS Multi-Modal Unfunded Needs
4	SW 10th St. from West of I-95 Interchange to East of I-95 Interchange	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
4	I-95 at Palmetto Park Rd.	Highway	SIS Multi-Modal Unfunded Needs
4	I-95 from High Meadow Ave. to Becker Rd.	Highway	SIS Multi-Modal Unfunded Needs
4	Sawgrass Expressway at I-595	Highway	SIS Multi-Modal Unfunded Needs
4	I-595 Westbound General Purpose Lanes to I-95 Northbound Express Lanes	Highway	SIS Multi-Modal Unfunded Needs
4	I-75 at Griffin Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at Corkscrew Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at Alico Rd.	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 at Daniels Parkway	Highway	SIS Multi-Modal Unfunded Needs
2	I-10 at SR 121	Highway	SIS Multi-Modal Unfunded Needs
2	I-295 at Collins Rd	Highway	SIS Multi-Modal Unfunded Needs
2	I-295 at US 17 / Wells Rd	Highway	SIS Multi-Modal Unfunded Needs
8	Beachline West Expressway @ Interstate 4	Highway	SIS Multi-Modal Unfunded Needs
8	Beachline West Expressway @ Consulate Dr.	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @US 1 (MP 0)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @Quail Roost Dr (MP 13)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @SW 120th St. (MP 19)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @NW 74th St. (MP 31)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @NW 57th St (MP 43)	Highway	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @Tallahassee Rd (MP 6)	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline/SR91 Homestead Extension	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline/SR 91 Sample Rd.	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline At the Sawgrass Expressway	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline/SR 91 Atlantic Ave.	Highway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline/SR 91 Kissimmee Park Rd. (MP 240)	Highway	SIS Multi-Modal Unfunded Needs
8	Polk Parkway/SR 570 Interstate 4	Highway	SIS Multi-Modal Unfunded Needs
8	Sawgrass Expressway/SR 869 @I-75/I-595 (MP 0)	Highway	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects			
District	Project Name	Project Type	Source
8	Seminole Expressway SR 426 (MP 38)	Highway	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway Red Bug Lake Rd. (MP 41)	Highway	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway CR 427 (MP 49)	Highway	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway Interstate 4 (MP 55)	Highway	SIS Multi-Modal Unfunded Needs
8	Western Beltway/SR 429 Interstate 4 (MP 0)	Highway	SIS Multi-Modal Unfunded Needs
5	SR 429 at CR 535	Highway	SIS Multi-Modal Unfunded Needs
5	SR 417 at Narcoossee Rd	Highway	SIS Multi-Modal Unfunded Needs
5	SR 528 at Dallas Blvd	Highway	SIS Multi-Modal Unfunded Needs
3	US 90/Mahan Dr. at I-10 East	Highway	SIS Multi-Modal Unfunded Needs
1	I-75 River Rd/ CR 777	Highway	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Roadway Improvements	Highway	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Upland Improvements Port Redwing (Access Rd.)	Highway	SIS Multi-Modal Unfunded Needs
6	Port of Miami Redevelopment of Port Blvd.	Highway	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Phase 10: Expansion Area GATX Dr.	Highway	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Fisherman's Wharf Roadway	Highway	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Terminal Dr. Roadway	Highway	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Harbor St. Roadway	Highway	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Port Ave. Roadway	Highway	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Ave. M St. Extension	Highway	SIS Multi-Modal Unfunded Needs
7	US 41 FROM PENDOLA POINT TO S OF CAUSEWAY BLVD	Highway	SIS First 5 Year_Highway
6	SR 25/OKEECHOBEE RD FROM BROWARD COUNTY LINE TO WEST OF HEFT	Highway	SIS First 5 Year_Highway
6	SR 9A/I-95 FROM N. OF BISCAYNE CANAL TO SR 860/MIAMI GARDEN DR	Highway	SIS First 5 Year_Highway
7	I-4 EB WEIGH STATION	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 FROM SOUTH OF GLADES RD. TO SOUTH OF LINTON BLVD.	Highway	SIS First 5 Year_Highway
4	SR-80 FROM W OF LION COUNTRY SAFARI RD TO FOREST HILL/CRESTWOOD BLVD.	Highway	SIS First 5 Year_Highway
2	SR26 CORRIDOR FROM: GILCHRIST C/L TO: CR26A E OF NEWBERRY	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
2	SR20 FROM: ALACHUA C/L TO: SW 56TH AVENUE	Highway	SIS First 5 Year_Highway
2	SR20 FROM: SW 56TH AVENUE TO: CR315 IN INTERLACHEN	Highway	SIS First 5 Year_Highway
2	SR15(US17) FROM: CR309 IN SATSUMA TO: W.OF DUNN CREEK BRIDGE	Highway	SIS First 5 Year_Highway
3	SR 77 FROM BAY COUNTY LINE TO NORTH OF CR 279	Highway	SIS First 5 Year_Highway
3	SR 77 FROM NORTH OF ROGERS ROAD TO SOUTH OF CANE MILL ROAD	Highway	SIS First 5 Year_Highway
3	SR 83 (US 331) FROM EDGEWOOD CIRCLE TO SR 8 (I-10)	Highway	SIS First 5 Year_Highway
5	SR 40 FROM SR 15 US17 TO SR 11	Highway	SIS First 5 Year_Highway
5	SR 40 FROM W OF SR 11 TO W OF CONE ROAD	Highway	SIS First 5 Year_Highway
6	SR 997/KROME AVENUE FROM SW 312ST/CAMPBELL DR TO SW 296 ST (TRUCK BYPS)	Highway	SIS First 5 Year_Highway
5	SR 15 (US 17) FROM DELEON SPRINGS BLVD TO SR40	Highway	SIS First 5 Year_Highway
5	SR 40 FROM END OF 4 LANES TO EAST OF CR 314	Highway	SIS First 5 Year_Highway
1	SR 29 FROM SUNNILAND NURSERY ROAD TO S OF AGRICULTURE WAY	Highway	SIS First 5 Year_Highway
1	SR 29 FROM S OF AGRICULTURE WAY TO CR 846 E	Highway	SIS First 5 Year_Highway
1	SR 29 FROM N OF NEWMARKET RD N ROAD TO SR 82	Highway	SIS First 5 Year_Highway
1	SR 29 FROM F ROAD TO COWBOY WAY	Highway	SIS First 5 Year_Highway
1	SR 29 FROM SR 82 TO HENDRY C/L	Highway	SIS First 5 Year_Highway
1	SR 29 FROM CR 832 (KERI RD) TO F RD	Highway	SIS First 5 Year_Highway
1	SR 29 FROM CR 80A (COWBOY WAY) TO CR 731 (WHIDDEN RD)	Highway	SIS First 5 Year_Highway
4	SR-710/BEE LINE HWY FROM NORTHLAKE BLVD TO SR-708/BLEU HERON BLVD	Highway	SIS First 5 Year_Highway
1	SR 710 FROM E OF L-63 CANAL TO SHERMAN WOOD RANCHES	Highway	SIS First 5 Year_Highway
1	SR 710 FROM SHERMAN WOOD RANCHES TO CR 714 (MARTIN C/L)	Highway	SIS First 5 Year_Highway
2	US17 N OF POMONA PARK CR309(SATSUMA)	Highway	SIS First 5 Year_Highway
1	SR 82 FROM ALABAMA ROAD S TO HOMESTEAD ROAD S	Highway	SIS First 5 Year_Highway
1	SR 82 FROM HOMESTEAD ROAD S TO HENDRY C/L	Highway	SIS First 5 Year_Highway
5	ST JOHNS HERITAGE PKWY/ELLIS RD FROM JOHN RHODES BLVD TO W OF WICKHAM	Highway	SIS First 5 Year_Highway
6	SR 997/KROME AVENUE FROM SW 296 STREET TO S OF SW 232 STREET	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
6	SR 997/KROME AVENUEFROM SW 232 STREET TO S OF SW 184TH ST/EUREKA DR.	Highway	SIS First 5 Year_Highway
6	SR 997/KROME AVENUEFROM SW 184 STREET TO SOUTH OF SW 136 STREET	Highway	SIS First 5 Year_Highway
1	SR 82 FROM HENDRY COUNTY LINE TO GATOR SLOUGH LANE	Highway	SIS First 5 Year_Highway
1	SR 82 FROM GATOR SLOUGH LANE TO SR 29	Highway	SIS First 5 Year_Highway
3	SR 83 (US 331) FROMCOY BURGESS LOOP ROAD TOSR 10 (US 90)	Highway	SIS First 5 Year_Highway
1	SR 60 FROM GRAPE HAMMOCK ROAD TO EAST OF KISSIMMEE RIVER BRIDGE	Highway	SIS First 5 Year_Highway
5	SR 50 FROM HERNANDO/SUMTER COUNTY LINE TO WEST OF CR 757	Highway	SIS First 5 Year_Highway
5	SR 50 FROM SUMTER/LAKE COUNTY LINE TO CR 33	Highway	SIS First 5 Year_Highway
7	SR 50 FROM US 301/SR 35 TO HERNANDO/SUMTER COUNTY LINE	Highway	SIS First 5 Year_Highway
8	WIDEN POLK PKWY FROM MP 18 TO MP 22, 2 TO 4 LANES	Highway	SIS First 5 Year_Highway
1	STATE FUNDED SIB FOR CONSTRUCTION OF ADDITIONAL LANES ON SR 31	Highway	SIS First 5 Year_Highway
2	I-95 FROM: 1-10 TO:SOUTH OF SR115 (US1) MLK	Highway	SIS First 5 Year_Highway
2	SR200(A1A) FROM US17 TO CR107	Highway	SIS First 5 Year_Highway
3	SR 75 (US 231) FROMSR 30A (US 98) 15TH ST TO SOUTH OF PIPE LINE RD	Highway	SIS First 5 Year_Highway
7	SR 694/GANDY BLVD FROM E OF 4TH ST TO W OF GANDY BRIDGE	Highway	SIS First 5 Year_Highway
7	SR 694/GANDY BLVD FROM E OF US 19 TO E OF I-275 (SR 93)	Highway	SIS First 5 Year_Highway
7	US 19 (SR 55) FROM W JUMP COURT TO W FORT ISLAND TRAIL	Highway	SIS First 5 Year_Highway
7	US 19 FROM CARDINALST TO GREEN ACRES ST	Highway	SIS First 5 Year_Highway
8	WIDEN TPK FROM WPB SERVICE PLAZA TO SR710 (MP94.5-106.1)(4TO8 LNS)W/EL	Highway	SIS First 5 Year_Highway
1	I-75 FROM S OF CORKSCREW ROAD TO S OF DANIELS PARKWAY	Highway	SIS First 5 Year_Highway
5	SR 528 FROM E OF SR524(INDUSTRY) TO EAST OF SR 3	Highway	SIS First 5 Year_Highway
5	SR 528 FROM EAST OFSR 3 TO PORT CANAVERAL INTERCHANGE	Highway	SIS First 5 Year_Highway
7	I-75 (SR 93) FROM PASCO/HERNANDO CO/L TO N OF US98/SR50/CORTEZ	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) FROM CR 457 MACK BAYOU ROAD TOEAST OF CR 30A WEST	Highway	SIS First 5 Year_Highway
8	WIDEN TPK FROM SR710 (MP 106.1) TO MP 117 (4TO 8 LNS)	Highway	SIS First 5 Year_Highway
7	SR 50 FROM US 98/MCKETHAN RD TO US 301	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
7	SR 50 FM WINDMERE RD/BRONSON BL TO US 98/MCKETHAN RD	Highway	SIS First 5 Year_Highway
7	SR 50/CORTEZ BLVD FROM COBB RD TO W OF BUCK HOPE RD	Highway	SIS First 5 Year_Highway
7	SR 50/CORTEZ BLVD FROM W OF BUCK HOPE RD TO W OF JEFFERSON STREET	Highway	SIS First 5 Year_Highway
1	SR 29 FROM CR 846 ETO N OF NEW MARKET ROAD N	Highway	SIS First 5 Year_Highway
1	US 27 (SR 25) FROM HIGHLANDS COUNTY LINE TO CR 630A	Highway	SIS First 5 Year_Highway
1	US 27 FROM CR 630A TO PRESIDENTS DRIVE	Highway	SIS First 5 Year_Highway
7	I-275 (SR 93) FROM 54TH AVE S TO GANDY BLVD	Highway	SIS First 5 Year_Highway
8	WIDEN SEMINOLE XWAY- ORANGE/SEMINOLE CNTY LINE TO ALOMA AVE	Highway	SIS First 5 Year_Highway
7	SR 50 FROM LOCKHARTRD TO E OF REMINGTON RD	Highway	SIS First 5 Year_Highway
1	SR 60 FROM CR 630 TO GRAPE HAMMOCK RD	Highway	SIS First 5 Year_Highway
8	WIDEN HEFT- NW 106TH ST TO I-75 (MP34 TO MP39) 6TO10 LANES W/EXP LANES	Highway	SIS First 5 Year_Highway
7	SR 60 FROM VALRICO RD TO E OF DOVER RD	Highway	SIS First 5 Year_Highway
7	SR 60 FROM E OF DOVER RD TO E OF SR 39	Highway	SIS First 5 Year_Highway
8	WIDEN TPK- SR50 CLERMONT TO ORANGE/LAKE C/L (271.17-274) 4TO8LNS W/EXP	Highway	SIS First 5 Year_Highway
8	WIDEN TPK- ORANGE/LAKE C/L - MINNEOLA (274-279.14) 4TO8LNS W/EXP	Highway	SIS First 5 Year_Highway
8	WIDEN TPK- MINNEOLAINTCHG TO US27 (MP279-289.3) (4TO8 W/EXP)	Highway	SIS First 5 Year_Highway
8	WIDEN TPK- US27 TO LAKE/SUMTER C/L (MP 289.3- 297.9) (4TO8 W/EXP)	Highway	SIS First 5 Year_Highway
8	WIDEN TPK- LAKE/SUMTER C/L TO CR468 INTCHG (MP297.9-301.4)(4TO8) W/EXP	Highway	SIS First 5 Year_Highway
8	WIDEN TPK FROM CR468 INTCHG TO I-75 INTCHG (MP 301.4 - 308.9)(4 TO 8)	Highway	SIS First 5 Year_Highway
8	WIDEN HEFT (SR821) FROM US-1/SOUTH OF PALM DR TO CAMPBELL DR (MP 0-2)	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 NORTHBOUND OFF-RAMP TO EASTBOUND I-595	Highway	SIS First 5 Year_Highway
2	I-295 FROM: SR13(SAN JOSE) TO: SR21(BLANDINGBLVD)	Highway	SIS First 5 Year_Highway
5	I-4 FROM S OF US 441 (OBT) TO S. OF IVANHOE BLVD.	Highway	SIS First 5 Year_Highway
8	WIDEN TPK(SR91) - HEFT(SR821) TO N OF JOHNSON ST(MP47-51)(6-10) W/EXP	Highway	SIS First 5 Year_Highway
8	WIDEN TPK(SR91) FROM N OF JOHNSON ST TO GRIFFIN RD(MP51-53)(6-10)W/EXP	Highway	SIS First 5 Year_Highway
8	WIDEN TPK- ATLANTICBLVD(SR814) TO WILES RD (MP66-70)(6TO10LANES) W/EL	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
8	WIDEN TPK(SR91) FROM SAWGRASS TO PALM BEACH C/L (MP71-73)(6-8 LN) W/EL	Highway	SIS First 5 Year_Highway
8	WIDEN TPK FROM GLADES TO ATLANTIC AVE (MP76.4-81.6) (6 TO 10 LN) W/EL	Highway	SIS First 5 Year_Highway
8	WIDEN TPK-PALM BEACH C/L TO GLADES RD (MP73-75) (6-10 LNS) W/EL	Highway	SIS First 5 Year_Highway
4	SR-710/WARFIELD BL.FR MARTIN FPL PWR PLANT TO CR609/SW ALLAPATTAH RD	Highway	SIS First 5 Year_Highway
6	SR 25/OKEECHOBEE RD FROM EAST OF NW 87 AVE TO NW 79 AVE (CONCRETE)	Highway	SIS First 5 Year_Highway
2	I-95(SR9) FROM: ST JOHNS C/L TO: I-295(SR9A)	Highway	SIS First 5 Year_Highway
8	WIDEN SAWGRASS- N OF ATLANTIC TO SR 7 (MP8-18)(6TO10 LNS) (W EXP LNS)	Highway	SIS First 5 Year_Highway
8	WIDEN TURNPIKE MAINLINE ATLANTIC TO BOYNTON(MP81.6-86)(6TO10 LNS) W/EL	Highway	SIS First 5 Year_Highway
8	WIDEN SAWGRASS EXPY, SR7 TO POWERLINE RD (MP18-21) (6 TO 10 LNS) W/EL	Highway	SIS First 5 Year_Highway
2	I-10 FROM: I-295 TO: I-95	Highway	SIS First 5 Year_Highway
5	I-4/SR 400 FROM E OF SR 434 TO W OF LAKE MARY BLVD	Highway	SIS First 5 Year_Highway
2	I-10(SR8) FROM I-295 TO I-95	Highway	SIS First 5 Year_Highway
3	SR 390 ST ANDREWS FROM SR 368 23RD ST TO E OF CR 2312 BALDWIN ROAD	Highway	SIS First 5 Year_Highway
3	SR 390 ST ANDREWS FROM JENKS AVENUE TO EAST OF SR 77 OHIO AVENUE	Highway	SIS First 5 Year_Highway
8	WIDEN TPK(SR91) BOYNTON BEACH BLVD-LAKE WORTH RD(4TO8LNS W/EL)(MP86-93	Highway	SIS First 5 Year_Highway
3	SR 263 CAPITAL CIRCLE FROM CR 2203 SPRINGHILL RD TO SR 371 ORANGE AVE	Highway	SIS First 5 Year_Highway
3	SR 388 FROM SR 79 TO E OF NWF BEACHES INTL AIRPORT	Highway	SIS First 5 Year_Highway
1	SR 82 FROM SHAWNEE ROAD TO ALABAMA ROAD S	Highway	SIS First 5 Year_Highway
7	SR 597 (N DALE MABRY) FROM VAN DYKE RD TO COUNTY LINE ROAD	Highway	SIS First 5 Year_Highway
8	WIDEN HEFT- I-75 TONW 57TH AVE (MP39 -MP43)(4TO8 LANES W EXP LANES)	Highway	SIS First 5 Year_Highway
8	WIDEN TPK FROM KISSIMMEE PARK RD TO US 192 (MP 238.5-242.5) (4TO8 LNS)	Highway	SIS First 5 Year_Highway
8	WIDEN SUNCOAST PKWY(SR589) FROM VAN DYKE RD TO SR 54 (MP 14-18)(4TO8)	Highway	SIS First 5 Year_Highway
8	WIDEN SUNCOAST PKWY(SR589) FROM SR 54 TO SR52 (MP 18-28) (4TO8 LNS)	Highway	SIS First 5 Year_Highway
7	SR 597(N DALE MABRY) FROM COUNTY LINE ROAD TO S OF US 41 (SR 45)	Highway	SIS First 5 Year_Highway
7	I-4 (WESTBOUND) FM W OF ORIENT RD TO WEST OF I-75	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
7	US 19 (SR 55) FROM S OF TIMBERLANE RD TO S OF LAKE ST	Highway	SIS First 5 Year_Highway
1	I-75 AT CORKSCREW INTERCHANGE	Highway	SIS First 5 Year_Highway
7	N 62ND STREET FROM CSX INTRMD ENTRANCE TO NORTH OF E COLUMBUS DRIVE	Highway	SIS First 5 Year_Highway
1	US 441 AT NE 102ND STREET	Highway	SIS First 5 Year_Highway
1	US 27 AT EAST PHOENIX ST	Highway	SIS First 5 Year_Highway
5	SR 200 @ I-75/W OF I-75 TO E OF I-75 ADDING LEFT & RIGHT TURN LANES	Highway	SIS First 5 Year_Highway
5	SR 326 FROM SR 326 RXR CROSS 627142B TO E OF CR 25A (NW GAINESVILLE RD)	Highway	SIS First 5 Year_Highway
7	SR 60 / BRANDON BLVD FROM BRANDON TOWN CTR TO GORNTON LAKE RD	Highway	SIS First 5 Year_Highway
4	SR-858/HALLANDALE BCH BLVD E OF RR XING #628290-Y TO W OF ANSIN BLVD	Highway	SIS First 5 Year_Highway
5	SR 405 SPACEPORT CONNECTOR SIS INTERSECTION IMPROVEMENTS	Highway	SIS First 5 Year_Highway
5	SR 405 AT SISSON RD SPACEPORT CONNECTOR SISINTERSECTION IMPROVEMENTS	Highway	SIS First 5 Year_Highway
5	WICKHAM RD AT I-95 RAMP IMPROVEMENTS AND MAST ARMS	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ SR-824/PEMBROKE ROAD	Highway	SIS First 5 Year_Highway
4	SR-80/SOUTHERN BLVD AT FOREST HILL BLVD	Highway	SIS First 5 Year_Highway
4	SR-5/US-1 @ SR-70/VIRGINIA AVENUE	Highway	SIS First 5 Year_Highway
2	SR26(NEWBERRY RD) FROM NW 75TH ST TO NW 69TH TERRACE	Highway	SIS First 5 Year_Highway
5	US 192 AT HOAGLAND BLVD	Highway	SIS First 5 Year_Highway
7	SR 580/HILLSBOROUGH AVE FROM MEMORIAL HWY/SHELDON RD TO HIMES AVE	Highway	SIS First 5 Year_Highway
7	SR 573/S DALE MABRY HWY FROM PINEWOOD ST TO GANDY BLVD	Highway	SIS First 5 Year_Highway
7	GIBSONTON DR EB FROM NB ON RAMP TO I-75	Highway	SIS First 5 Year_Highway
4	NW 136TH AVE @ SR-84, SIS FACILITY IMPROVEMENTS	Highway	SIS First 5 Year_Highway
4	SR-80/SOUTHERN BLVD. RAMP AND SR-7/US-441	Highway	SIS First 5 Year_Highway
2	SR26 WESTBOUND RIGHT TURN LANE @ SE 70TH AVENUE	Highway	SIS First 5 Year_Highway
2	SR26 WESTBOUND LEFT TURN LANE @ SE 25TH AVENUE	Highway	SIS First 5 Year_Highway
2	SR26 EASTBOUND LEFT TURN LANE @ CR307(SW 30TH AVENUE)	Highway	SIS First 5 Year_Highway
2	SR26 WESTBOUND LEFT TURN LANE @ SW 298TH ST/SE 90TH AVENUE	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
3	SR 75 (US 231) @ 19TH ST INTERSECTION	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) @ JD MILLER ROAD INTERSECTION	Highway	SIS First 5 Year_Highway
4	SR-9/ I-95 SOUTHBOUND RAMPS AT OKEECHOBEE BOULEVARD	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) @ SR 83 (US 331) INTERSECTION	Highway	SIS First 5 Year_Highway
3	SR 75 (US 231) @ CR2327 TRANSMITTER ROAD INTERSECTION	Highway	SIS First 5 Year_Highway
2	I-95 @ SR152(BAYMEADOWS ROAD)	Highway	SIS First 5 Year_Highway
1	US 27 FROM SOUTH OF SUN 'N LAKE TO NORTH OF SUN 'N LAKE	Highway	SIS First 5 Year_Highway
6	SR 836/I-395 FROM WEST OF I-95 TO MACARTHUR CSWY BRIDGE	Highway	SIS First 5 Year_Highway
7	CR 296(FUTURE SR686) FROM US 19 (SR 55) TO EOF ROOSEVELT/CR 296	Highway	SIS First 5 Year_Highway
7	I-275 (HOWARD FRKL)FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	Highway	SIS First 5 Year_Highway
7	I-275 (HOWARD FRKL)FM N OF HOWARD FRANKLANDTO S OF SR 60	Highway	SIS First 5 Year_Highway
8	GOLDEN GLADES INTERCHANGE IMPROVEMENTS N/B DIRECT CONNECT BRIDGE	Highway	SIS First 5 Year_Highway
6	SR 25/OKEECHOBEE RDFROM E. OF NW 116 WAY TOE. OF NW 87 AVE(CONCRETE)	Highway	SIS First 5 Year_Highway
6	SR 25/OKEECHOBEE RDFROM E. OF NW 107 AVE TOE. OF NW 116 WAY(CNCRETE)	Highway	SIS First 5 Year_Highway
7	US 41/SR 45/S 50TH ST @ CSX GRADE SEPARATIONSOUTH OF CAUSEWAY BLVD	Highway	SIS First 5 Year_Highway
2	I-295(SR9A) FROM: SOUTHSIDE CONNECTOR(SR113)TO: SR202 JTB	Highway	SIS First 5 Year_Highway
2	I-295(SR9A) FROM: DAME POINT BRIDGE TO: NORTH OF PULASKI	Highway	SIS First 5 Year_Highway
2	I-10(SR8) FROM: CR125 TO: US301	Highway	SIS First 5 Year_Highway
2	I-10(SR8) FROM: US301 TO: SR23(MANAGED LANES)	Highway	SIS First 5 Year_Highway
2	I-10(SR8) FROM: NASSAU/DUVAL C/L TO: US301	Highway	SIS First 5 Year_Highway
5	SR 400 (I-4) W OF SR 528 BEACHLINE TO W OF SR 435 KIRKMAN RD	Highway	SIS First 5 Year_Highway
5	SR 400 (I-4) E OF SR 522 (OSCEOLA PKWY) TO WEST OF SR 528	Highway	SIS First 5 Year_Highway
5	SR 400 (I-4) 1 MILEE OF SR 434 TO E OF SR 15/600 (US 17/92)	Highway	SIS First 5 Year_Highway
5	SR 400 (I-4) E OF SR 15/600 (US 17/92) TO 1/2 MILE E OF SR 472	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO EXPY FROM I-75 TO NW 17 AVENUE	Highway	SIS First 5 Year_Highway
4	I-595/SR-862/ P3 FROM E. OF I-75 TO W. OF I-95	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
4	SR-93/I-75 FROM N OF GRIFFIN RD. TO N OF SW 14TH/INDIAN TRACE	Highway	SIS First 5 Year_Highway
2	I-75(SR121)WILLISTON RD TO SR222(NW 39TH AVE)	Highway	SIS First 5 Year_Highway
2	I-95(SR9) FROM: INT'L GOLF PKWY TO: DUVAL CL	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO XWAY FROM W. OF NW 17TH AVENUE TO I-95 (EXPRESS LANES)	Highway	SIS First 5 Year_Highway
8	WIDEN HEFT FROM NW 57TH AVE TO MIRAMAR PLAZA(MP43-47)(4TO9 LNS) W/EL	Highway	SIS First 5 Year_Highway
6	SR 93/I-75 FROM S. OF NW 170 STREET TO MIAMI-DADE COUNTY LINE	Highway	SIS First 5 Year_Highway
5	SR 400 (I-4) WEST OF CR 532 TO EAST OF SR 522 (OSCEOLA PARKWAY)	Highway	SIS First 5 Year_Highway
7	I-4 FROM I-4/SELMONCONNECTOR TO E OF BRANCHFORBES RD	Highway	SIS First 5 Year_Highway
5	I-4 MANAGED LANES FROM KIRKMAN TO SR 434	Highway	SIS First 5 Year_Highway
2	I-95(SR9) FROM: SR202(J.T. BUTLER) TO: ATLANTIC BLVD	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO EXPY FROM US-1/S. DIXIE HWY TO SR 836/DOLPHIN XWAY	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 FROM BROWARD/PALM BEACH COUNTY LINE TO LINTON BLVD.	Highway	SIS First 5 Year_Highway
2	I-295(SR9A) FROM: SR9B TO: SOUTH INTERCHANGE	Highway	SIS First 5 Year_Highway
7	I-275 (SR 93) FROM S OF LOIS AVE TO WILLOW AVE	Highway	SIS First 5 Year_Highway
2	I-10(SR8) FROM: US301 TO: I-295	Highway	SIS First 5 Year_Highway
8	WIDEN HEFT FROM SR836 TO NW 106TH ST (MP26-34) (6/8 LNS TO 10 INC EXP)	Highway	SIS First 5 Year_Highway
2	I-95(SR9) FROM: I-295(SR9A) TO; SR202(JT BUTLER BLVD)	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO EXPY FROM I-75 TO N.OF CANALC-8 BRDG(APPROX NW 162ST)	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO EXPY FROM N.OF CANAL C-8 BRDG(162ST) TO E.OF NW 67 AVE	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO EXPY FROM E. OF NW 67 AVE TOE. OF NW 57 AVE	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO EXPY FROM E. OF NW 57 AVE TOE. OF NW 42 AVE	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO EXPY FROM E. OF NW 42 AVE TOE. OF NW 32 AVE	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO EXPY FROM E. OF NW 32 AVE TOW. OF NW 17 AVE	Highway	SIS First 5 Year_Highway
8	WIDEN TPK, US192/441 TO OSCEOLA PKWY (MP242-248.93) 4TO8LNS + EXP LNS	Highway	SIS First 5 Year_Highway
8	WIDEN SAWGRASS- S OF SUNRISE TO N OF ATLANTIC (MP0.5-8)(6TO10LNS)W EXP	Highway	SIS First 5 Year_Highway
7	I-275 AND I-4 EXPRESS LANES - TAMPA BAY EXPRESS	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
7	I-275/SR 93 FROM S OF KENNEDY BLVD TO S OF LOIS AVE	Highway	SIS First 5 Year_Highway
5	I-4 BTU CONNECTION FROM 150' WEST OF CENTRALFLORIDA PARKWAY TO SR 528	Highway	SIS First 5 Year_Highway
7	VETERAN'S EXPRESSWAY-SR60 OPERATIONAL IMPROVEMENT	Highway	SIS First 5 Year_Highway
1	I-75 AT SR 70 INTERCHANGE	Highway	SIS First 5 Year_Highway
1	I-75 (SR 93) AT US 301 INTERCHANGE	Highway	SIS First 5 Year_Highway
1	I-75 AT SR 64	Highway	SIS First 5 Year_Highway
1	I-4 AT SR 557	Highway	SIS First 5 Year_Highway
1	I-75 AT SR 72 (CLARK ROAD) INTERCHANGE	Highway	SIS First 5 Year_Highway
1	I-75 (SR93) AT BEE RIDGE ROAD	Highway	SIS First 5 Year_Highway
3	SR 8 (I-10) @ SR 95(US 29) INTERCHANGE	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ GATEWAYBLVD. INTERCHANGE	Highway	SIS First 5 Year_Highway
8	RIDGE RD / SUNCOASTPKWY (SR 589) INTERCHANGE (MP 24.7)	Highway	SIS First 5 Year_Highway
4	I-95/I-595 EXPRESS LANES DIRECT CONNECT,I-95FR STIRLING TO BROWARD BL	Highway	SIS First 5 Year_Highway
5	I-95/MATANZAS WOODSINTERCHANGE	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ SR-808/GLADES ROAD	Highway	SIS First 5 Year_Highway
7	I-275 (SR 93) FM WEST OF SR 60/MEMORIAL TO NOF SPRUCE STREET	Highway	SIS First 5 Year_Highway
7	I-275 (SR 93) I-275/SR 60 INTERCHANGE	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ 10TH AVE NORTH IN LAKE WORTH	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ OSLO ROAD INTERCHANGE	Highway	SIS First 5 Year_Highway
1	I-75 AT SR 884 (COLONIAL BLVD) INTERCHANGE	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ HYPOLUXO ROAD	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ LANTANAROAD	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ PALM BEACH LAKES BLVD	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ PGA BOULEVARD/CENTRAL BOULEVARD	Highway	SIS First 5 Year_Highway
4	SR-93/I-75 INTERCHNG @SR-820 PINES BLVD F N OF MIRAMAR PKWY T N OF PIN	Highway	SIS First 5 Year_Highway
2	I-95 (SR 9) AT SR 202 (JT BUTLER BLV) INTERCHANGE IMPROVEMENT	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
7	US 41(SR45) @ SR54 FM W OF WILSON RD/SR 54 INT TO E OF OSPREY LN/SR54	Highway	SIS First 5 Year_Highway
1	US 27 AT SR 60	Highway	SIS First 5 Year_Highway
1	I-75 AT FRUITVILLE ROAD/CR 780	Highway	SIS First 5 Year_Highway
4	SR-93/I-75 INTRCHNG@ ROYAL PALM BLVD FR GRIFFIN RD TO N OF SW 14 ST	Highway	SIS First 5 Year_Highway
2	I-75(SR93) @ SR121	Highway	SIS First 5 Year_Highway
2	I-75(SR93)@ SR24(ARCHER RD)	Highway	SIS First 5 Year_Highway
6	SR 836/I-95 INTERCHANGE RAMP FROM NW 17 AVETO I-95 (MDX)	Highway	SIS First 5 Year_Highway
6	SR 9A/I-95 SOUTHBOUND RAMP TO WESTBOUND SR 836	Highway	SIS First 5 Year_Highway
6	SR 25/OKEECHOBEE RD FROM W. OF NW 138 ST TO E. OF NW 107 AVE (CNCRETE)	Highway	SIS First 5 Year_Highway
7	I-75 @ BIG BEND RD NEW NB & SB RAMP	Highway	SIS First 5 Year_Highway
1	I-75 AT SR 951	Highway	SIS First 5 Year_Highway
5	I-95 INT @ ELLIS RD/ST JOHNS HERITAGE PKWY	Highway	SIS First 5 Year_Highway
7	I-75 NB ON RAMP FROM NB US 301 TO I-75 NB	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO EXPY - SR 826 EASTBOUND RAMP TO SR 9A/I-95 NORTHBOUND	Highway	SIS First 5 Year_Highway
6	GOLDEN GLADES INTERCHANGE VARIOUS RAMP IMPROVEMENTS	Highway	SIS First 5 Year_Highway
6	SR 826 CONNECTOR AT GOLDEN GLADES INTERCHG AND VARIOUS RAMP	Highway	SIS First 5 Year_Highway
7	I-75 (SR 93A) FM WBSR60 ENTRANCE RAMP TO S OF CSX RR/CR 574	Highway	SIS First 5 Year_Highway
7	I-75 (SR93A)& SR 60 FM S OF SR60 @ SLIP RMP TO S OF CSX BRIDGE 100471	Highway	SIS First 5 Year_Highway
7	I-75 (SR 93A) FM S OF SELMON EXP OVRPSS TO NOF SR 60	Highway	SIS First 5 Year_Highway
7	I-75(SR93A)SB OFF-RAMP FROM EB/WB I-4 TO S OF BYPASS CANAL	Highway	SIS First 5 Year_Highway
7	I-75 (SR 93A) FM S OF CSX/BROADWAY AVE TO EB/WB I-4 EXIT RAMP	Highway	SIS First 5 Year_Highway
1	I-4 AT SR 33 INTERCHANGE MODIFICATION	Highway	SIS First 5 Year_Highway
1	FGT I-4 AT SR 33 INTERCHANGE MODIFICATION	Highway	SIS First 5 Year_Highway
7	I-4 (SR 400) FM E OF I-75 (SR 93A) TO EAST OF WILLIAMS RD	Highway	SIS First 5 Year_Highway
7	I75/SR 56 INTERCHANGE FM E OF CR 54 TO W OF CYPRESS RIDGE BL(PHASE I)	Highway	SIS First 5 Year_Highway
7	I75/I275 FROM COUNTY LINE ROAD TO SR 56 (PHASE II)	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
3	SR 30 (US 98) ELEVATED ROADWAY E TO W OF TYNDALL AFB ENTRANCE	Highway	SIS First 5 Year_Highway
4	I-75/SR-93 EAST SIDE RAMP IMPROVEMENTS AT GRIFFIN ROAD	Highway	SIS First 5 Year_Highway
3	SR 8 (I-10) @ CR 99BEULAH ROAD	Highway	SIS First 5 Year_Highway
7	I-275/SR93 NB FM N OF HOWARD FRANKLAND TO S OF TRASK STREET	Highway	SIS First 5 Year_Highway
7	I-275/SR93 NB FLYOVER FROM SR 60 EB TO I-275NB	Highway	SIS First 5 Year_Highway
8	SAND LAKE RD / TPK INTERCHANGE (SR482/SR91) (MP 257)	Highway	SIS First 5 Year_Highway
7	US 19 (SR 55) FROM N OF CR 95 TO S OF PINE RIDGE WAY S	Highway	SIS First 5 Year_Highway
7	I-275/SR 93 FM S OFWILLOW TO N OF MLK;I-4 FM I-275 TO W OF CONNECTOR	Highway	SIS First 5 Year_Highway
2	I-95(SR9) @ SR115(US1)/ML KING/20TH STREET	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ SR-806/ATLANTIC AVENUE INTERCHANGE	Highway	SIS First 5 Year_Highway
5	I-75(SR 93) AT NW 49TH ST FROM END OF NW 49TH ST TO END OF NW 35TH ST	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 AT ST LUCIE WEST BLVD	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ LINTON BOULEVARD INTERCHANGE	Highway	SIS First 5 Year_Highway
5	I-75 @ CR 514 FROM 0.5 MILES W OF I-75 TO CR525 EXTENSION	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ SR-842/BROWARD BOULEVARD	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ SUNRISEBLVD. INTERCHANGE IMPROVEMENT	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ SR-80/SOUTHERN BLVD. INTERCHG. ULTIM. IMPRVMT.	Highway	SIS First 5 Year_Highway
2	I-295(SR9A) @ US17 TO SOUTH OF WELLS ROAD	Highway	SIS First 5 Year_Highway
2	I-10(SR8) @ SR121 OPERATIONAL IMPROVEMENTS	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ NORTHLAKE BOULEVARD INTERCHANGE	Highway	SIS First 5 Year_Highway
2	SR200(US301) @ CRAWFORD ROAD	Highway	SIS First 5 Year_Highway
4	EASTBOUND SR-84 TO SOUTHBOUND SR-93/I-75 ON-RAMP	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 FROM S OF45TH STREET TO N OF 45THST	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ SR-834/SAMPLE RD FR S OF NB EXITRAMP TO N OF NB ENT. RAMP	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @COPANS RD FR S OF NB EXIT RAMP TON OF SB TO WB EXIT RAMP	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ 6TH AVENUE SOUTH	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
4	SR-9/I-95 FROM SOUTH OF SW 10TH STREET TO NORTH OF HILLSBORO BLVD.	Highway	SIS First 5 Year_Highway
7	I-275 (SR 93) FROM SB I-275 EXIT RAMP TO 22ND AVE S	Highway	SIS First 5 Year_Highway
8	GOLDEN GLADES INTERCHANGE IMPROVEMENTS (MAINLINE SPUR MP 0X)	Highway	SIS First 5 Year_Highway
8	TURNPIKE MAINLINE AT I-4 (MP 259 - DIRECT CONNECT RAMPS)	Highway	SIS First 5 Year_Highway
8	HEFT & SURFACE STREET IMPROVEMENTS FROM HAINLIN MILLS TO US 1 MP11-12	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 FROM SOUTH OF WOOLBRIGHT ROAD TO NORTH OF WOOLBRIGHT ROAD	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 FROM SOUTH OF SHERIDAN STREET TO NORTH OF GRIFFIN ROAD	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 AT DAVIE BOULEVARD	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 AT OAKLAND PARK BOULEVARD	Highway	SIS First 5 Year_Highway
2	I-295 INTERCHANGE @COLLINS ROAD	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 NORTHBOUND AND SOUTHBOUND OFF-RAMPS AT MIDWAY RD.	Highway	SIS First 5 Year_Highway
4	SR-84/RAMP U9 FROM I-595 C-D ROAD EB TO I-595 EB AND SR-84 EB	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 NORTHBOUND OFF-RAMP AT INDIANTOWN ROAD	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 @ BELVEDERE RD NB OFF-RAMP	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 NORTHBOUND AND SOUTHBOUND OFF-RAMPS AT GATLIN BLVD.	Highway	SIS First 5 Year_Highway
7	N 62ND STREET FROM CSX INTRMD ENTRANCE TO NORTH OF E COLUMBUS DRIVE.	Highway	SIS First 5 Year_Highway
1	SR 60 AT BAILEY RD	Highway	SIS First 5 Year_Highway
1	US 27 AT SR 64	Highway	SIS First 5 Year_Highway
4	SR-80/SOUTHERN BLVDAT SANSBURY WAY/LYONS RD.	Highway	SIS First 5 Year_Highway
2	SR100 @ EAST END ROAD	Highway	SIS First 5 Year_Highway
1	SR 15/700 (US 98/441) AT SE 18TH TERR ROUNDABOUT	Highway	SIS First 5 Year_Highway
7	US 19 (SR 55) FROM N OF SR 580 (MAIN ST) TO NORTHSIDE DR	Highway	SIS First 5 Year_Highway
7	US 19 (SR 55) FROM NORTHSIDE DR TO NORTH OF CR 95	Highway	SIS First 5 Year_Highway
7	US 19 (SR 55) FROM N OF NEBRASKA AVE TO S OFTIMBERLANE RD	Highway	SIS First 5 Year_Highway
5	SR429/46 (WEKIVA PKWY) FROM E OF OSPREY HAMMOCK TRAIL TO ORANGE BLVD	Highway	SIS First 5 Year_Highway
5	SR 429 (WEKIVA PKWY) FROM ORANGE BOULEVARD TO W OF I-4 (SR 400)	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
6	PORT OF MIAMI TUNNEL FROM PORT OF MIAMI TO SR 836/I-395	Highway	SIS First 5 Year_Highway
8	SUNCOAST PARKWAY 2 - SR 44 TO US19	Highway	SIS First 5 Year_Highway
1	SR 710 FROM US 441 TO L-63 CANAL	Highway	SIS First 5 Year_Highway
2	FIRST COAST XWAY FROM I-95 TO I-10	Highway	SIS First 5 Year_Highway
2	FIRST COAST XWAY FROM I-95(SR9) TO SR15(US17)	Highway	SIS First 5 Year_Highway
2	FIRST COAST XWAY FROM: SR15(US17) TO: SR21	Highway	SIS First 5 Year_Highway
2	SR23 FROM EAST OF CR209 TO NORTH OF SR16	Highway	SIS First 5 Year_Highway
2	SR23 FROM NORTH OF SR16 TO NORTH OF SR21(BLANDING BLVD)	Highway	SIS First 5 Year_Highway
2	SR23 FROM WEST OF CR16A TO EAST OF CR209	Highway	SIS First 5 Year_Highway
2	SR23 FROM I-95 TO WEST OF CR16A	Highway	SIS First 5 Year_Highway
7	I75/I275 CD ROAD FMS OF COUNTY LINE RD TO COUNTY LINE RD (PHASE II)	Highway	SIS First 5 Year_Highway
6	SR 112/I-195 FRONTAGE RD & RAMP REALIGNMENT (MIAMI DESIGN DISTRICT)	Highway	SIS First 5 Year_Highway
8	CENTRAL POLK PARKWAY - FROM US 17 (SR 35) TOSR 60	Highway	SIS First 5 Year_Highway
8	SR589 - SR 44 TO CR586 - SUNCOAST II	Highway	SIS First 5 Year_Highway
4	SR-704/OKEECHOBEE BLVD FROM SR-7 TO SR-5/US-/SOUTH DIXIE HWY	Highway	SIS First 5 Year_Highway
3	SR 30A (US98) PC BCH PKWY FROM E OF NAUTILUSST TO E OF R JACKSON BLVD	Highway	SIS First 5 Year_Highway
3	SR 30A (US 98) PC BCH PKWY FROM E OF R JACKSON BLVD TO HATHAWAY BRIDGE	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) FROM SANTA ROSA C.O. LINE TO EOF FALLIN WATERS DRIVE	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) FROM FALLIN WATERS DRIVE TO MARY ESTHER BLVD	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) GULF BREEZE PKWY FROM PORTSIDEDRIVE TO BERGREN ROAD	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) GULF BREEZE PKWY FROM E OF ORTEGA ST TO OKA CO LINE	Highway	SIS First 5 Year_Highway
3	SR 8 (I-10) @ CR 4 ANTIOCH ROAD INTERCHANGE	Highway	SIS First 5 Year_Highway
5	SR 40 FROM EAST OF CR 314 TO EAST OF CR 314A	Highway	SIS First 5 Year_Highway
3	SR 173 BLUE ANGEL PW FROM SR 292 SORRENTO ROAD TO SR 30 (US 98)	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 FR MIAMI-DADE/BROWARD COUNTY LINE TO PALM BEACH COUNTY LINE	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 FROM BROWARD/PALM BEACH COUNTY LINE TO NORTH OF LINTON BLVD.	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
3	SR 79 WAUKESHA ST FROM NORTH OF SR 8 (1-10) TO SR 10 (US 90)	Highway	SIS First 5 Year_Highway
3	SR 79 FROM SR 10 (US 90) TO NORTH OF CREEK ROAD	Highway	SIS First 5 Year_Highway
3	SR 79 FROM NORTH OF CREEK ROAD TO NORTH OF BAXTER ROAD	Highway	SIS First 5 Year_Highway
3	SR 79 FROM N OF BAXTER ROAD TO ALABAMA STATELINE	Highway	SIS First 5 Year_Highway
3	SR 187 (US 331) FROM S OF HOLLEY KING RD TO N OF MIDDLE CREEK BRIDGE	Highway	SIS First 5 Year_Highway
3	SR 187 (US 331) FROM N OF MIDDLE CREEK BR TO S OF CR 2	Highway	SIS First 5 Year_Highway
2	SR20 FROM ALACHUA C/L TO CR315 IN INTERLACHEN	Highway	SIS First 5 Year_Highway
6	SR 997/KROME AVENUE FROM SO. OF FLAGLER AVE TO SW 296TH ST. (BY-PASS)	Highway	SIS First 5 Year_Highway
4	SR-862/I-595 E/W CENTRAL BROWARD TRANSIT ANALYSIS	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) HARBOR BLVD FROM CR 30A CALHOUN AVENUE TO AIRPORT ROAD	Highway	SIS First 5 Year_Highway
1	SR 70 FROM LORRAINER RD TO CR 675/WATERBURY ROAD	Highway	SIS First 5 Year_Highway
1	SR 70 FROM CR 29 TOLONESOME ISLAND ROAD	Highway	SIS First 5 Year_Highway
6	SR 9A/I-95 FROM S. OF SR 836/I-395 TO BROWARD COUNTY LINE	Highway	SIS First 5 Year_Highway
6	SR 9A/I-95 FROM US-1/SOUTH DIXIE HIGHWAY TO SOUTH OF SR 90/SW 8 STREET	Highway	SIS First 5 Year_Highway
6	SR 9A/I-95 FROM NORTH OF SR 90/SW 8 STREET TO SOUTH OF SR 836/I-395	Highway	SIS First 5 Year_Highway
1	SR 29 FROM OIL WELL ROAD TO SR 82	Highway	SIS First 5 Year_Highway
1	SR 29 FROM SR 82 TO CR 80-A	Highway	SIS First 5 Year_Highway
6	SR 826/PALMETTO EXPY FROM SR 968/W FLAGLER ST TO S OF NW 154 STREET	Highway	SIS First 5 Year_Highway
2	SR202(JTURNER BUTLER BLVD) FROM: I-95 TO: SRA1A	Highway	SIS First 5 Year_Highway
8	PD&E WIDEN TPK SPUR& HEFT (GOLDEN GLADES-HEFT)&(NW57TH AVE-MAINLINE)	Highway	SIS First 5 Year_Highway
8	PD&E WIDEN MAINLINE FROM FT PIERCE TO YEEHAW JUNCTION (MP 152 - 193)	Highway	SIS First 5 Year_Highway
8	PD&E WIDEN MAINLINE YEEHAW JUNCTION TO SOUTH OF US 192 (MP 193-242)	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 FROM MIAMI-DADE/BROWARD CL TO SR-842/BROWARD BLVD	Highway	SIS First 5 Year_Highway
5	SR 40 FROM BREAKAWAY TRAIL TO WILLIAMSON BLVD	Highway	SIS First 5 Year_Highway
5	I-75 INTERCHANGE AT SW 95TH ST & SW 95TH ST FROM 49TH AVE TO CR 475A	Highway	SIS First 5 Year_Highway
7	I75/I275 SB FROM S OF COUNTY LINE RD TO SR 56	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
3	SR 79 FROM SR 8 (I-10) TO ALABAMA LINE	Highway	SIS First 5 Year_Highway
1	SR 29 FROM I-75 TO OIL WELL RD	Highway	SIS First 5 Year_Highway
7	US92/SR580/HILLSBOROUGH CORRIDOR EVALUATION FM MEMORIAL HWY TO I-275	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 FROM S. OF SR-870/COMMERCIAL BLVD.TO N. OF CYPRESS CREEK RD	Highway	SIS First 5 Year_Highway
1	NORTH JONES LOOP RDR FROM BURNT STORE ROAD TO PIPER ROAD	Highway	SIS First 5 Year_Highway
6	SR 25/OKEECHOBEE RD. & SR 826/PALMETTO EXPRESSWAY (VARIOUS RAMPS)	Highway	SIS First 5 Year_Highway
4	SR-9/I-95 FROM S. OF SR-858/HALLANDALE BCH BLVD TO N.OF HOLLYWOOD BLVD	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) FROM COUNTY ROAD 30A TO BAY COUNTY LINE	Highway	SIS First 5 Year_Highway
3	SR 8 (I-10) E OF ALABAMA STATE LINE TO W OF SR 95 (US 29)	Highway	SIS First 5 Year_Highway
6	SR 9/NW 27 AVE FROM MIA INTRMDAL CTR TO NW 215 ST/UNITY STN(PTC STUDY)	Highway	SIS First 5 Year_Highway
4	SR-869/SW 10 ST FROM W OF SR-845/POWERLINE RD TO WEST OF MILITARY TRL	Highway	SIS First 5 Year_Highway
7	US 92/SR 600/GANDY BLVD FROM E OF 4TH ST TO WESTSHORE BLVD	Highway	SIS First 5 Year_Highway
1	SR 31 FROM SR 80 (PALM BEACH BLVD) TO SR 78 (BAYSHORE RD)	Highway	SIS First 5 Year_Highway
8	PD&E WIDEN TPK FROM I-595 TO WILES RD (8 TO 10 LNS) (MP 53-70)	Highway	SIS First 5 Year_Highway
1	I-4 (SR 400) FROM W OF SR 570 (POLK PARKWAY) TO W OF US 27 INTERCHANGE	Highway	SIS First 5 Year_Highway
1	I-75 (SR 93) FROM N UNIVERSITY PKWY TO MOCCASIN WALLOW	Highway	SIS First 5 Year_Highway
1	I-75 (SR 93) FROM N RIVER RD TO SR 681	Highway	SIS First 5 Year_Highway
1	I-75 (SR 93) FROM SR 681 TO N OF UNIVERSITY PARKWAY	Highway	SIS First 5 Year_Highway
1	I-75 (SR 93) FROM E OF SR 951 TO COLLIER/LEE COUNTY LINE	Highway	SIS First 5 Year_Highway
1	I-75 (SR 93) FROM COLLIER/LEE COUNTY LINE TO SR 78 (BAYSHORE DR)	Highway	SIS First 5 Year_Highway
1	INTERSTATE PROGRAM MANAGER - GEC	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) OVER ST ANDREWS BAY ICWW BRIDGE NO. 460019	Highway	SIS First 5 Year_Highway
3	SR 30A (US 98) PC BEACH PKWY FROM MANDY LANE TO EAST OF NAUTILUS ST	Highway	SIS First 5 Year_Highway
3	SR 75 (US 231) FROM SOUTH OF PIPE LINE RD TO NORTH OF PENNY ROAD	Highway	SIS First 5 Year_Highway
3	SR 742 BURGESS ROAD FROM SR 95 (US 29) TO HILBURN ROAD	Highway	SIS First 5 Year_Highway
3	SR 30 (US 98) FROM BAYSHORE ROAD TO PORTSIDE DRIVE	Highway	SIS First 5 Year_Highway

HIGHWAY Projects			
District	Project Name	Project Type	Source
5	HOAGLAND BOULEVARD FROM N OF SHINGLE CREEK TO 5TH STREET	Highway	SIS First 5 Year_Highway
3	SR 187 (US 331) FROM SR 10 (US 90) TO S OF HOLLEY KING RD	Highway	SIS First 5 Year_Highway
1	I-75 (SR 93) FROM NRIVER RD (CR 777) TO MOCCASIN WALLOW RD	Highway	SIS First 5 Year_Highway
1	I-75 (SR 93) FROM EOF SR 951 TO SR 78 (BAYSHORE DR)	Highway	SIS First 5 Year_Highway
6	SR 9336/PALM DRIVE FROM SR 997/KROME AVE TO SR 5/US 1 (TRUCK BYPASS)	Highway	SIS First 5 Year_Highway
6	NE 203 STREET INTERSECTION IMPROVEMENTS BETWEEN SR 5/US-1 & W. DIXIE HIGHWAY	Highway	SIS First 5 Year_Rail
1	SR 29 FROM OIL WELLROAD TO SUNNILAND NURSERY ROAD	Highway	SIS Second 5 Year_Highway
1	SR 29 FROM COLLIER C/L TO CR 832 (KERI RD)	Highway	SIS Second 5 Year_Highway
3	SR 75 (US 231) FROM SR 30A (US 98) 15TH ST TO SR 368 23RD STREET	Highway	SIS Second 5 Year_Highway
3	SR 75 (US 231) FROM SR 368 23RD STREET TO SOUTH OF PIPE LINE ROAD	Highway	SIS Second 5 Year_Highway
2	I-10(SR8) FROM WEST OF CR125 TO W SR121	Highway	SIS Second 5 Year_Highway
2	I-10(SR8) FROM WEST OF SR121 TO NASSAU C/L	Highway	SIS Second 5 Year_Highway
2	I-10(SR8) FROM BAKER C/L TO DUVAL C/L	Highway	SIS Second 5 Year_Highway
7	I-275 (SR 93) FROM N OF MLK TO N OF BUSCH BLVD	Highway	SIS Second 5 Year_Highway
7	I-4 (SR 400) FM W OF I-75 NB OFF RAMP TO E OF MANGO RD	Highway	SIS Second 5 Year_Highway
4	I-95 FROM INDIANTOWN ROAD TO MARTIN/PALM BEACH COUNTY LINE	Highway	SIS Second 5 Year_Highway
4	I-95 FROM MARTIN/PALM BEACH COUNTY LINE TO CR-708/BRIDGE ROAD	Highway	SIS Second 5 Year_Highway
4	SR-9/I-95 FROM CR-708/BRIDGE ROAD TO HIGH MEADOWS	Highway	SIS Second 5 Year_Highway
4	I-95 FROM HIGH MEADOWS TO MARTIN/ST. LUCIE COUNTY LINE	Highway	SIS Second 5 Year_Highway
4	I-95 FROM MARTIN/ST. LUCIE COUNTY LINE TO SR-70	Highway	SIS Second 5 Year_Highway
4	US 27 (Miami-Dade to Hendry)	Highway	SIS CFP Plan
4	SR-80	Highway	SIS CFP Plan
1	US 27 (Palm Beach / Hendry County Line)	Highway	SIS CFP Plan
4, 5	US 27 (Miami-Dade, Broward)	Highway	SIS CFP Plan
4	US 27 (Palm Beach, Hendry)	Highway	SIS CFP Plan

HIGHWAY Projects			
District	Project Name	Project Type	Source
6	PortMiami Tunnel from McArthur Causeway to PortMiami	Highway	SIS CFP Plan
5	NASA Parkway Bridge Replacement from SR405 to KSC Visitor Center	Highway	SIS CFP Plan
2	US17 from Collins Road to NAS Birmingham Gate	Highway	SIS CFP Plan
6	Port Miami Tunnel from McArthur Causeway to Port Miami	Highway	SIS CFP Plan
6	Port Miami Tunnel-Phase 52 from Watson Island to MacArthur Causeway Bridge	Highway	SIS CFP Plan
6	Port Miami Tunnel-Phase 82 from Watson Island to MacArthur Causeway Bridge	Highway	SIS CFP Plan
6	PortMiami Tunnel-Phase A8 from Watson Island to MacArthur Causeway Bridge	Highway	SIS CFP Plan
3	I-10 (Antioch)	Highway	SIS CFP Plan
3	US98 @ SR 293	Highway	SIS CFP Plan
3	I-10 @ US90 West 9 Mile Road Interchange	Highway	SIS CFP Plan
5	I-4 @ Daryl Carter Parkway	Highway	SIS CFP Plan
5	I-10 @ end of NW 49th Street	Highway	SIS CFP Plan
1	I-75 @ North Jones Loop Rd	Highway	SIS CFP Plan
1	I-75 @ US17/SR35	Highway	SIS CFP Plan
1	I-75 @ CR77/Harbor View	Highway	SIS CFP Plan
1	I-75 @ CR769/Kings Highway	Highway	SIS CFP Plan
2	I-10 @ SR-121	Highway	SIS CFP Plan
2	I-75 @ SR-121 (Williston Rd)	Highway	SIS CFP Plan
2	I-95 @ SR-16	Highway	SIS CFP Plan
4	I-95 @ Stirling Road	Highway	SIS CFP Plan
4	I-95 @ Davie Boulevard	Highway	SIS CFP Plan
4	I-95 @ Oakland Park Boulevard	Highway	SIS CFP Plan
4	I-95 @ Belvedere Road	Highway	SIS CFP Plan
4	SR-80 @ SR-7	Highway	SIS CFP Plan
5	I-75 @ US27	Highway	SIS CFP Plan
5	I-95 @ US1	Highway	SIS CFP Plan

HIGHWAY Projects			
District	Project Name	Project Type	Source
5	I-95 @ LPGA	Highway	SIS CFP Plan
5	I-95 @ SR-44	Highway	SIS CFP Plan
6	I-75 @ NW 138th St	Highway	SIS CFP Plan
6	I-75/HEFT Int. @ CD Road to Miami Gardens Drive	Highway	SIS CFP Plan
6	I-75 to SR-826 Interchange	Highway	SIS CFP Plan
7	I-275 @ I-4 flyover	Highway	SIS CFP Plan
7	I-275 @ MLK Blvd	Highway	SIS CFP Plan
7	I-275 @ Hillsborough Avenue	Highway	SIS CFP Plan
7	I-275 @ Sligh Avenue	Highway	SIS CFP Plan
7	I-275 @ Busch Boulevard	Highway	SIS CFP Plan
7	I-275 @ Fowler Avenue	Highway	SIS CFP Plan
7	I-275 @ Fletcher Avenue	Highway	SIS CFP Plan
7	I-275 @ Bears Avenue	Highway	SIS CFP Plan
7	I-275 @ South of SR-60 to Lois Avenue to SR 60 from South of I-275 to SR 589	Highway	SIS CFP Plan
7	I-4 @ McIntosh Road	Highway	SIS CFP Plan
7	I-4 @ Branch Forbes	Highway	SIS CFP Plan
7	I-4 @ Thonotosassa Road	Highway	SIS CFP Plan
7	I-4 @ Park Road	Highway	SIS CFP Plan
7	I-4 @ Mango Road	Highway	SIS CFP Plan
7	I-4 (EB) from west of Orient Road to NB/SB I-75	Highway	SIS CFP Plan
7	I-4 (EB) from west of Orient Road to NB/SB I-76	Highway	SIS CFP Plan
7	I-75 @ Big Bend Road	Highway	SIS CFP Plan
7	I-75 @ Gibsonton	Highway	SIS CFP Plan
7	SR-686/Roosevelt Boulevard from I-275/SR-93 to West of 9th Street N/MLK Street N	Highway	SIS CFP Plan
1	SR-82 (from SR-739/Fowler Avenue to Michigan Link Avenue)	Highway	SIS CFP Plan
1	US-17 (from Palmetto Street to SR-35/DeSoto Avenue)	Highway	SIS CFP Plan

HIGHWAY Projects			
District	Project Name	Project Type	Source
1	US-27 (from North of Kokomo Road to Polk/Lake County Line)	Highway	SIS CFP Plan
4	I-95 (N. of Broward Boulevard to Sunrise Boulevard)	Highway	SIS CFP Plan
4	I-95 (SR-84 to S. of Broward Boulevard)	Highway	SIS CFP Plan
4	I-95 (S. of Indiantown Road to Martin/Palm Beach County line)	Highway	SIS CFP Plan
4	I-95 (from Martin/Palm Beach County Line to Becker Road)	Highway	SIS CFP Plan
4	I-95 (Becker Road to SR-70)	Highway	SIS CFP Plan
4	I-95 (from S. of Hallandale Beach Boulevard to N. of Hollywood Boulevard)	Highway	SIS CFP Plan
4	I-95 (from S. of Sheridan Street to N. of Griffin Road)	Highway	SIS CFP Plan
4	I-95 (from S. of Commercial Boulevard to N of Cypress Creek Road)	Highway	SIS CFP Plan
4	SR-710 (from Blue Heron Boulevard to Congress Avenue)	Highway	SIS CFP Plan
4	SR-80 (from West of Binks Forest Drive to I-95)	Highway	SIS CFP Plan
4	SR-80 (from West of Royal Palm Beach Boulevard to I-95)	Highway	SIS CFP Plan
7	I-275 (Innovation Corridor - Section 7/Part 2)	Highway	SIS CFP Plan
2	SR 26	Highway	SIS CFP Plan
1	SR 29	Highway	SIS CFP Plan
5	SR 40	Highway	SIS CFP Plan
1	SR 31	Highway	SIS CFP Plan
1	SR 60	Highway	SIS CFP Plan
1	SR 64	Highway	SIS CFP Plan
1	SR 70	Highway	SIS CFP Plan
1	SR 710	Highway	SIS CFP Plan
1	US 98 / US 441	Highway	SIS CFP Plan
3	East Avenue	Highway	SIS CFP Plan
3	SR 389 EAST AVE	Highway	SIS CFP Plan
4	SR-710	Highway	SIS CFP Plan
5	Ellis Road / St. Johns Heritage Pkwy	Highway	SIS CFP Plan

HIGHWAY Projects			
District	Project Name	Project Type	Source
5	SR 326	Highway	SIS CFP Plan
3	CR 2327 Transmitter Rd	Highway	SIS CFP Plan
1	US 17	Highway	SIS CFP Plan
5	SR 528	Highway	SIS CFP Plan
7	SR 50 (Cortez Blvd)	Highway	SIS CFP Plan
7	SR 50	Highway	SIS CFP Plan
7	US 41	Highway	SIS CFP Plan
3	US 231	Highway	SIS CFP Plan
7	US 92 (Gandy Bridge)	Highway	SIS CFP Plan
3	I-10	Highway	SIS CFP Plan
3	SR 173 Blue Angel Pkwy	Highway	SIS CFP Plan
3	SR 368 23rd St	Highway	SIS CFP Plan
3	SR 85 S Ferdon Blvd	Highway	SIS CFP Plan
1	SR 80	Highway	SIS CFP Plan
1	SR 82	Highway	SIS CFP Plan
1	US 19	Highway	SIS CFP Plan
1	US 27	Highway	SIS CFP Plan
3	US 98	Highway	SIS CFP Plan
5	SR 100	Highway	SIS CFP Plan
5	I-75	Highway	SIS CFP Plan
5	I-95	Highway	SIS CFP Plan
4	I-595	Highway	SIS CFP Plan
2	I-295	Highway	SIS CFP Plan
5	I-4	Highway	SIS CFP Plan
6	SR 826 Managed Lanes	Highway	SIS CFP Plan
4	SR-714/Monterey Road	N/A	SIS CFP Plan

HIGHWAY Projects			
District	Project Name	Project Type	Source
4	Port Everglades Midport Multimodal Facility - Phase 1	Other	SIS Multi-Modal Unfunded Needs
4	Port of Palm Beach Waterside Cargo Terminal Redevelopment	Other	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Phase 4: Intermodal Rail	Other	SIS Multi-Modal Unfunded Needs
3	Tallahassee International Airport Expand Air Freight Facilities	Other	SIS Multi-Modal Unfunded Needs
3	Intermodal Logistics Center at Tallahassee International Airport	Other	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Upland Improvements Port Redwing (Rail)	Other	SIS Multi-Modal Unfunded Needs
2	Port of Jacksonville Talleyrand Marine Terminal Rail	Other	SIS Multi-Modal Unfunded Needs
2	Port of Jacksonville Blount Island / Dames Point Marine Terminals Rail	Other	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Phase 1: Rail Improvement	Other	SIS Multi-Modal Unfunded Needs
2	Port of Fernandina Rail Track Improvements	Other	SIS Multi-Modal Unfunded Needs
4	Port of Palm Beach On Dock Rail Expansion & Rail Bridge	Other	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Re-establish Indian River Terminal Railway Spur	Other	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Re-establish Ave. M Railway Spur	Other	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Re-establish Fisherman's Wharf Railway Spur	Other	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Regional Distribution Center Rail Connector to Port	Other	SIS Multi-Modal Unfunded Needs
4	Port of Palm Beach On Port Rail Facility Expansion Project	Other	SIS Multi-Modal Unfunded Needs
1	CSXT at Current rail terminus, Webster Turn	Other	SIS Multi-Modal Unfunded Needs
5	Port Canaveral railway expansion	Other	SIS Multi-Modal Unfunded Needs
3	TALLAHASSEE INTERNATIONAL AIRPORT AIR CARGO FACILITY EXPANSION	Other	SIS First 5 Year_Modal
4	FT. LAUDERDALE/HOLLYWOOD INT'L AIRPORT. AIRPORT ACCESS ROADWAY SYSTEM	Other	SIS First 5 Year_Modal
7	TAMPA INTERNATIONALAIRPORT - PHASE 2 AND 3 MASTER PLAN PROJECTS	Other	SIS First 5 Year_Modal
1	I-4 at US-27/SR-25	Highway	FDOT Leadership
3	SR-20 Extension Project	Highway	FDOT Leadership
8	Florida Turnpike Electrification	Highway	FDOT Leadership

TRUCK PARKING Projects			
District	Project Name	Type	Source
6	Golden Glades Truck Travel Center	Truck Parking	2019 NHFP Projects
6	Site X from Dolphin/Palmetto Expressway Int. to Dolphin/Palmetto Expressway Int.	Truck Parking	SIS Multi-Modal Unfunded Needs
6	Site W from Prologis Site to NW 137th Ave.	Truck Parking	SIS Multi-Modal Unfunded Needs
6	Site V from Turnpike to NW 74th St.	Truck Parking	SIS Multi-Modal Unfunded Needs
6	Site Q from NW 167th St to Golden Glades Int.	Truck Parking	SIS Multi-Modal Unfunded Needs
5	Sanford Truck Parking Facility	Truck Parking	FDOT Leadership
2	I-75 NB & SB Rest Area Expansion (Ellisville)	Truck Parking	FDOT Leadership
2	I-95 NB & SB Rest Area Expansion (CR-210)	Truck Parking	FDOT Leadership
2	I-95 NB & SB WIM Station User Experience (Yulee)	Truck Parking	FDOT Leadership
ITS Projects			
District	Project Name	Type	Source
4	US 27 (Miami-Dade to Hendry)	ITS	SIS CFP Plan
4	US 27 (Miami-Dade to Hendry)	ITS	SIS CFP Plan
4	US 27 (Miami-Dade to Hendry)	ITS	SIS CFP Plan
4	US-27 ITS Improvements from MP 0.000 to 25.854	ITS	NHFP Prioritization
4	US 27 (Miami-Dade to Hendry)	ITS	SIS CFP Plan
4	US 27 (Miami-Dade to Hendry)	ITS	SIS CFP Plan
6	Advanced Freight Mobility Solutions	ITS	NHFP Prioritization
2	Talleyrand Avenue ITS Solution	ITS	FDOT Leadership
4, 6	Strategies for Reducing Railroad Trespassing (SRRT) Pilot Project	ITS	FDOT Leadership
4	Connected Freight Priority System Deployment	ITS	FDOT Leadership

Appendix B: Tier 2 List

HIGHWAY Projects		
District	Project Name	Source
5	Orlando International Airport	JACIP
5	Daytona Beach International Airport	JACIP
5	Melbourne International Airport	JACIP
2	Northeast Florida Regional Airport	JACIP
5	Orlando International Airport	JACIP
3	I-10 and SR 95 (US 29) Interchange	MPOAC 2019
3	SR 8 (I-10) Interchange West of Crestview	MPOAC 2019
4	SR-5/US-1 southbound on ramp to west bound I-595	MPOAC 2019
4	SR-9/I-95 at Oslo Rd Interchange	MPOAC 2019
6	SR 25/Okeechobee Rd from E of NW 116 Way to E of NW 87 Ave	MPOAC 2019
6	SR 25/Okeechobee Rd from E of NW 107 Ave to E of NW 116 Way	MPOAC 2019
7	I-275 (SR 93) & SR 60/Memorial Hwy (Westshore Area) Interchange	MPOAC 2019
3	SR 8 (I-10) E OF ALABAMA STATE LINE TO W OF SR 95 (US 29)	NHFP Prioritization, Aug 2019
2	SR 105 WB@ I-295	NHFP Prioritization, Aug 2019
3	SR 8 (I-10) @ SR 10 (US 90) WEST 9 MILE ROAD INTERCHANGE	NHFP Prioritization, Aug 2019
4	I-595 Project Ramp from SB US-1 to EB I-595	NHFP Prioritization, Aug 2019
5	SR 948/NW 36 ST FROM SR 826/PALMETTO EXPY TO SR 5/ US1	NHFP Prioritization, Aug 2019
9	Advanced Freight Mobility Solutions	NHFP Prioritization, Aug 2019
2	US301(SR200) @ Starke Truck Route (SR223) (N)	NHFP Prioritization, Aug 2019
4	I-95 and SR 68 Improvements	NHFP Prioritization, Aug 2019
7	I-4 @ County Line Road	NHFP Prioritization, Aug 2019
2	I-10@ SR 121	NHFP Prioritization, Aug 2019
4	US-27 ITS Improvements from MP 0.000 to 25.854	NHFP Prioritization, Aug 2019
4	I-95 Interchange at 45th Street	NHFP Prioritization, Aug 2019

HIGHWAY Projects		
District	Project Name	Source
4	I-595 / SR-84 Ramps to NB SR-7	NHFP Prioritization, Aug 2019
4	SR 84 at Weston	NHFP Prioritization, Aug 2019
5	I-95 INTERCHANGE AT PIONEER TRAIL	NHFP Prioritization, Aug 2019
7	I-75 / SR 93A at Gibsonton Drive	NHFP Prioritization, Aug 2019
3	SR 8 (I-10) FROM GADSDEN CO LINE TO WEST OF SR 263 CAPITAL CIRCLE	NHFP Prioritization, Aug 2019
7	I-75 / SR 93A SB from S of Tampa Bypass Canal to S of Fowler	NHFP Prioritization, Aug 2019
7	I-75 / SR 93A NB from S of Tampa Bypass Canal to N of US 301	NHFP Prioritization, Aug 2019
7	WB I-4 Aux lane MLK to 50th Street	NHFP Prioritization, Aug 2019
7	EB I-4 2-lane I-75 Exit Ramp	NHFP Prioritization, Aug 2019
7	WB I-4 Aux Lane Weigh Station to McIntosh Rd	NHFP Prioritization, Aug 2019
7	WB I-4 Aux Lane Extension from Branch Forbes Road On Ramp	NHFP Prioritization, Aug 2019
7	EB I-4 Aux Lane extension to Branch Forbes Rd Exit Ramp	NHFP Prioritization, Aug 2019
2	Bowden Intermodal Entrance	Rail Plan
4	West Palm Beach Intermodal Center - SIS Connector from I-95 to West Palm Beach Intermodal Center	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce SIS Connector from I-95 to Port of Fort Pierce	SIS Multi-Modal Unfunded Needs
4	SR 710 from Martin Powerplant Rd. to SR 76 Connector Ramps	SIS Multi-Modal Unfunded Needs
4	SR 80 from US 27 to US 441	SIS Multi-Modal Unfunded Needs
4	US 27 from I-75 to Broward / Palm Beach County Line	SIS Multi-Modal Unfunded Needs
4	US 27 from Milepost 12.4 to SR 80	SIS Multi-Modal Unfunded Needs
4	US 27 from Broward / Palm Beach County Line to Milepost 12.4	SIS Multi-Modal Unfunded Needs
4	US 27 from SR 80 to Palm Beach / Hendry County Line	SIS Multi-Modal Unfunded Needs
4	US 27 from Miami-Dade / Broward County Line to I-75	SIS Multi-Modal Unfunded Needs
7	CSX Transportation at US 41 (Rockport) NGCN: 624802A	SIS Multi-Modal Unfunded Needs
2	SR 200 / SR A1A from at Yulee to	SIS Multi-Modal Unfunded Needs
5	SR 401 - new high level bridge from SR 528 to Port Canaveral to SIS Connector & MAF	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
5	Indian River Bridge NASA Causeway from SR 405/US 1 interchange to NASA Parkway	SIS Multi-Modal Unfunded Needs
2	First Coast Expressway / SR 23 from Shands Bridge to	SIS Multi-Modal Unfunded Needs
7	CSX Transportation at US 41 / 50th St., NGCN: 624368C	SIS Multi-Modal Unfunded Needs
7	CSX Transportation at SR 60 / Adamo Dr., NGCN: 624820X	SIS Multi-Modal Unfunded Needs
4	45th St. from I-95 to Port of Palm Beach	SIS Multi-Modal Unfunded Needs
4	Ft. Laud/Hollywood Int'l Airport (FLL) Connector from I-95 to Northside FLL delivery entrance	SIS Multi-Modal Unfunded Needs
4	Port of Palm Beach/Blue Heron Blvd SIS Connector from I-95 to Port of Palm Beach at US1	SIS Multi-Modal Unfunded Needs
1	US 17 from Palmetto Ave. to SR 70 / Hickory St.	SIS Multi-Modal Unfunded Needs
1	US 17 from SR 70 / Hickory St. to SR 35 / DeSoto Ave.	SIS Multi-Modal Unfunded Needs
1	SR 82 / Dr. MLK Jr. Blvd. from Michigan Ave. to CR 865 / Ortiz Ave.	SIS Multi-Modal Unfunded Needs
2	US 17 from at I-295 to Birmingham Gate	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from SR 408 (MP 265) to SR 429 (MP 267A)	SIS Multi-Modal Unfunded Needs
2	US 17 from CR-220 to Creighton Rd.	SIS Multi-Modal Unfunded Needs
2	US 17 from Creighton Rd to Elbow Rd.	SIS Multi-Modal Unfunded Needs
2	US 17 from Elbow Rd to SR 224 (Kingsley Ave)	SIS Multi-Modal Unfunded Needs
2	US 17 from SR 224 (Kingsley Ave) to Wells Rd.	SIS Multi-Modal Unfunded Needs
2	US 17 from Wells Rd to Duval County Line	SIS Multi-Modal Unfunded Needs
7	SR 60 (Brandon Blvd.) from I-75 to Kings Ave.	SIS Multi-Modal Unfunded Needs
7	SR 60 (Brandon Blvd.) from Kingsway Rd. / Bryan Rd. to Valrico Rd.	SIS Multi-Modal Unfunded Needs
5	I-75 from Sumter County Line to Urban Boundary	SIS Multi-Modal Unfunded Needs
5	I-75 from Florida's Turnpike to SR 44	SIS Multi-Modal Unfunded Needs
5	I-75 from SR 44 to Marion County Line	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Capital Circle NE to Buck Lake Rd	SIS Multi-Modal Unfunded Needs
3	US 319 / Thomasville Rd. from I-10 to Killarney Way	SIS Multi-Modal Unfunded Needs
2	I-95 from CR-210 to Duval County Line	SIS Multi-Modal Unfunded Needs
2	US 17 from SR 20 to SR 100	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
5	I-75 from Florida's Turnpike to SR 44	SIS Multi-Modal Unfunded Needs
2	US 17 from N 1st St to SR 20	SIS Multi-Modal Unfunded Needs
1	SR 70 from CR 760 to DeSoto / Highlands County Line	SIS Multi-Modal Unfunded Needs
1	SR 29 from South of Agriculture Way to CR 846	SIS Multi-Modal Unfunded Needs
3	Transmitter Rd. from US 98 to US 231	SIS Multi-Modal Unfunded Needs
2	US 17 from Volusia County Line to S of Crescent City	SIS Multi-Modal Unfunded Needs
2	SR 100 from Clay County Line to Starke	SIS Multi-Modal Unfunded Needs
1	US 98 / 441 from 18th Terrace to 38th Ave.	SIS Multi-Modal Unfunded Needs
1	SR 70 from NW 38th Terrace to US 98	SIS Multi-Modal Unfunded Needs
7	Columbus Dr. from I-4 to CXS Intermodal Yard	SIS Multi-Modal Unfunded Needs
1	SR 70 from Lorraine Rd. to CR 675 / Waterbury Rd.	SIS Multi-Modal Unfunded Needs
1	SR 710 from 59th Blvd. to Okeechobee / Martin County Line	SIS Multi-Modal Unfunded Needs
4	SR 710 from Okeechobee / Martin County Line to Martin Powerplant Rd.	SIS Multi-Modal Unfunded Needs
1	SR 29 from I-75 to Oil Well Rd.	SIS Multi-Modal Unfunded Needs
1	SR 29 from New Market Rd. / Westclox Rd. to SR 82	SIS Multi-Modal Unfunded Needs
1	SR 29 from SR 78 to CR 74	SIS Multi-Modal Unfunded Needs
1	SR 64 from Hardee / Highlands County Line to Olivia Dr. / Avon Estates Blvd.	SIS Multi-Modal Unfunded Needs
1	SR 64 from Old Town Creek Rd. / CR 671 / Parnell Rd. to Hardee / Highlands County Line	SIS Multi-Modal Unfunded Needs
1	SR 64 from Avon Estates Blvd. / Olivia Dr. to US 27	SIS Multi-Modal Unfunded Needs
1	SR 70 from SR 72 to West of Peace River	SIS Multi-Modal Unfunded Needs
1	SR 29 from Collier / Hendry County Line to CR 832 / Keri Rd.	SIS Multi-Modal Unfunded Needs
1	US 27 By-Pass Georgia Ave. Extension from Lewis Blvd. to US 27	SIS Multi-Modal Unfunded Needs
3	Blue Angel Parkway from US 98 to Pine Forrest Rd.	SIS Multi-Modal Unfunded Needs
1	SR 60 from East of CR 630 to Polk / Osceola County Line	SIS Multi-Modal Unfunded Needs
1	SR 70 from East of SR 31 to CR 760	SIS Multi-Modal Unfunded Needs
1	SR 70 from Pine Level St. to CR 661A / Bunker Ave.	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
1	SR 70 from DeSoto / Highlands County Line to US 27	SIS Multi-Modal Unfunded Needs
1	SR 70 from US 27 to Highlands / Okeechobee County Line	SIS Multi-Modal Unfunded Needs
2	Forsyth St. from Lee St to Cleveland St	SIS Multi-Modal Unfunded Needs
2	SR 100 from E City Limit (NE 8th Ave) to SR 231	SIS Multi-Modal Unfunded Needs
2	SR A1A / SR 200 / 8th St. from Lime St to Centre St / Atlantic Ave.	SIS Multi-Modal Unfunded Needs
2	SR 26 / Newberry Rd from CR-337 / SW 266th St to SR 45	SIS Multi-Modal Unfunded Needs
2	US 41 from Guerdon St to I-10	SIS Multi-Modal Unfunded Needs
2	SR 100 from Bradford County Line to Putnam County Line	SIS Multi-Modal Unfunded Needs
2	SR 100 from SR 26 to CR 216	SIS Multi-Modal Unfunded Needs
2	US 17 from S of Crescent City to N of Crescent City	SIS Multi-Modal Unfunded Needs
2	US 17 from N of Crescent City to S of Pomona Park	SIS Multi-Modal Unfunded Needs
2	US 17 from S of Pomona Park to N of Pomona Park	SIS Multi-Modal Unfunded Needs
7	SR 45 (Nebraska Ave) from SR 60 (Kennedy Blvd) to Cass St / Nuccio Parkway	SIS Multi-Modal Unfunded Needs
5	SR 15 / US 17 from Washington Ave to CR 305 / Lake George Rd	SIS Multi-Modal Unfunded Needs
5	SR 15 / US 17 from CR 305 / Lake George Rd to Putnam County Rd	SIS Multi-Modal Unfunded Needs
5	SR 100 from US 1 / SR 5 / SR 100 to Commerce Parkway	SIS Multi-Modal Unfunded Needs
5	Division Ave. from Kaley St to Columbia St.	SIS Multi-Modal Unfunded Needs
5	Boggy Creek Rd from Landstreet Rd to SR 528	SIS Multi-Modal Unfunded Needs
5	SR 326 from SR 25 / US 301 to OLD US 301 / CR 200A	SIS Multi-Modal Unfunded Needs
5	SR 326 from Old US 301 / CR 200A to NE 36TH Ave Rd (Approx. Urban Boundary)	SIS Multi-Modal Unfunded Needs
5	Ellis Road from I-95 to W Of Wickham	SIS Multi-Modal Unfunded Needs
1	SR 70 from CR 675 to DeSoto County Line	SIS Multi-Modal Unfunded Needs
1	SR 70 from Manatee County Line to Pine Level St.	SIS Multi-Modal Unfunded Needs
1	SR 70 from CR 661A / Bunker Ave. to SR 72	SIS Multi-Modal Unfunded Needs
1	SR 29 from CR 74 to US 27	SIS Multi-Modal Unfunded Needs
1	SR 636 from SR 64 to CR 671 / Parnell Rd.	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
1	SR 64 from US 17 to SR 636	SIS Multi-Modal Unfunded Needs
1	SR 710 from Interceptor Creek to 59th Blvd.	SIS Multi-Modal Unfunded Needs
1	SR 70 from Highlands County Line to NW 38th Terrace	SIS Multi-Modal Unfunded Needs
1	SR 29 from Oil Well Rd. / CR 658 to Sunniland Nursery Rd.	SIS Multi-Modal Unfunded Needs
1	SR 29 from Sunniland Nursery Rd. to South of Agriculture Way	SIS Multi-Modal Unfunded Needs
1	SR 29 from CR 832 / Keri Rd. to F Rd.	SIS Multi-Modal Unfunded Needs
1	SR 29 from Hendry County Line / Whidden Rd. to SR 78	SIS Multi-Modal Unfunded Needs
1	SR 31 from SR 80 to SR 78	SIS Multi-Modal Unfunded Needs
1	SR 31 from SR 78 to CR 78/River Road	SIS Multi-Modal Unfunded Needs
5	SR 60 from Polk County Line to SR 15 / US 441	SIS Multi-Modal Unfunded Needs
5	SR 60 from US 441 to Florida's Turnpike	SIS Multi-Modal Unfunded Needs
3	I-10 from SR 12 to West of US 90	SIS Multi-Modal Unfunded Needs
3	SR 85 from SR 123 to I-10	SIS Multi-Modal Unfunded Needs
3	US 19 / US 27 from US 19 / SR 57 to Jefferson / Madison County Line	SIS Multi-Modal Unfunded Needs
3	SR 263 from Springhill Rd. / CR 2203 to Orange Ave.	SIS Multi-Modal Unfunded Needs
3	US 231 from SR 20 to I-10	SIS Multi-Modal Unfunded Needs
3	US 319 from North of Bannerman Rd. to Florida / Georgia State Line	SIS Multi-Modal Unfunded Needs
1	SR 80 from SR 31 / Arcadia Rd. to Buckingham Rd.	SIS Multi-Modal Unfunded Needs
3	SR 79 from SR 388 to I-10	SIS Multi-Modal Unfunded Needs
3	Eglin Parkway and John Sims Parkway from SR 123 to Eglin Blvd.	SIS Multi-Modal Unfunded Needs
3	SR 388 from SR 79 to Airport Entrance	SIS Multi-Modal Unfunded Needs
3	US 98 Tyndall Parkway from Transmitter Rd. to Tyndall Dr.	SIS Multi-Modal Unfunded Needs
3	US 98 / Miracle Strip Parkway from Eglin Parkway to Cody Ave.	SIS Multi-Modal Unfunded Needs
3	Eglin Parkway from Richburg Ave. / 12th Ave. to SR 123	SIS Multi-Modal Unfunded Needs
3	I-10 from Walton / Holmes County Line to Holmes / Washington County Line	SIS Multi-Modal Unfunded Needs
3	I-10 from Holmes / Washington County Line to Washington / Jackson County Line	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
3	I-10 from Washington / Jackson County Line to Jackson / Gadsen County Line	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from City of Waldo to Alachua / Bradford County Line	SIS Multi-Modal Unfunded Needs
3	I-10 from Jackson / Gadsden County Line to SR 12	SIS Multi-Modal Unfunded Needs
7	SR 597 (Dale Mabry Hwy) from Van Dyke Rd. to Calusa Trace Blvd.	SIS Multi-Modal Unfunded Needs
3	I-10 from East of US 319 to US 19	SIS Multi-Modal Unfunded Needs
3	I-10 from US 19 to Jefferson / Madison County Line	SIS Multi-Modal Unfunded Needs
7	SR 50 from California St. to CR 485 / Cobb Rd.	SIS Multi-Modal Unfunded Needs
4	SR 710 from Martin / Palm Beach County Line to Northlake Blvd.	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from Bradford / Clay County Line to Clay / Duval County Line	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from Alachua / Bradford County Line to CR 227 (Starke bypass south interchange)	SIS Multi-Modal Unfunded Needs
3	US 98 from Old US 98 alignment to Walton / Bay County Line	SIS Multi-Modal Unfunded Needs
7	Big Bend Rd. from US 41 to Covington Garden Dr.	SIS Multi-Modal Unfunded Needs
7	SR 44 from CR 491 to County Landfill Access	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from Marion County Line to Waldo	SIS Multi-Modal Unfunded Needs
1	US 17 from Copley Dr. to North of CR 74 / Bermont Rd.	SIS Multi-Modal Unfunded Needs
1	US 27 from Glades / Highlands County Line to SR 70	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from SR 710 (MP 107) to Kissimmee-St Cloud South (MP 242)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from Campbell Dr. (MP 2) to Bicsayne Dr. (MP 5)	SIS Multi-Modal Unfunded Needs
3	I-10 from Okaloosa / Walton County Line to Walton / Holmes County Line	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from CR 233 (Starke Bypass North Interchange) to Bradford / Clay County Line	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 from Clay / Duval County Line to I-10	SIS Multi-Modal Unfunded Needs
1	SR 60 from Bonnie Mine Rd. to CR 555 / Agricola Rd.	SIS Multi-Modal Unfunded Needs
1	SR 60 from SR 60A / Van Fleet Dr. to SR 25 / US 27	SIS Multi-Modal Unfunded Needs
1	US 27 from Palm Beach / Hendry County Line to Old US 27	SIS Multi-Modal Unfunded Needs
3	SR 77 from SR 390 to Bay County Line	SIS Multi-Modal Unfunded Needs
1	SR 60 from 12th Ave. to Bonnie Mine Rd.	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
1	US 27 from CR 832 / Owens Ave. to SR 80	SIS Multi-Modal Unfunded Needs
3	US 331 from SR 20 to I-10	SIS Multi-Modal Unfunded Needs
7	US 19 from Hernando / Citrus County Line to West Green Acres St.	SIS Multi-Modal Unfunded Needs
1	SR 60 from Hillsborough / Polk County Line to CR 676 / Nicholas Rd.	SIS Multi-Modal Unfunded Needs
1	SR 60 from CR 676 / Nicholas Rd. to Church Ave.	SIS Multi-Modal Unfunded Needs
1	SR 60 from Church Ave. to 12th Ave.	SIS Multi-Modal Unfunded Needs
3	US 231 from I-10 to Alabama State Line	SIS Multi-Modal Unfunded Needs
3	SR 77 from Bay County Line to I-10	SIS Multi-Modal Unfunded Needs
3	23rd St SR 368 from US 98 / SR 368 Int. to SR 390	SIS Multi-Modal Unfunded Needs
3	I-10 from SR 281 / Avalon Blvd. to Okaloosa / Walton County Line	SIS Multi-Modal Unfunded Needs
3	US 19 from US 19 / US 27 to Georgia State Line	SIS Multi-Modal Unfunded Needs
3	US 331 from US 98 to SR 20	SIS Multi-Modal Unfunded Needs
3	SR 123 from SR 85 South to SR 85 North	SIS Multi-Modal Unfunded Needs
1	US 17 (S. L. Holland) from Mann Rd. to Main St.	SIS Multi-Modal Unfunded Needs
3	SR 390 from SR 77 to US 231 SR 75	SIS Multi-Modal Unfunded Needs
3	US 98 SR30 from Tang-O-MAR Dr. to Bay County Line	SIS Multi-Modal Unfunded Needs
3	I-10 from Santa Rosa County Line to Walton County Line	SIS Multi-Modal Unfunded Needs
5	SR 3- New Connector from SR 528 to NASA Causeway	SIS Multi-Modal Unfunded Needs
5	Cape Canaveral from NASA Causeway West (Gate3) to Space Commerce Parkway	SIS Multi-Modal Unfunded Needs
7	SR 60 from Valrico Rd. to Dover Rd.	SIS Multi-Modal Unfunded Needs
7	SR 60 from Dover Rd. to SR 39	SIS Multi-Modal Unfunded Needs
7	SR 60 from SR 39 to Hillsborough / Polk County Line	SIS Multi-Modal Unfunded Needs
2	Pritchard Rd. from Pritchard Rd to I-295	SIS Multi-Modal Unfunded Needs
2	SR 100 from E. City Limit (NE 8th Ave) to SR 231	SIS Multi-Modal Unfunded Needs
2	SR 222 / 39th Ave from W of I-75 Ramps to NW 83rd St	SIS Multi-Modal Unfunded Needs
2	SR 222 / 39th Ave from NW 83rd St to NW 43 St	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
2	SR 222 / 39th Ave from NW 43 St to SR 121 / NW 34 St	SIS Multi-Modal Unfunded Needs
2	SR 222 / 39th Ave. from SR 121 / NW 34 St to US 441 / NW 13 St.	SIS Multi-Modal Unfunded Needs
2	US 17 from SR 16 East to SR 16 West	SIS Multi-Modal Unfunded Needs
2	US 17 from SR 16 West to N City Limit (.09 miles N of Governor St)	SIS Multi-Modal Unfunded Needs
3	US 98 / SR 30 from US 331 / SR 83 to Bay County Line	SIS Multi-Modal Unfunded Needs
3	US 29 from Nine 1/2 Mile Rd to state line	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Riggins Rd to Capital Circle NE	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Blair Stone Rd to Riggins Rd	SIS Multi-Modal Unfunded Needs
3	US 90 / Tennessee St from Monroe St to Magnolia Dr.	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Magnolia Dr. to Blair Stone Rd	SIS Multi-Modal Unfunded Needs
7	US 19 from W Ashburn Ln / 2nd St to W Emerald Oaks Dr.	SIS Multi-Modal Unfunded Needs
7	SR 50 from Suncoast Parkway (NB Ramps) to California St.	SIS Multi-Modal Unfunded Needs
7	SR 50 from Brooksville By-Pass to Lockhart	SIS Multi-Modal Unfunded Needs
7	US 92 (Gandy Bridge) from West end of Gandy Bridge to East end of Gandy Bridge	SIS Multi-Modal Unfunded Needs
7	US 41 / SR 45 from CR 672 (Big Bend Rd.) to Pembroke Rd. (Port Redwing Entrance)	SIS Multi-Modal Unfunded Needs
7	South 20th St. / Causeway Blvd. from South of 22nd St. / Maritime Blvd. to US 41	SIS Multi-Modal Unfunded Needs
7	SR 60 from Kennedy Blvd at Channelside Dr. to Channelside Dr. at Adamo Dr.	SIS Multi-Modal Unfunded Needs
7	SR 573 (South Dale Mabry Hwy) from MacDill Air Force Base Entrance to US 92 / SR 600 (Gandy Blvd.)	SIS Multi-Modal Unfunded Needs
7	I-275 (Sunshine Skyway Bridge) from Begin New Skyway Bridge to End of New Skyway Bridge	SIS Multi-Modal Unfunded Needs
5	SR 482 from SR 528 to End of SIS Connector	SIS Multi-Modal Unfunded Needs
5	SR 600 US 17 / 92 from CR 531 / Donegan to Osceola Parkway	SIS Multi-Modal Unfunded Needs
5	Hoagland Blvd. from Merlin Dr. to Vine St / US 192	SIS Multi-Modal Unfunded Needs
5	SR 500 / US 27 from 60th Ave to SR 93 / I-75	SIS Multi-Modal Unfunded Needs
5	SR 25 / US 27 from CR 561A to Causey Rd / Urban Boundary	SIS Multi-Modal Unfunded Needs
5	SR 25 / US 27 from Causey Rd / Urban Boundary to Urban Boundary E. Of SR 19	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
5	SR 25 / US 27 from Urban Boundary E OF SR 19 to Florida's Turnpike Northern Ramps	SIS Multi-Modal Unfunded Needs
4	SR 84 from I-95 to I-595	SIS Multi-Modal Unfunded Needs
1	US 19 from I-275 Ramp to Skyway Br. Hillsborough County Line	SIS Multi-Modal Unfunded Needs
1	US 17 from Main St. to SR 60A / Auto Zone Ln	SIS Multi-Modal Unfunded Needs
1	US 27 from Old US 27 to CR 832 / Owens Ave.	SIS Multi-Modal Unfunded Needs
1	US 27 from South of Skipper Rd. to US 98	SIS Multi-Modal Unfunded Needs
1	SR 82 from SR 739 / Fowler Ave. to Veronica Shoemaker Blvd.	SIS Multi-Modal Unfunded Needs
1	SR 82 from Veronica Shoemaker Blvd. to Michigan Link Ave.	SIS Multi-Modal Unfunded Needs
1	SR 82 from Alabama Rd. to Homestead Blvd.	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Buck Lake Rd to Thornton Rd	SIS Multi-Modal Unfunded Needs
3	US 90, Mahan Dr. from Thornton Rd to I-10	SIS Multi-Modal Unfunded Needs
5	SR 417 from International Dr. to Boggy Creek Rd	SIS Multi-Modal Unfunded Needs
5	SR 417 from Boggy Creek Rd to SR 528	SIS Multi-Modal Unfunded Needs
5	SR 429 from Seidel Rd to CR 535	SIS Multi-Modal Unfunded Needs
5	SR 429 from CR 535 to SR 50	SIS Multi-Modal Unfunded Needs
5	SR 429 from SR 50 to SR 414	SIS Multi-Modal Unfunded Needs
5	SR 528 from SR 417 to Innovation Way	SIS Multi-Modal Unfunded Needs
5	SR 528 from Innovation Way to SR 520	SIS Multi-Modal Unfunded Needs
5	SR 40 from Breakaway Trail to Williamson Blvd	SIS Multi-Modal Unfunded Needs
2	US 19 from Taylor-Madison County line to Jefferson County Line	SIS Multi-Modal Unfunded Needs
2	US 19 from Perry to Madison County Line	SIS Multi-Modal Unfunded Needs
3	I-10 from US 27 / Monroe St. to US 319 / Thomasville Rd.	SIS Multi-Modal Unfunded Needs
7	I-275 from 54th Ave. South to South of Gandy Blvd.	SIS Multi-Modal Unfunded Needs
2	I-95 from Flagler / St. Johns County Line to SR 206	SIS Multi-Modal Unfunded Needs
7	US 19 from New York Ave. to Pasco / Hernando County Line	SIS Multi-Modal Unfunded Needs
1	US 27 from South of B Moore Rd. to CR 547 / Sanders Rd.	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
1	US 27 from I-4 to Polk / Lake County Line	SIS Multi-Modal Unfunded Needs
2	I-75 from Marion / Alachua County Line to Williston Rd	SIS Multi-Modal Unfunded Needs
3	US 98 from Okaloosa / Walton County Line to Walton / Bay County Line	SIS Multi-Modal Unfunded Needs
3	I-10 from US 29 to Scenic Highway / US 90	SIS Multi-Modal Unfunded Needs
1	US 27 from North of Kokomo Rd. to South of B. Moore Rd.	SIS Multi-Modal Unfunded Needs
1	US 27 from CR 547 / Sanders Rd. to I-4	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 15 / US 17 to SR 122 (Golfair Ave)	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 122 (Golfair Ave) to SR 115 (Lem Turner Rd)	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 115 (Lem Turner Rd) to SR 111 (Edgewood Ave)	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 111 (Edgewood Ave) to SR 105 (Heckscher Dr)	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 102 (Airport Rd) to Pecan Park Rd	SIS Multi-Modal Unfunded Needs
2	I-95 from Pecan Park Rd to Nassau County Line	SIS Multi-Modal Unfunded Needs
2	I-95 from Duval County Line to SR A1A / SR 200	SIS Multi-Modal Unfunded Needs
2	I-95 from US 17 / SR 5 to Georgia State Line	SIS Multi-Modal Unfunded Needs
2	SR 26 / Newberry Rd from NW 76th Blvd to I-75	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr from Capital Circle NE to Buck Lake Rd	SIS Multi-Modal Unfunded Needs
7	CR 672 (Big Bend Rd.) from US 41 to I-75	SIS Multi-Modal Unfunded Needs
7	US Bus 41 / SR 45 (20th St) from Maritime Blvd to Lee Roy Selmon Expressway	SIS Multi-Modal Unfunded Needs
7	SR 585 (22nd St.) from Lee Roy Selmon Expressway to 21st St.	SIS Multi-Modal Unfunded Needs
7	SR 580 (Hillsborough Ave) from SR 589 (Veterans Expressway) to Cargo Rd.	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from SR 686 (E Bay Dr.) to Central Ave.	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from Central Ave. to Druid Rd.	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from Druid Rd. to SR 60 (Gulf to Bay Blvd.)	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from SR 60 (Gulf to Bay Blvd) to CR 576 (Sunset Point Rd)	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from CR 576 (Sunset Point Rd) to SR 580 (Main St.)	SIS Multi-Modal Unfunded Needs
7	US 19 / SR 55 from SR 580 (Main St.) to SR 586 (Curlew Rd.)	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
7	US 19 / SR 55 from SR 586 (Curlew Rd.) to CR 813 (Alderman Rd.)	SIS Multi-Modal Unfunded Needs
5	SR 530 / US 192 from Hoagland Blvd to Thacker Ave.	SIS Multi-Modal Unfunded Needs
5	SR 600 / US 17 / 92 from Emmett St to US 192 / Vine St.	SIS Multi-Modal Unfunded Needs
5	I-95 from SR 518 to CR 509 / Wickham Rd	SIS Multi-Modal Unfunded Needs
5	I-75 from CR 318 to Alachua County Line	SIS Multi-Modal Unfunded Needs
5	I-75 from SR 326 to CR 318	SIS Multi-Modal Unfunded Needs
1	SR 82 from CR 865 / Ortiz Ave. to I-75	SIS Multi-Modal Unfunded Needs
1	SR 82 from I-75 to Buckingham Rd.	SIS Multi-Modal Unfunded Needs
1	SR 82 from Buckingham Rd. to Gateway Blvd.	SIS Multi-Modal Unfunded Needs
1	SR 82 from Michigan Link Ave. to CR 865 / Ortiz Ave.	SIS Multi-Modal Unfunded Needs
3	US 90 / Tennessee St from Greyhound Bus Station to Monroe St	SIS Multi-Modal Unfunded Needs
3	US 90 / Mahan Dr. from Thornton Rd to I-10	SIS Multi-Modal Unfunded Needs
3	US 319 / Thomasville Rd from I-10 to Killearney Way	SIS Multi-Modal Unfunded Needs
3	US 319 / Thomasville Rd. from Killarney Way to Velda Dairy Rd.	SIS Multi-Modal Unfunded Needs
3	US 319, Thomasville Rd. from Velda Dairy Rd to Bannerman Rd.	SIS Multi-Modal Unfunded Needs
5	SR 528 from SR 436 to SR 417	SIS Multi-Modal Unfunded Needs
5	I-95 from Palm Coast Parkway to Flagler/St. Johns County Line	SIS Multi-Modal Unfunded Needs
7	I-75 from Pasco / Hillsborough County Line to SR 56	SIS Multi-Modal Unfunded Needs
4	I-95 from Becker Rd. to SR 70	SIS Multi-Modal Unfunded Needs
4	I-75 from Miramar Parkway to Royal Palm Blvd.	SIS Multi-Modal Unfunded Needs
5	Poinciana Parkway from Marigold Avenue to CR 54 / US 17/92	SIS Multi-Modal Unfunded Needs
7	I-75 from North of SR 52 to Pasco / Hernando County Line	SIS Multi-Modal Unfunded Needs
7	I-75 from CR 54 to SR 52	SIS Multi-Modal Unfunded Needs
7	SR 60 (Brandon Blvd.) from Kings Ave. to Kingsway Rd. / Bryan Rd.	SIS Multi-Modal Unfunded Needs
2	SR 100 from SR 21 to E. City Limit (Lakeview Dr)	SIS Multi-Modal Unfunded Needs
2	SR 100 from NW City Limit (1800' NW of SR 21) to SR 21	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
1	I-4 from County Line Rd. to West of SR 570 / Polk Parkway	SIS Multi-Modal Unfunded Needs
1	I-75 from Moccasin Wallow Rd. to Manatee / Hillsborough County Line	SIS Multi-Modal Unfunded Needs
7	I-75 from Moccasin Wallow Rd. to SR 674	SIS Multi-Modal Unfunded Needs
1	I-4 from East of US 27 / SR 25 to Polk / Osceola County Line	SIS Multi-Modal Unfunded Needs
7	I-75 from S of US 301 to N of SR 60	SIS Multi-Modal Unfunded Needs
7	I-75 from N of Fletcher Ave. to Bruce B. Downs Blvd.	SIS Multi-Modal Unfunded Needs
7	I-75 from SR 56 to CR 54	SIS Multi-Modal Unfunded Needs
7	I-75 from North of SR 60 to North of I-4	SIS Multi-Modal Unfunded Needs
7	I-75 from North of I-4 to North of Fletcher Ave.	SIS Multi-Modal Unfunded Needs
7	I-75 from N of I-75 / I-275 Apex to SR 56	SIS Multi-Modal Unfunded Needs
1	I-75 from CR 886 (Goldengate Pkwy) to CR 846 (Immokalee Rd)	SIS Multi-Modal Unfunded Needs
1	I-75 from CR 846 (Immokalee Rd) to SR 884/Colonial Blvd	SIS Multi-Modal Unfunded Needs
1	I-75 from SR 884/Colonial Blvd to SR 80	SIS Multi-Modal Unfunded Needs
1	I-75 from River Rd. to SR 681	SIS Multi-Modal Unfunded Needs
1	I-75 from University Parkway to 19th St / US 301 / SR 43	SIS Multi-Modal Unfunded Needs
1	I-75 from 19th St / US 301 / SR 43 to I-275 Off Ramp	SIS Multi-Modal Unfunded Needs
7	I-75 from SR 674 to Big Bend Rd.	SIS Multi-Modal Unfunded Needs
7	I-75 from Big Bend Rd. to US 301	SIS Multi-Modal Unfunded Needs
7	I-75 from Bruce B. Downs Blvd. to N of I-75 / I-275 Apex	SIS Multi-Modal Unfunded Needs
1	I-75 from I-275 Off Ramp to CR 6 / Moccasin Wallow Rd.	SIS Multi-Modal Unfunded Needs
1	I-75 from SR 681 to SR 758/Bee Ridge Road	SIS Multi-Modal Unfunded Needs
1	I-75 from SR 758/Bee Ridge Road to University Parkway	SIS Multi-Modal Unfunded Needs
2	I-10 from Madison / Suwannee County Line to Suwannee / Columbia County Line	SIS Multi-Modal Unfunded Needs
2	I-10 from Columbia / Baker County Line to CR 125	SIS Multi-Modal Unfunded Needs
2	I-10 from I-75 to Columbia / Baker County Line	SIS Multi-Modal Unfunded Needs
2	I-95 from North of Fuller Warren Bridge to SR 104 / Dunn Ave	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
2	I-295 from Southside Connector / SR 113 to JTB / SR 202	SIS Multi-Modal Unfunded Needs
2	I-10 from Suwannee / Columbia County Line to I-75	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Osceola County Line (MP 249) to SR 408 (MP 265)	SIS Multi-Modal Unfunded Needs
2	I-10 from Jefferson / Madison County Line to Madison / Suwannee County Line	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway / SR 417 from SR 434 to Rinehart Rd.	SIS Multi-Modal Unfunded Needs
8	Suncoast Parkway / SR 589 from Van Dyke Rd. (MP 14) to SR 52 (MP 27)	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from SR 429 (MP 267A) to SR 50 (MP 272)	SIS Multi-Modal Unfunded Needs
2	I-95 from SR 206 to CR 13A / International Golf Parkway	SIS Multi-Modal Unfunded Needs
4	I-95 from Linton Blvd. to Indiantown Rd.	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Jupiter / Indiantown Rd. to SR 714 / Stuart	SIS Multi-Modal Unfunded Needs
4	SW 10th St. from Turnpike to I-95	SIS Multi-Modal Unfunded Needs
8	Cape Canaveral from SR 407 (SR 528 to SR 405) - Add 2 Lanes to Build 4 to	SIS Multi-Modal Unfunded Needs
7	I-275 from South of Gandy Blvd. to North of 4th St. N	SIS Multi-Modal Unfunded Needs
6	SR 826 Improvements from NW 154th St to NW 103rd St.	SIS Multi-Modal Unfunded Needs
6	SR 836 Managed Lanes from NW 87th Ave. to HEFT	SIS Multi-Modal Unfunded Needs
6	SR 836 Managed Lanes from East of SR 826 to West of SW 27 Ave	SIS Multi-Modal Unfunded Needs
6	SR 826 Managed Lanes from SR 836 to US 1	SIS Multi-Modal Unfunded Needs
2	I-95 from I-10 to SR 139 / US 23 (Kings Rd)	SIS Multi-Modal Unfunded Needs
2	I-75 from SR 121 (Williston Rd) to SR 222 (NW 39th Ave)	SIS Multi-Modal Unfunded Needs
2	I-75 from SR 222 (NW 39th Ave) to US 441 (Alachua)	SIS Multi-Modal Unfunded Needs
2	I-75 from US 441 (Alachua) to Alachua / Columbia County Line	SIS Multi-Modal Unfunded Needs
2	I-75 from Alachua / Columbia County Line to I-10	SIS Multi-Modal Unfunded Needs
2	I-75 from I-10 to Columbia / Suwannee County Line	SIS Multi-Modal Unfunded Needs
2	I-75 from Columbia / Suwannee County Line to Suwannee / Hamilton County Line	SIS Multi-Modal Unfunded Needs
2	I-75 from Suwannee / Hamilton County Line to Georgia State Line	SIS Multi-Modal Unfunded Needs
2	I-10 from SR 23 to I-295	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
2	I-295 from SR 9B to I-95 South Int.	SIS Multi-Modal Unfunded Needs
4	SR 80 from Royal Palm Beach Blvd. to I-95	SIS Multi-Modal Unfunded Needs
4	SR 80 from Lion Country Safari Rd. to Royal Palm Beach Blvd.	SIS Multi-Modal Unfunded Needs
2	I-295 from W of US 17 (Collins / Blanding CDs) to S of SR 134 / 103rd St.	SIS Multi-Modal Unfunded Needs
2	I-295 from W of US 17 to S of SR 134 / 103rd St.	SIS Multi-Modal Unfunded Needs
2	I-295 from SR 13 to SR 21	SIS Multi-Modal Unfunded Needs
8	Beachline East Expressway from SR 520 (MP 31) to Industry Rd. (MP 45)	SIS Multi-Modal Unfunded Needs
8	Beachline West Expressway from I-4 (MP 0) to International Dr. (MP 1)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from Caribbean Blvd (MP 12) to Quail Roost Dr (MP 13)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from Biscayne Dr (MP 5) to Hainlin Mill Dr (MP 11)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from Kendall Dr (MP 20) to Bird Dr (MP 23)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from Bird Rd (MP 23) to SW 8th St (MP 25)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from SW 8th St (MP 25) to SR 836 (MP 26A)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from NW 41st St. (MP 29) to NW 74th St. (MP 31)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 from NW 106th St (MP 34) to Okeechobee Rd. (MP 35)	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Golden Glades (MP 0X) to Dolphin Center (MP 2X)	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Homestead Extension (MP 47) to Griffin Rd. (MP 53)	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from I-595 (MP 54) to Sunrise Blvd. (MP 58)	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Sunrise Blvd (MP 58) to Boynton Beach Blvd. (MP 86)	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 from Lake Worth (MP 93) to SR 710 (MP 107)	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline/SR 91 from CR 468 (MP 300) to Interstate 75 (MP 309)	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway from Central Florida Greeneway (MP 33) to SR 434 (MP 44)	SIS Multi-Modal Unfunded Needs
8	Western Beltway/SR 429 from Interstate 4 (MP 0) to Seidel Rd. (MP 11)	SIS Multi-Modal Unfunded Needs
8	Veterans Expressway/SR 589 from Independence Parkway (MP 2B) to Linebaugh Ave (MP 7)	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline (SR 91) from Minneola (MP 279) to CR 468 (MP 300)	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway from SR 434 (MP 44) to Interstate 4 (MP 55)	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
1	I-4 at SR 570 / Polk Parkway (Eastern End)	SIS Multi-Modal Unfunded Needs
1	I-75 at SR 80	SIS Multi-Modal Unfunded Needs
1	US 27 at US 17 / 92	SIS Multi-Modal Unfunded Needs
1	I-75 at SR 82	SIS Multi-Modal Unfunded Needs
1	I-75 at CR 896 / Pine Ridge Rd.	SIS Multi-Modal Unfunded Needs
1	I-75 at North Jones Loop Rd.	SIS Multi-Modal Unfunded Needs
1	I-75 at CR 769 / Kings Highway	SIS Multi-Modal Unfunded Needs
4	I-75 at Sawgrass Expressway	SIS Multi-Modal Unfunded Needs
2	I-10 at I-75	SIS Multi-Modal Unfunded Needs
7	I-75 at CR 54	SIS Multi-Modal Unfunded Needs
1	I-75 at SR 681	SIS Multi-Modal Unfunded Needs
1	I-75 at I-275	SIS Multi-Modal Unfunded Needs
1	I-75 at Moccasin Wallow Rd.	SIS Multi-Modal Unfunded Needs
7	I-275 at 31st St. South	SIS Multi-Modal Unfunded Needs
7	I-75 at Gibsonton Dr.	SIS Multi-Modal Unfunded Needs
7	I-75 at Big Bend Rd.	SIS Multi-Modal Unfunded Needs
7	I-75 at SR 674	SIS Multi-Modal Unfunded Needs
7	I-275 at 38th Ave.	SIS Multi-Modal Unfunded Needs
7	I-275 at Gandy Blvd.	SIS Multi-Modal Unfunded Needs
1	I-75 at Jacaranda Blvd.	SIS Multi-Modal Unfunded Needs
1	I-75 at Laurel Rd.	SIS Multi-Modal Unfunded Needs
2	I-10 at I-295	SIS Multi-Modal Unfunded Needs
2	I-95 at University & Bowden	SIS Multi-Modal Unfunded Needs
2	I-95 at Emerson	SIS Multi-Modal Unfunded Needs
1	I-75 at Lockett Rd.	SIS Multi-Modal Unfunded Needs
1	I-4 at Socrum Loop Rd.	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
1	I-4 at SR 33	SIS Multi-Modal Unfunded Needs
1	I-4 at SR 539	SIS Multi-Modal Unfunded Needs
1	I-4 at US 27 / SR 25	SIS Multi-Modal Unfunded Needs
1	I-4 at County Line Rd.	SIS Multi-Modal Unfunded Needs
1	I-75 at CR 846 / Immokalee Rd.	SIS Multi-Modal Unfunded Needs
2	US 301 / SR 200 at SR 24 (Waldo)	SIS Multi-Modal Unfunded Needs
2	I-95 at US 1 and SR 206	SIS Multi-Modal Unfunded Needs
1	I-75 at SR 78	SIS Multi-Modal Unfunded Needs
2	I-75 at SR 26 / Newberry Rd	SIS Multi-Modal Unfunded Needs
2	I-75 at SR 24 / Archer Rd	SIS Multi-Modal Unfunded Needs
1	I-75 at US 17 / SR 35	SIS Multi-Modal Unfunded Needs
7	I-275 at Ulmerton Rd. / SR 688	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 at Commercial Blvd.	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline / SR 91 at Beachline West Expressway / SR 528	SIS Multi-Modal Unfunded Needs
1	I-75 at CR 776 / Harbor View	SIS Multi-Modal Unfunded Needs
1	I-75 at Bonita Beach Rd.	SIS Multi-Modal Unfunded Needs
1	I-4 at US 98 / SR 35 / 700	SIS Multi-Modal Unfunded Needs
1	I-4 at SR 570 / Polk Parkway (Western End)	SIS Multi-Modal Unfunded Needs
1	I-4 at SR 546 / Memorial Blvd.	SIS Multi-Modal Unfunded Needs
6	I-75 / HEFT Int. CD Rd Miami Gardens Dr	SIS Multi-Modal Unfunded Needs
6	SR 90 at I-95	SIS Multi-Modal Unfunded Needs
6	I-75 at NW 138th St	SIS Multi-Modal Unfunded Needs
6	I-75 / SR 826 Int. I-75 SR 826	SIS Multi-Modal Unfunded Needs
6	SR 826 / NW 154th St. Int. SR 826 NW 154th St.	SIS Multi-Modal Unfunded Needs
6	SR 826 / Okeechobee Rd Int. SR 826 US 27/Okeechobee Rd.	SIS Multi-Modal Unfunded Needs
3	I-10 Int. at Thomasville Rd.	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
2	I-10 at US 301	SIS Multi-Modal Unfunded Needs
5	I-95 at US 1	SIS Multi-Modal Unfunded Needs
5	I-95 at SR 44	SIS Multi-Modal Unfunded Needs
5	I-75 at US 27	SIS Multi-Modal Unfunded Needs
4	SW 10th St. from West of I-95 Interchange to East of I-95 Interchange	SIS Multi-Modal Unfunded Needs
4	I-95 at Palmetto Park Rd.	SIS Multi-Modal Unfunded Needs
4	I-95 from High Meadow Ave. to Becker Rd.	SIS Multi-Modal Unfunded Needs
4	Sawgrass Expressway at I-595	SIS Multi-Modal Unfunded Needs
4	I-595 Westbound General Purpose Lanes to I-95 Northbound Express Lanes	SIS Multi-Modal Unfunded Needs
4	I-75 at Griffin Rd.	SIS Multi-Modal Unfunded Needs
1	I-75 at Corkscrew Rd.	SIS Multi-Modal Unfunded Needs
1	I-75 at Alico Rd.	SIS Multi-Modal Unfunded Needs
1	I-75 at Daniels Parkway	SIS Multi-Modal Unfunded Needs
2	I-10 at SR 121	SIS Multi-Modal Unfunded Needs
2	I-295 at Collins Rd	SIS Multi-Modal Unfunded Needs
2	I-295 at US 17 / Wells Rd	SIS Multi-Modal Unfunded Needs
8	Beachline West Expressway @ Interstate 4	SIS Multi-Modal Unfunded Needs
8	Beachline West Expressway @ Consulate Dr.	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @US 1 (MP 0)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @Quail Roost Dr (MP 13)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @SW 120th St. (MP 19)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @NW 74th St. (MP 31)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @NW 57th St (MP 43)	SIS Multi-Modal Unfunded Needs
8	HEFT / SR 821 @Tallahassee Rd (MP 6)	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline/SR91 Homestead Extension	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline/SR 91 Sample Rd.	SIS Multi-Modal Unfunded Needs

HIGHWAY Projects		
District	Project Name	Source
8	Turnpike Mainline At the Sawgrass Expressway	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline/SR 91 Atlantic Ave.	SIS Multi-Modal Unfunded Needs
8	Turnpike Mainline/SR 91 Kissimmee Park Rd. (MP 240)	SIS Multi-Modal Unfunded Needs
8	Polk Parkway/SR 570 Interstate 4	SIS Multi-Modal Unfunded Needs
8	Sawgrass Expressway/SR 869 @I-75/I-595 (MP 0)	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway SR 426 (MP 38)	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway Red Bug Lake Rd. (MP 41)	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway CR 427 (MP 49)	SIS Multi-Modal Unfunded Needs
8	Seminole Expressway Interstate 4 (MP 55)	SIS Multi-Modal Unfunded Needs
8	Western Beltway/SR 429 Interstate 4 (MP 0)	SIS Multi-Modal Unfunded Needs
5	SR 429 at CR 535	SIS Multi-Modal Unfunded Needs
5	SR 417 at Narcoossee Rd	SIS Multi-Modal Unfunded Needs
5	SR 528 at Dallas Blvd	SIS Multi-Modal Unfunded Needs
3	US 90/Mahan Dr at I-10 East	SIS Multi-Modal Unfunded Needs
1	I-75 River Rd/ CR 777	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Roadway Improvements	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Upland Improvements Port Redwing (Access Rd.)	SIS Multi-Modal Unfunded Needs
6	Port of Miami Redevelopment of Port Blvd.	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Phase 10: Expansion Area GATX Dr.	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Fisherman's Wharf Roadway	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Terminal Dr. Roadway	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Harbor St. Roadway	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Port Ave. Roadway	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Ave. M St. Extension	SIS Multi-Modal Unfunded Needs
4	US 27 (Miami-Dade to Hendry)	SIS CFP Plan
4	SR-80	SIS CFP Plan

HIGHWAY Projects		
District	Project Name	Source
1	US 27 (Palm Beach / Hendry County Line)	SIS CFP Plan
4, 5	US 27 (Miami-Dade, Broward)	SIS CFP Plan
4	US 27 (Palm Beach, Hendry)	SIS CFP Plan
6	PortMiami Tunnel from McArthur Causeway to PortMiami	SIS CFP Plan
5	NASA Parkway Bridge Replacement from SR405 to KSC Visitor Center	SIS CFP Plan
2	US17 from Collins Road to NAS Birmingham Gate	SIS CFP Plan
6	Port Miami Tunnel from McArthur Causeway to Port Miami	SIS CFP Plan
6	Port Miami Tunnel-Phase 52 from Watson Island to MacArthur Causeway Bridge	SIS CFP Plan
6	Port Miami Tunnel-Phase 82 from Watson Island to MacArthur Causeway Bridge	SIS CFP Plan
6	PortMiami Tunnel-Phase A8 from Watson Island to MacArthur Causeway Bridge	SIS CFP Plan
3	I-10 (Antioch)	SIS CFP Plan
3	US98 @ SR 293	SIS CFP Plan
3	I-10 @ US90 West 9 Mile Road Interchange	SIS CFP Plan
5	I-4 @ Daryl Carter Parkway	SIS CFP Plan
5	I-10 @ end of NW 49th Street	SIS CFP Plan
1	I-75 @ North Jones Loop Rd	SIS CFP Plan
1	I-75 @ US17/SR35	SIS CFP Plan
1	I-75 @ CR77/Harbor View	SIS CFP Plan
1	I-75 @ CR769/Kings Highway	SIS CFP Plan
2	I-10 @ SR-121	SIS CFP Plan
2	I-75 @ SR-121 (Williston Rd)	SIS CFP Plan
2	I-95 @ SR-16	SIS CFP Plan
4	I-95 @ Stirling Road	SIS CFP Plan
4	I-95 @ Davie Boulevard	SIS CFP Plan
4	I-95 @ Oakland Park Boulevard	SIS CFP Plan
4	I-95 @ Belvedere Road	SIS CFP Plan

HIGHWAY Projects		
District	Project Name	Source
4	SR-80 @ SR-7	SIS CFP Plan
5	I-75 @ US27	SIS CFP Plan
5	I-95 @ US1	SIS CFP Plan
5	I-95 @ LPGA	SIS CFP Plan
5	I-95 @ SR-44	SIS CFP Plan
6	I-75 @ NW 138th St	SIS CFP Plan
6	I-75/HEFT Int. @ CD Road to Miami Gardens Drive	SIS CFP Plan
6	I-75 to SR-826 Interchange	SIS CFP Plan
7	I-275 @ I-4 flyover	SIS CFP Plan
7	I-275 @ MLK Blvd	SIS CFP Plan
7	I-275 @ Hillsborough Avenue	SIS CFP Plan
7	I-275 @ Sligh Avenue	SIS CFP Plan
7	I-275 @ Busch Boulevard	SIS CFP Plan
7	I-275 @ Fowler Avenue	SIS CFP Plan
7	I-275 @ Fletcher Avenue	SIS CFP Plan
7	I-275 @ Bears Avenue	SIS CFP Plan
7	I-275 @ South of SR-60 to Lois Avenue to SR 60 from South of I-275 to SR 589	SIS CFP Plan
7	I-4 @ McIntosh Road	SIS CFP Plan
7	I-4 @ Branch Forbes	SIS CFP Plan
7	I-4 @ Thonotosassa Road	SIS CFP Plan
7	I-4 @ Park Road	SIS CFP Plan
7	I-4 @ Mango Road	SIS CFP Plan
7	I-4 (EB) from west of Orient Road to NB/SB I-75	SIS CFP Plan
7	I-4 (EB) from west of Orient Road to NB/SB I-76	SIS CFP Plan
7	I-75 @ Big Bend Road	SIS CFP Plan
7	I-75 @ Gibsonton	SIS CFP Plan

HIGHWAY Projects		
District	Project Name	Source
7	SR-686/Roosevelt Boulevard from I-275/SR-93 to West of 9th Street N/MLK Street N	SIS CFP Plan
1	SR-82 (from SR-739/Fowler Avenue to Michigan Link Avenue)	SIS CFP Plan
1	US-17 (from Palmetto Street to SR-35/DeSoto Avenue)	SIS CFP Plan
1	US-27 (from North of Kokomo Road to Polk/Lake County Line)	SIS CFP Plan
4	I-95 (N. of Broward Boulevard to Sunrise Boulevard)	SIS CFP Plan
4	I-95 (SR-84 to S. of Broward Boulevard)	SIS CFP Plan
4	I-95 (S. of Indiantown Road to Martin/Palm Beach County line)	SIS CFP Plan
4	I-95 (from Martin/Palm Beach County Line to Becker Road)	SIS CFP Plan
4	I-95 (Becker Road to SR-70)	SIS CFP Plan
4	I-95 (from S. of Hallandale Beach Boulevard to N. of Hollywood Boulevard)	SIS CFP Plan
4	I-95 (from S. of Sheridan Street to N. of Griffin Road)	SIS CFP Plan
4	I-95 (from S. of Commercial Boulevard to N of Cypress Creek Road)	SIS CFP Plan
4	SR-710 (from Blue Heron Boulevard to Congress Avenue)	SIS CFP Plan
4	SR-80 (from West of Binks Forest Drive to I-95)	SIS CFP Plan
4	SR-80 (from West of Royal Palm Beach Boulevard to I-95)	SIS CFP Plan
7	I-275 (Innovation Corridor - Section 7/Part 2)	SIS CFP Plan
2	SR 26	SIS CFP Plan
1	SR 29	SIS CFP Plan
5	SR 40	SIS CFP Plan
1	SR 31	SIS CFP Plan
1	SR 60	SIS CFP Plan
1	SR 64	SIS CFP Plan
1	SR 70	SIS CFP Plan
1	SR 710	SIS CFP Plan
1	US 98 / US 441	SIS CFP Plan
3	East Avenue	SIS CFP Plan

HIGHWAY Projects		
District	Project Name	Source
3	SR 389 EAST AVE	SIS CFP Plan
4	SR-710	SIS CFP Plan
5	Ellis Road / St. Johns Heritage Pkwy	SIS CFP Plan
5	SR 326	SIS CFP Plan
3	CR 2327 Transmitter Rd	SIS CFP Plan
1	US 17	SIS CFP Plan
5	SR 528	SIS CFP Plan
7	SR 50 (Cortez Blvd)	SIS CFP Plan
7	SR 50	SIS CFP Plan
7	US 41	SIS CFP Plan
3	US 231	SIS CFP Plan
7	US 92 (Gandy Bridge)	SIS CFP Plan
3	I-10	SIS CFP Plan
3	SR 173 Blue Angel Pkwy	SIS CFP Plan
3	SR 368 23rd St	SIS CFP Plan
3	SR 85 S Ferdon Blvd	SIS CFP Plan
1	SR 80	SIS CFP Plan
1	SR 82	SIS CFP Plan
1	US 19	SIS CFP Plan
1	US 27	SIS CFP Plan
3	US 98	SIS CFP Plan
5	SR 100	SIS CFP Plan
5	I-75	SIS CFP Plan
5	I-95	SIS CFP Plan
4	I-595	SIS CFP Plan
2	I-295	SIS CFP Plan

HIGHWAY Projects		
District	Project Name	Source
5	I-4	SIS CFP Plan
6	SR 826 Managed Lanes	SIS CFP Plan
4	SR-714/Monterey Road	SIS CFP Plan
4	Port Everglades Midport Multimodal Facility - Phase 1	SIS Multi-Modal Unfunded Needs
4	Port of Palm Beach Waterside Cargo Terminal Redevelopment	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Phase 4: Intermodal Rail	SIS Multi-Modal Unfunded Needs
3	Tallahassee International Airport Expand Air Freight Facilities	SIS Multi-Modal Unfunded Needs
3	Intermodal Logistics Center at Tallahassee International Airport	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Upland Improvements Port Redwing (Rail)	SIS Multi-Modal Unfunded Needs
2	Port of Jacksonville Talleyrand Marine Terminal Rail	SIS Multi-Modal Unfunded Needs
2	Port of Jacksonville Blount Island / Dames Point Marine Terminals Rail	SIS Multi-Modal Unfunded Needs
7	Port Tampa Bay Phase 1: Rail Improvement	SIS Multi-Modal Unfunded Needs
2	Port of Fernandina Rail Track Improvements	SIS Multi-Modal Unfunded Needs
4	Port of Palm Beach On Dock Rail Expansion & Rail Bridge	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Re-establish Indian River Terminal Railway Spur	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Re-establish Ave. M Railway Spur	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Re-establish Fisherman's Wharf Railway Spur	SIS Multi-Modal Unfunded Needs
4	Port of Fort Pierce Regional Distribution Center Rail Connector to Port	SIS Multi-Modal Unfunded Needs
4	Port of Palm Beach On Port Rail Facility Expansion Project	SIS Multi-Modal Unfunded Needs
1	CSXT at Current rail terminus, Webster Turn	SIS Multi-Modal Unfunded Needs
5	Port Canaveral railway expansion	SIS Multi-Modal Unfunded Needs
1	I-4 at US-27/SR-25	FDOT Leadership
3	SR-20 Extension Project	FDOT Leadership
Turnpike	Florida Turnpike Electrification	FDOT Leadership

GRADE SEPARATION PROJECTS				
District	Crossing ID	Project Name	Type	Source
2	627514R	CSX Transportation at SE 144th St / Mullins Grade (Starke) Crossing	Grade Separation	SIS Multi-Modal Unfunded Needs
2	620901J	CSX Transportation at CR-28 / Wells Rd (Orange Park)	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272386A	Florida East Coast Railway at Northlake Blvd. / CR-809	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272386A	Florida East Coast Railway at Belvedere Rd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272437H	Florida East Coast Railway at Woolbright Rd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272484R	Florida East Coast Railway at Linton Blvd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272497S	Florida East Coast Railway at SR 811 (Palmetto Park)	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272509J	Florida East Coast Railway at Hillsboro Blvd. / SR 810	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272512S	Florida East Coast Railway at Atlantic Blvd. / SR 814	Grade Separation	SIS Multi-Modal Unfunded Needs
1	908366B	CSX Transportation at SR 60 (Mosaic, Crossing #908366)	Grade Separation	SIS Multi-Modal Unfunded Needs
3	339800C	CSX Transportation at S Main St. / SR 85	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272377B	Florida East Coast Railway at Indiantown Rd. / SR 706	Grade Separation	SIS Multi-Modal Unfunded Needs
1	624525T	CSX Transportation at SR 60 (West of Mulberry, Crossing #624525T)	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272517B	Florida East Coast Railway at Sample Rd. / SR 834	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272537M	Florida East Coast Railway at Commercial Blvd. / SR 870	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272544X	Florida East Coast Railway at Oakland Park Blvd. / SR 816	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272549G	Florida East Coast Railway at Sunrise Blvd. / SR 838	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272556S	Florida East Coast Railway at W Broward Blvd. / SR 842	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272567E	Florida East Coast Railway at SW 24th St. / SR 84	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272592M	Florida East Coast Railway at Hallandale Beach Blvd. / SR 858	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272910W	Florida East Coast Railway at Glades Rd. / SR 808	Grade Separation	SIS Multi-Modal Unfunded Needs
4	621437X	South Florida Rail Corridor at McNab Rd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	621538J	South Florida Rail Corridor at NW 33rd St.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628095Y & 628096F	South Florida Rail Corridor at Northlake Blvd. / CR-809A	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628118D	South Florida Rail Corridor at Palm Beach Lakes Blvd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628135U	South Florida Rail Corridor at Belvedere Rd.	Grade Separation	SIS Multi-Modal Unfunded Needs

GRADE SEPARATION PROJECTS				
District	Crossing ID	Project Name	Type	Source
4	628139W	South Florida Rail Corridor at Forest Hill Blvd. / SR 882	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628155F	South Florida Rail Corridor at Atlantic Ave. / SR 806	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628160C	South Florida Rail Corridor at Linton Blvd. / SR 782	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628163X	South Florida Rail Corridor at SE Yamato Rd. / SR 794	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628168G	South Florida Rail Corridor at NW 36th St. / Sample Rd. / SR 834	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628169N	South Florida Rail Corridor at Copans Rd.	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628183J	South Florida Rail Corridor at NW 62nd / Cypress Creek	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628191B	South Florida Rail Corridor at Oakland Park Blvd. / SR 816	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628272B	South Florida Rail Corridor at New Griffin Rd. / SR 818	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628281A	South Florida Rail Corridor at Hollywood Blvd. / SR 820	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628282G	South Florida Rail Corridor at Pembroke Rd. / SR 824	Grade Separation	SIS Multi-Modal Unfunded Needs
1	622866E	CSX Transportation at Kathleen Rd. (Crossing #622866E)	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628165L	South Florida Rail Corridor at Palmetto Park / CR-798	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628126V	South Florida Rail Corridor at Okeechobee Blvd. / SR 704	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628167A	South Florida Rail Corridor at Hillsboro Blvd. / SR 810	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628177F	South Florida Rail Corridor at Atlantic Blvd. / SR 814	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628186E	South Florida Rail Corridor at Commercial Blvd. / SR 870	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628274P	South Florida Rail Corridor at Stirling Rd. / SR 848	Grade Separation	SIS Multi-Modal Unfunded Needs
4	628290Y	South Florida Rail Corridor at Hallandale Beach / SR 858	Grade Separation	SIS Multi-Modal Unfunded Needs
1	624508C	CSX Transportation at SR 60 (Armour, Crossing #624508)	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272500X	Florida East Coast Railway at Yamato Rd. / SR 794	Grade Separation	SIS Multi-Modal Unfunded Needs
4	272353M	Florida East Coast Railway at Monterey Rd. / SR 714	Grade Separation	SIS Multi-Modal Unfunded Needs
1	624304R	CSX at County Line Rd at US 92 (Crossing #624304-R)	Grade Separation	SIS Multi-Modal Unfunded Needs
1		CSXT at SR 655 / Recker Highway	Grade Separation	SIS Multi-Modal Unfunded Needs
1	6245419N	CSXT at SR 60 (West of Lake Wales, Crossing #625419-N)	Grade Separation	SIS Multi-Modal Unfunded Needs
1	625426Y	CSXT at SR 60 W Lk Wales, Central Ave, Crossing #625426-Y	Grade Separation	SIS Multi-Modal Unfunded Needs
1	625420H	SR 60 from W of Scenic Park Rd. / W of Lake Wales Rd. to	Grade Separation	SIS Multi-Modal Unfunded Needs

GRADE SEPARATION PROJECTS				
District	Crossing ID	Project Name	Type	Source
1	624304R	SR 60 GRADE SEPARATION OVER CSX RAILROAD	Grade Separation	FRE
1	625419N	SR 655/RECKER HWY CONSTRUCT A BRIDGE SPANNING CSX RR TRACK IN POLK CO	Grade Separation	FRE
1	625419N	SR 60 GRADE SEPARATION OVER CSX RAILROAD	Grade Separation	FRE
1	624525T	SR 655/RECKER HWY	Grade Separation	FRE
1	908367H	US92/COUNTY LINE RD - GRADE SEPARATION	Grade Separation	FRE
1	908367H	US 441/PARROTT AVE - GRADE SEPARATION	Grade Separation	FRE
1	628062L	US 441/PARROTT AVE - GRADE SEPARATION	Grade Separation	FRE
1	628062L	SR 60/NICHOLS - GRADE SEPARATION	Grade Separation	FRE
1	623082F	SR 60/MOSAIC - GRADE SEPARATION	Grade Separation	FRE
1	623082F	SR 60/MOSAIC - GRADE SEPARATION	Grade Separation	FRE

TRUCK PARKING Projects		
District	Project Name	Source
6	Golden Glades Truck Travel Center	2019 NHFP Projects
6	Site X from Dolphin / Palmetto Expressway Int. to Dolphin / Palmetto Expressway Int.	SIS Multi-Modal Unfunded Needs
6	Site W from Prologis Site to NW 137th Ave.	SIS Multi-Modal Unfunded Needs
6	Site V from Turnpike to NW 74th St.	SIS Multi-Modal Unfunded Needs
6	Site Q from NW 167th St to Golden Glades Int.	SIS Multi-Modal Unfunded Needs
5	Sanford Truck Parking Facility	FDOT Leadership
2	I-75 NB & SB Rest Area Expansion (Ellisville)	FDOT Leadership
2	I-95 NB & SB Rest Area Expansion (CR-210)	FDOT Leadership
2	I-95 NB & SB WIM Station User Experience (Yulee)	FDOT Leadership

ITS Projects		
District	Project Name	Source
4	US 27 (Miami-Dade to Hendry)	SIS CFP Plan
4	US 27 (Miami-Dade to Hendry)	SIS CFP Plan
4	US 27 (Miami-Dade to Hendry)	SIS CFP Plan
4	US-27 ITS Improvements from MP 0.000 to 25.854	NHFP Prioritization
4	US 27 (Miami-Dade to Hendry)	SIS CFP Plan
4	US 27 (Miami-Dade to Hendry)	SIS CFP Plan
6	Advanced Freight Mobility Solutions	NHFP Prioritization
2	Talleyrand Avenue ITS Solution	FDOT Leadership
4, 6	Strategies for Reducing Railroad Trespassing (SRRT) Pilot Project	FDOT Leadership
4	Connected Freight Priority System Deployment	FDOT Leadership

Appendix C: List of Prioritized Projects (Tier 1 Projects)

Project Prioritization Legend
High Priority
Medium Priority
Low Priority

GRADE SEPARATION Projects			
District	RR Crossing ID	Project Name	Type
4	628191B	South Florida Rail Corridor at Oakland Park Blvd. / SR 816	Grade Separation
4	628183J	South Florida Rail Corridor at NW 62nd / Cypress Creek	Grade Separation
4	628177F	South Florida Rail Corridor at Atlantic Blvd. / SR 814	Grade Separation
4	628272B	South Florida Rail Corridor at New Griffin Rd. / SR 818	Grade Separation
4	628163X	South Florida Rail Corridor at SE Yamato Rd. / SR 794	Grade Separation
4	272556S	Florida East Coast Railway at W Broward Blvd. / SR 842	Grade Separation
4	628282G	South Florida Rail Corridor at Pembroke Rd. / SR 824	Grade Separation
4	628186E	South Florida Rail Corridor at Commercial Blvd. / SR 870	Grade Separation
4	628118D	South Florida Rail Corridor at Palm Beach Lakes Blvd.	Grade Separation
4	628165L	South Florida Rail Corridor at Palmetto Park / CR-798	Grade Separation
4	628160C	South Florida Rail Corridor at Linton Blvd. / SR 782	Grade Separation
4	628139W	South Florida Rail Corridor at Forest Hill Blvd. / SR 882	Grade Separation
4	628155F	South Florida Rail Corridor at Atlantic Ave. / SR 806	Grade Separation
4	272549G	Florida East Coast Railway at Sunrise Blvd. / SR 838	Grade Separation
4	272537M	Florida East Coast Railway at Commercial Blvd. / SR 870	Grade Separation
4	628169N	South Florida Rail Corridor at Copans Rd.	Grade Separation
4	272509J	Florida East Coast Railway at Hillsboro Blvd. / SR 810	Grade Separation
4	628290Y	South Florida Rail Corridor at Hallandale Beach / SR 858	Grade Separation
4	628126V	South Florida Rail Corridor at Okeechobee Blvd. / SR 704	Grade Separation
4	628168G	South Florida Rail Corridor at NW 36th St. / Sample Rd. / SR 834	Grade Separation

GRADE SEPARATION Projects			
District	RR Crossing ID	Project Name	Type
4	272484R	Florida East Coast Railway at Linton Blvd.	Grade Separation
4	272910W	Florida East Coast Railway at Glades Rd. / SR 808	Grade Separation
3	339800C	CSX Transportation at S Main St. / SR 85	Grade Separation
4	272377B	Florida East Coast Railway at Indiantown Rd. / SR 706	Grade Separation
4	628281A	South Florida Rail Corridor at Hollywood Blvd. / SR 820	Grade Separation
4	272517B	Florida East Coast Railway at Sample Rd. / SR 834	Grade Separation
4	628274P	South Florida Rail Corridor at Stirling Rd. / SR 848	Grade Separation
1	624304R	CSX at County Line Rd at US 92 (Crossing #624304-R)	Grade Separation
1	624304R	US92/COUNTY LINE RD - GRADE SEPARATION	Grade Separation
4	272512S	Florida East Coast Railway at Atlantic Blvd. / SR 814	Grade Separation
4	272497S	Florida East Coast Railway at SR 811 (Palmetto Park)	Grade Separation
4	272386A	Florida East Coast Railway at Northlake Blvd. / CR-809	Grade Separation
4	272544X	Florida East Coast Railway at Oakland Park Blvd. / SR 816	Grade Separation
2	627514R	CSX Transportation at SE 144th St / Mullins Grade (Starke) Crossing	Grade Separation
4	272437H	Florida East Coast Railway at Woolbright Rd.	Grade Separation
4	628167A	South Florida Rail Corridor at Hillsboro Blvd. / SR 810	Grade Separation
1	6245419N	CSXT at SR 60 (West of Lake Wale)	Grade Separation
1	625419N	SR 60 GRADE SEPARATION OVER CSX RAILROAD	Grade Separation
4	272592M	Florida East Coast Railway at Hallandale Beach Blvd. / SR 858	Grade Separation
4	272353M	Florida East Coast Railway at Monterey Rd. / SR 714	Grade Separation
4	628135U	South Florida Rail Corridor at Belvedere Rd.	Grade Separation
4	272500X	Florida East Coast Railway at Yamato Rd. / SR 794	Grade Separation
4	272567E	Florida East Coast Railway at SW 24th St. / SR 84	Grade Separation
1	624525T	CSX Transportation at SR 60 (West of Mulberry)	Grade Separation
1	624525T	SR 60/NICHOLS - GRADE SEPARATION	Grade Separation
1	908366B	CSX Transportation at SR 60 (Mosaic, Crossing)	Grade Separation
1	908367H	SR 60/MOSAIC - GRADE SEPARATION	Grade Separation
1	908367H	SR 60/MOSAIC - GRADE SEPARATION	Grade Separation

GRADE SEPARATION Projects			
District	RR Crossing ID	Project Name	Type
4	628095Y main road / 628096F turn lanes	CSX Corridor at Northlake Blvd. / CR-809A	Grade Separation
1	628062L	US 441/PARROTT AVENUE	Grade Separation
1	628062L	US 441/PARROTT AVENUE	Grade Separation
1	622866E	CSX Transportation at Kathleen Road	Grade Separation
2	620901J	CSX Transportation at CR-28 / Wells Rd (Orange Park)	Grade Separation
4	621437X	South Florida Rail Corridor at McNab Road	Grade Separation
1	625426Y	CSXT at SR 60 W Lake Wales, Central Avenue	Grade Separation
1		CSXT at SR 655 / Recker Highway	Grade Separation
1	623082F	SR 655/RECKER HWY CONSTRUCT A BRIDGE SPANNING CSX RR TRACK IN POLK CO	Grade Separation
1	623082F	SR 655/RECKER HWY	Grade Separation
4	272386A	Florida East Coast Railway at Belvedere Rd.	Grade Separation
1	625420H	SR 60 from W of Scenic Park Rd. / W of Lake Wales Rd. to	Grade Separation
4	621538J	South Florida Rail Corridor at NW 33rd St.	Grade Separation
1	624508C	CSX Transportation at SR 60 (Armour)	Grade Separation

HIGHWAY Projects		
District	Project Name	Type
4	45th St. from I-95 to Port of Palm Beach	Modify Connector
6	SR 826 / Okeechobee Rd Int. SR 826 US 27/Okeechobee Rd.	Modify Interchange
4	Port of Palm Beach/Blue Heron Blvd SIS Connector from I-95 to Port of Palm Beach at US1	Modify Connector
5	SR 948/NW 36 ST FROM SR 826/PALMETTO EXPY TO SR 5/ US1	Study
8	Beachline West Expressway @ Consulate Dr.	Modify Interchange
4	I-95 @ Davie Boulevard	Modify Interchange
4	Ft. Laud/Hollywood Int'l Airport (FLL) Connector from I-95 to Northside FLL delivery entrance	Modify Connector
4	Ft. Laud/Hollywood Int'l Airport (FLL) Connector from I-95 to Northside FLL delivery entrance	Modify Connector
7	I-275 (SR 93) & SR 60/Memorial Hwy (Westshore Area) Interchange	Interchange
7	I-275 @ I-4 flyover	Modify Interchange

HIGHWAY Projects		
District	Project Name	Type
7	I-275 (SR 93) & SR 60/Memorial Hwy (Westshore Area) Interchange	Interchange
7	I-275 (SR 93) & SR 60/Memorial Hwy (Westshore Area) Interchange	Interchange
4	I-95 Interchange at 45th Street	Interchange
4	Port of Fort Pierce SIS Connector from I-95 to Port of Fort Pierce	Modify Connector
4	Port of Fort Pierce SIS Connector from I-95 to Port of Fort Pierce	Modify Connector
7	I-275 (SR 93) & SR 60/Memorial Hwy (Westshore Area) Interchange	Interchange
7	I-275 (SR 93) & SR 60/Memorial Hwy (Westshore Area) Interchange	Interchange
7	I-275 @ South of SR-60 to Lois Avenue to SR 60 from South of I-275 to SR 589	Modify Interchange
7	I-275 @ I-4 flyover	Modify Interchange
2	I-95 at University & Bowden	Modify Interchange
8	Turnpike Mainline / SR 91 at Beachline West Expressway / SR 528	Modify Interchange
1	I-4 at US-27/SR-25	Highway Capacity
3	SR-20 Extension Project	Highway Capacity
8	Florida Turnpike Electrification	Highway Capacity
1	I-4 at US 27 / SR 25	Modify Interchange
4	Port of Fort Pierce SIS Connector from I-95 to Port of Fort Pierce	Modify Connector
4	Port of Fort Pierce SIS Connector from I-95 to Port of Fort Pierce	Modify Connector
2	I-10 at I-295	Modify Interchange
4	I-95 @ Oakland Park Boulevard	Modify Interchange
4	US 27 from Milepost 12.4 to SR 80	Add 2 Truck Only Lanes
4	US 27 from SR 80 to Palm Beach / Hendry County Line	Add 2 Truck Only Lanes
7	I-275 at Gandy Blvd.	Modify Interchange
4	US 27 from Miami-Dade / Broward County Line to I-75	Add 2 Truck Only Lanes
4	SW 10th St. from West of I-95 Interchange to East of I-95 Interchange	Modify Interchange
2	I-10 at US 301	Modify Interchange
1	I-4 at SR 539	Modify Interchange
4	US 27 from I-75 to Broward / Palm Beach County Line	Add 2 Truck Only Lanes
4	US 27 from Broward / Palm Beach County Line to Milepost 12.4	Add 2 Truck Only Lanes
4	I-95 @ Stirling Road	Modify Interchange
4	I-95 @ Belvedere Road	Modify Interchange

HIGHWAY Projects		
District	Project Name	Type
7	I-275 (SR 93) & SR 60/Memorial Hwy (Westshore Area) Interchange	Interchange
6	I-75 @ NW 138th St	Modify Interchange
1	I-4 at County Line Rd.	Modify Interchange
6	I-75 at NW 138th St	Modify Interchange
2	I-95 at Emerson	Modify Interchange
1	I-4 at US 98 / SR 35 / 700	Modify Interchange
1	I-4 at SR 570 / Polk Parkway (Western End)	Modify Interchange
6	I-75 to SR-826 Interchange	Modify Interchange
6	I-75 / SR 826 Int. I-75 SR 826	Modify Interchange
6	SR 826 / NW 154th St. Int. SR 826 NW 154th St.	Modify Interchange
7	I-275 (SR 93) & SR 60/Memorial Hwy (Westshore Area) Interchange	Interchange
7	I-275 @ MLK Blvd	Modify Interchange
6	I-75 to SR-826 Interchange	Modify Interchange
7	I-4 (EB) from west of Orient Road to NB/SB I-76	Modify Interchange
1	I-4 at SR 546 / Memorial Blvd.	Modify Interchange
6	SR 90 at I-95	Modify Interchange
8	Beachline West Expressway @ Interstate 4	Modify Interchange
7	I-4 @ Branch Forbes	Modify Interchange
7	I-275 @ Hillsborough Avenue	Modify Interchange
7	I-275 @ Sligh Avenue	Modify Interchange
3	I-10 and SR 95 (US 29) Interchange	Intersection
3	I-10 and SR 95 (US 29) Interchange	Intersection
6	I-75/HEFT Int. @ CD Road to Miami Gardens Drive	Modify Interchange
6	I-75/HEFT Int. @ CD Road to Miami Gardens Drive	Modify Interchange
6	I-75 / HEFT Int. CD Rd Miami Gardens Dr	Modify Interchange
7	I-275 at Ulmerton Rd. / SR 688	Modify Interchange
7	I-75 / SR 93A at Gibsonton Drive	Interchange
7	I-4 @ McIntosh Road	Modify Interchange
7	I-75 at Gibsonton Dr.	Modify Interchange
1	I-75 at US 17 / SR 35	Modify Interchange

HIGHWAY Projects		
District	Project Name	Type
7	I-4 @ Thonotosassa Road	Modify Interchange
1	I-75 at Laurel Rd.	Modify Interchange
5	I-4 @ Daryl Carter Parkway	New Interchange
7	I-4 @ Daryl Carter Parkway	New Interchange
1	I-75 at Daniels Parkway	Modify Interchange
7	I-75 @ Big Bend Road	Modify Interchange
7	I-75 @ Gibsonton	Modify Interchange
1	US 27 at US 17 / 92	Modify Interchange
7	I-75 at Big Bend Rd.	Modify Interchange
7	I-75 at SR 674	Modify Interchange
1	I-75 @ North Jones Loop Rd	Modify Interchange
7	I-4 @ Park Road	Modify Interchange
1	I-75 at North Jones Loop Rd.	Modify Interchange
1	I-75 at Alico Rd.	Modify Interchange
1	I-75 at SR 82	Modify Interchange
4	I-75 at Sawgrass Expressway	Modify Interchange
7	I-275 @ Busch Boulevard	Modify Interchange
7	I-275 @ Fowler Avenue	Modify Interchange
7	I-4 @ Mango Road	Modify Interchange
1	I-4 at Socrum Loop Rd.	Modify Interchange
1	I-4 at SR 33	Modify Interchange
1	I-75 at Luckett Rd.	Modify Interchange
5	I-95 @ LPGA	Modify Interchange
1	I-75 at I-275	Modify Interchange
1	I-75 at Moccasin Wallow Rd.	Modify Interchange
1	I-75 @ US17/SR35	Modify Interchange
1	I-75 @ CR77/Harbor View	Modify Interchange
1	I-75 at CR 776 / Harbor View	Modify Interchange
1	I-75 at SR 78	Modify Interchange
2	I-295 at Collins Rd	Modify Interchange

HIGHWAY Projects		
District	Project Name	Type
4	SR-9/I-95 at Oslo Rd Interchange	Interchange
4	I-75 at Griffin Rd.	Modify Interchange
7	I-275 at 38th Ave.	Modify Interchange
4	I-595 Project Ramp from SB US-1 to EB I-595	Interchange
7	I-275 @ Bears Avenue	Modify Interchange
1	I-4 at SR 570 / Polk Parkway (Eastern End)	Modify Interchange
8	Sawgrass Expressway/SR 869 @I-75/I-595 (MP 0)	Modify Interchange
3	SR 8 (I-10) @ SR 10 (US 90) WEST 9 MILE ROAD INTERCHANGE	Interchange
1	I-75 at SR 80	Modify Interchange
7	I-75 at CR 54	Modify Interchange
1	I-75 at Bonita Beach Rd.	Modify Interchange
1	I-75 at Corkscrew Rd.	Modify Interchange
3	I-10 @ US90 West 9 Mile Road Interchange	New Interchange
2	I-75 @ SR-121 (Williston Rd)	Modify Interchange
2	I-75 at SR 26 / Newberry Rd	Modify Interchange
5	I-10 @ end of NW 49th Street	New Interchange
8	Turnpike Mainline At the Sawgrass Expressway	Modify Interchange
7	I-275 @ Fletcher Avenue	Modify Interchange
5	SR 528 at Dallas Blvd	Modify Interchange
1	I-75 at Jacaranda Blvd.	Modify Interchange
1	I-75 River Rd/ CR 777	Modify Interchange
5	I-75 @ US27	Modify Interchange
2	I-75 at SR 24 / Archer Rd	Modify Interchange
5	I-75 at US 27	Modify Interchange
7	I-275 at 31st St. South	Modify Interchange
1	I-75 at SR 681	Modify Interchange
1	I-75 at CR 846 / Immokalee Rd.	Modify Interchange
2	I-10@ SR 121	Interchange
3	SR 8 (I-10) Interchange West of Crestview	Intersection
4	I-95 from High Meadow Ave. to Becker Rd.	Modify Interchange

HIGHWAY Projects		
District	Project Name	Type
2	I-10 @ SR-121	Modify Interchange
1	I-75 at CR 896 / Pine Ridge Rd.	Modify Interchange
2	US 301 / SR 200 at SR 24 (Waldo)	Modify Interchange
1	I-75 @ CR769/Kings Highway	Modify Interchange
2	I-95 @ SR-16	Modify Interchange
1	I-75 at CR 769 / Kings Highway	Modify Interchange
5	I-95 @ US1	Modify Interchange
2	I-10 at I-75	Modify Interchange
5	I-95 at US 1	Modify Interchange
5	I-95 @ SR-44	Modify Interchange
5	I-95 at SR 44	Modify Interchange
2	I-95 at US 1 and SR 206	Modify Interchange
3	I-10 (Antioch)	New Interchange
5	I-95 INTERCHANGE AT PIONEER TRAIL	Interchange
3	SR 8 (I-10) E OF ALABAMA STATE LINE TO W OF SR 95 (US 29)	Capacity
4, 5	US 27 (Miami-Dade, Broward)	Freight Capacity
4	US 27 (Palm Beach, Hendry)	Freight Capacity
4	US 27 (Palm Beach, Hendry)	Freight Capacity
4, 5	US 27 (Miami-Dade, Broward)	Freight Capacity
1	US 27 (Palm Beach / Hendry County Line)	Freight Capacity
3	SR 8 (I-10) FROM GADSDEN CO LINE TO WEST OF SR 263 CAPITAL CIRCLE	Capacity
4	US 27 (Palm Beach, Hendry)	Freight Capacity

TRUCK PARKING Projects		
BD	Project Name	Type
6	Golden Glades Truck Travel Center	Truck Parking
6	Site Q from NW 167th St to Golden Glades Int.	Truck Parking
6	Site W from Prologis Site to NW 137th Ave.	Truck Parking
6	Site X from Dolphin / Palmetto Expressway Int. to Dolphin / Palmetto Expressway Int.	Truck Parking
6	Truck Parking Facility - Site V from Turnpike to NW 74th St.	Truck Parking
5	Sanford Truck Parking Facility	Truck Parking
2	I-75 NB & SB Rest Area Expansion (Ellisville)	Truck Parking
2	I-95 NB & SB Rest Area Expansion (CR-210)	Truck Parking
2	I-95 NB & SB WIM Station User Experience (Yulee)	Truck Parking

ITS Projects		
District	Project Name	Type
4	US 27 (Miami-Dade to Hendry)	ITS
4	US 27 (Miami-Dade to Hendry)	ITS
4	US 27 (Miami-Dade to Hendry)	ITS
4	US-27 ITS Improvements from MP 0.000 to 25.854	ITS
4	US 27 (Miami-Dade to Hendry)	ITS
4	US 27 (Miami-Dade to Hendry)	ITS
6	Advanced Freight Mobility Solutions	ITS
2	Talleyrand Avenue ITS Solution	ITS
4, 6	Strategies for Reducing Railroad Trespassing (SRRT) Pilot Project	ITS
4	Connected Freight Priority System Deployment	ITS

Appendix D: Quantitative Scoring Measures and Criteria

FMTP Objective: Leverage multisource data and technology to improve freight system and security

1. Measure: (Truck Injuries/Truck Vehicle Miles Traveled (VMT))*1000

Description: This measure is the number of truck crashes resulting in injury divided by the truck vehicle miles traveled for a given roadway segment. This measure is an indicator of a safety issue involving trucks at a given location. A higher score is given to projects located in areas with a higher concentration of truck crashes resulting in injuries relative to truck traffic.

Measure Categorization and Scoring

(Truck Injuries/Truck VMT)*1000	Score
0-35	0
35-150	10
150-500	20
500-1250	30
1250+	40

Data Source: Truck Crashes-FDOT Safety Office; Truck VMT-FDOT Transportation Data and Analytics Office

2. Measure: (Truck Fatalities/Truck VMT)*1000

Description: This measure is the number of truck crashes resulting in fatalities divided by the truck vehicle miles traveled for a given roadway segment. This measure is an indicator of a safety issue involving trucks at a given location. A higher score is given to projects located in areas with a higher concentration of truck crashes resulting in fatalities relative to truck traffic.

Measure Categorization and Scoring

(Truck Fatalities/Truck VMT)*1000	Score
0-5	0
5-10	10
10-40	20
40-85	30
85+	40

Data Source: Truck Crashes-FDOT Safety Office; Truck VMT-FDOT Transportation Data and Analytics Office

3. Measure: Crime Index

Description: Crime Index is a proprietary metric produced by ESRI (Environmental Systems Resources Institute) Demographics. Crime index is an assessment of the relative risk of major crime types (against both persons and property) and their summarization at the United States Census block group scale. This measure assesses the crime index of the project area. If project limits fall within multiple block groups the average crime index score is computed for a given project.

Measure Categorization and Scoring

Crime Index	Score
0-100	0
100-250	5
250-500	10
500-1000	15
1000+	20

Data Source: Esri Demographics

FMTP Objective: Create a more resilient multimodal freight system

4. Measure: Roadways within 100-year Floodplain

Description: This measure identifies projects that occur within flood plains designated as a Special Flood Hazard Area by the Federal Emergency Management Agency (FEMA). Projects whose limits are located within a floodplain are given higher priority than roadways that are not located within floodplains.

Measure Categorization and Scoring

Roadways within 100 year floodplain	Score
Not within floodplain	0
Within floodplain	20

Data Source: Federal Emergency Management Agency (FEMA) and Flood Insurance Rate Map (FIRM)

FMTP Objective: Ensure the Florida freight system is in a state of good repair

5. Measure: Presence of structurally deficient bridges

Description: The presence of structurally deficient bridges is used to measure the state of Florida's freight system. If a bridge has been classified as structurally deficient they are posted as necessary for load or closed. Identifying projects with the presence of a structurally deficient bridge prioritizes the goal of ensuring that Florida's freight system is in a state of good repair by maintaining and preserving the existing system.

Measure Categorization and Scoring

Presence of structurally deficient bridges	Score
No Structurally deficient bridges within Project limits	0
Structurally deficient bridge within Project limits	40

Data Source: FDOT Bridge Maintenance Office

6. Measure: Presence of poor pavement conditions segments

Description: The presence of poor pavement conditions segments is used to measure the state of Florida’s freight system. Pavement conditions are rated by FDOT and FHWA using two different methods of criteria. For the FMTP objective, this measure utilizes the FHWA pavement condition criteria. Pavement segments rated as poor must fall under the following criteria listed in the table below:

Rating Factors	Poor
IRI (in/mile)	>170
Cracking Percent	> 15 (JPCP) >20 (Asphalt)
Rutting	>0.4

Two of the three metrics must be rated as Poor for the interval to be considered Poor. Identifying projects with the presence of poor pavement conditions prioritizes the goal of ensuring that Florida’s freight system is in a state of good repair by maintaining and preserving the existing system.

Measure Categorization and Scoring

Presence of poor pavement conditions segments	Score
No poor pavement conditions within project limits	0
Poor pavement conditions within project limits	40

Data Source: FDOT Pavement Office

FMTP Objective: Drive innovation to reduce congestion, bottlenecks and improve travel time reliability

7. Measure: Roadways with top bottlenecks

Description: This measure employs identified truck bottlenecks on the National Highway System (NHS). Bottlenecks are locations on roadways where the flow of traffic has decreased or has been delayed. The methodology for identifying truck bottlenecks in the state of Florida was developed for the FMTP. The roadway segments which rank highest in recurring or non-recurring congestion

are defined as truck bottlenecks in the state of Florida. Identifying the projects with top bottlenecks facilitates the higher prioritization of these projects thus allowing FDOT to address the congestion issue.

Measure Categorization and Scoring

Roadways with top bottlenecks	Score
No Bottlenecks present within project limits	0
Bottleneck present within project limits	60

Data Source: FHWA National Performance Measurement Research Data Set (NPMRDS)

8. Measure: Truck AADT

Description: Truck Average Annual Daily Traffic (AADT) is a measure of the number of trucks traveling on a given roadway segment in both directions on an average day. Truck AADT is used as a measure of mobility to indicate whether a roadway has more truck traffic than other roadways. Distinguishing project locations with higher volumes of truck traffic will help to address the mobility by appointing higher prioritization scores for these projects.

Measure Categorization and Scoring

Truck AADT	Score
0-1000	0
1000-3000	10
3000-6000	20
6000-12000	30
12000+	40

Data Source: FDOT Transportation Data and Analytics Office

FMTP Objective: Improve last-mile connectivity for all freight modes

9. Measure: Vicinity to Hubs

Description: This measure computes the distance from a roadway segment to the nearest major transportation hub identified by the Systems Intermodal Office (SIO). This measure identifies links between roadways and other transportation modes, including seaport and aviation. The closer a given roadway is to a major transportation hub the higher the prioritization score. Prioritizing roadways that connect to other modes supports the FMTP objective to improve last-mile connectivity for all freight modes.

Measure Categorization and Scoring

Vicinity to Hubs	Score
5+ Miles	0
2-5 Miles	20
1-2 Miles	40
1 Mile	60

Source: FDOT Systems Implementation Office

10. Measure: Roadways within freight intensive areas

Description: The FDOT SIO in coordination with the FDOT Transportation Data and Analytics Office conducted a study to identify major freight intensive areas in the state of Florida. A Freight Intensive Area is a cluster or group of freight facilities that generates, distributes or attracts large amounts of freight activities and has a significant impact on Florida's transportation system and economy. This measure identifies roadways that fall within the boundaries of a freight intensive area. Prioritizing roadways that are located in freight intensive areas supports the FMTP objective to improve last-mile connectivity for all freight modes.

Measure Categorization and Scoring

Roadways within freight intensive areas	Score
Project limit not within freight intensive area	0
Project limit within freight intensive area	40

Source: FDOT Systems Implementation Office and FDOT Transportation Data and Analytics Office

FMTF Objective: Capitalize on emerging freight trends to promote economic development

11. Measure: Labor Force Size (Ratio of labor force by county population relative to average state wide ratio)

Description: This measure identifies the size of a county's labor force relative to the rest of the state. When this measure equals or is greater than 100, it indicates that the ratio of workforce to population in a county is the same as (or higher than) the corresponding ratio in the state. A higher labor force indicates a more accessible workforce in an area.

Measure Categorization and Scoring

Labor Force Size	Score
0-50	0
50-100	5
100-150	10
150-200	15
200+	20

Data Source: Florida Department of Economic Opportunity

12. Measure: County Gross Regional Product (GRP) level (relative to the average county GRP level in Florida)

Description: Gross Regional Product (GRP) level is the total value of goods and services produced annually within a county. This measure identifies the county level GRP relative to the rest of the state. When this measure equals or is greater than 100, it indicates that the GRP level in a county is the same as (or higher than) the corresponding GRP level in the state. A higher GRP level indicates a more robust economy in the area.

Measure Categorization and Scoring

County GRP Level	Score
0-50	0
50-100	5
100-150	10
150-200	15
200+	20

Data Source: Bureau of Economic Analysis

13. Measure: Transportation and Warehousing Industry Share of Total Employment

Description: This measure identifies counties with higher shares of transportation and warehousing industry employment. A higher share of transportation and warehousing employment indicates more freight related industries in the area.

Measure Categorization and Scoring

Transportation and Warehousing Industry Share of Total Employment	Score
0-2%	0
2-4%	10
4-6%	20
6-8%	30
8%+	40

Data Source: Florida Department of Economic Opportunity

14. Measure: County Population Density

Description: This measure identifies counties with higher population densities relative to the state. The value of this measure indicates the relative size of population density in a county when comparing it to the state’s average population density. When the value of this measure equals (or is greater than) 100, it indicates that the population density in a census tract is the same as (or higher) than the state average. Areas with higher population densities receive higher prioritization due to the fact that they are typically in need of additional transportation investment due to the higher levels of economic activity.

Measure Categorization and Scoring

Population Density	Score
0-50	0
50-100	5
100-150	10
150-200	15
200+	20

Data Source: Florida Department of Economic Activity

FMTF Objective: Promote and support the shift to alternatively fueled freight vehicles

15. Measure: On designated Alternative Fuels Corridors

Description: The U.S. Department of Transportation has designated national plug-in electric vehicle charging and hydrogen, propane, and natural gas fueling corridors in strategic locations along major highways to improve the mobility of alternative fuel vehicles. Identifying roadways designated as alternative fuel corridors will facilitate the prioritization and investment in supporting the shift to alternatively fueled freight vehicles.

Measure Categorization and Scoring

On Designated Alternative Fuel Corridors	Score
Project limits are not within a designated Alternative Fuels Corridor	0
Project limits are within a designated Alternative Fuels Corridor	40

Data Source: United States Department of Energy

16. Measure: Number of alternative fueling stations within one mile of roadway

Description: This measure identifies the number of alternative fuels stations within one mile of project's roadway limits. Higher concentrations of alternative fuel stations within the vicinity of a roadway offer more accessibility to alternative fuel sources.

Measure Categorization and Scoring

Number of alternative fueling stations within one mile of roadway	Score
0-4	0
5-9	15
10-14	30
15-20	45
20+	60

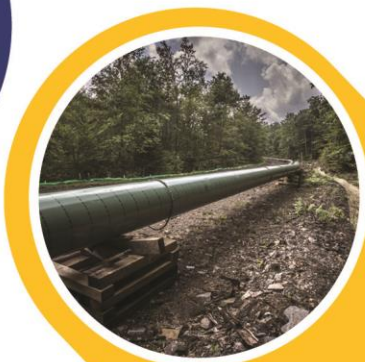
Data Source: United States Department of Energy



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Freight Mobility and Trade Plan

Technical Memorandum 7
Investment Element

April 2020



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Fiscally Constrained Funding Plan 2019-2024

The FMTP establishes a 5-Year Financially Constrained Freight Investment Plan inclusive of funded freight projects. This technical memorandum is meant to guide near future investments and meet FAST Act requirements. The FMTP objectives and outreach results provide guidelines for many of these investments. This equips the FMO office with the needed direction for attaining freight investments through sources outside of the NHFP allotment. This FMTP update is compliant with FAST Act guidance but does not affect projects that are already funded as of FY 2019, as those projects follow the previous FMTP guides.

The NHFP obligations are reimbursed from the Highway Account of the Highway Trust Fund and are limited in their scope and availability depending on which state they are apportioned to. Florida is estimated to be apportioned an average of \$50 to \$60 million a year through 2024. This tech memo lists all projects with existing or planned NHFP funding pursuant to the FAST Act, and their matched funding through local or state agencies. NHFP funds may only be used to fund projects located on the following three assets:

- The National Primary Highway Freight System
- Critical Rural Freight Corridors (CRFC)
- Critical Urban Freight Corridors (CUFC)

Current Investments

FDOT utilizes a series of investment systems to support freight across Florida. The Adopted Work Program (AWP) catalogues all funds collected by the state for the express purpose of funding FDOT projects, and is a catch-all funding document. The Adopted Work Program covers projects over the period of 2019-2024 and consists of over 16,000 projects at a value of \$62 billion¹. Of this \$62 billion, 75% (\$46.5 billion) is utilized for projects such as right of way acquisition, project development, engineering, etc. These projects span the variety of systems supporting all FDOT offices inclusive of freight, safety, and capacity. These funds are collected from the fuel tax, toll fees and other sources and are distributed through various programs.

Certain programs listed within the AWP support freight more directly than others, with SIS funds providing a large portion of freight funding. Within the AWP is the SIS 1st Five Year Plan, a major set of encumbered funds totaling \$7.5 billion for supporting freight and transit systems across 195 projects. Beyond this five-year horizon are the SIS 2nd Five-Year Plan which sets funding for

¹ <https://fdotewp1.dot.state.fl.us/FMSupportApps/WorkProgram/Support/Download.aspx>

years 6-10 and the SIS Cost Feasible Plan (CFP) which sets funding from 2029-2045. The CFP has a much broader vision which includes \$29.9 billion in funds over that period².

Projects in the SIS First Five Year Plan are derived from the SIS CFP. The CFP provides a funding horizon through 2045 based on projected funds. Projects are shifted from the CFP into the SIS Second Five Year Plan and then SIS First Five Year Plan as they approach their implementation and funds become available. These three levels of planning ensure that funding meets the evolving needs of Florida's transportation systems.

The NHFP provides federal funds annually for freight projects on the National Highway Freight Network. \$492 million of anticipated NHFP funding will be spent across 59 projects through 2024 (see Table 1), all of which meet the FAST Act requirements³.

NHFP Funded Projects

The National Highway Freight Program (NHFP) funded projects are selected based on their priority, cost, and ability to improve freight bottlenecks, congestion, level of service, and other factors in freight mobility (Figure 1). Projects with anticipated NHFP funding include truck parking, operational improvements, roadway widening, and interchange construction. Table 1 summarizes Florida's yearly allotment of NHFP funds, including expected local match for projects over NHFP allotment. Table 2 shows the number of project types and investment totals for the NHFP. Those projects anticipated to receive NHFP funds can be found in Appendices D and E. Project descriptions can be found in Appendices F and G.

² <https://www.fdot.gov/planning/systems/programs/mspi/plans/>

³ FMO Office Strategic Development Finance & Administrative Services Team



Table 1 | Project Funding Amounts by Year NHFP 2016-2024

Fiscal Year	Estimated NHFP Funding*	Estimated Balance Forward	Estimated NHFP Funding Available**	Estimated NHFP Funding on Projects
2016	\$53,926,568	\$53,926,568	\$0	\$0
2017	\$48,871,170***	\$63,829,306	\$102,797,738	\$38,968,432
2018	\$56,001,483	\$40,693,432	\$119,830,789	\$79,137,357
2019	\$63,211,900	\$61,087,794	\$103,905,332	\$42,817,538
2020	\$71,396,176	\$43,306,310	\$132,483,970	\$89,177,660
2021	\$65,000,000	\$64,647,129	\$108,306,310	\$43,659,181
2022	\$65,000,000	\$62,893,627	\$129,647,129	\$66,753,502
2023	\$65,000,000	\$61,906,246	\$127,893,627	\$65,987,381
2024	\$65,000,000	\$60,924,026	\$126,906,246	\$65,982,220
Total	\$553,407,297			\$492,483,271

* FY 2016-2020 based on Highway Apportionments under the FAST Act, FY 2021 and beyond estimated at similar funding levels

<https://www.fhwa.dot.gov/fastact/funding.cfm>

** Estimated NHFP Funding annual apportionment plus Estimated Balance Forward carried over from the previous FY

*** After rescission



Freight *Mobility* and Trade Plan

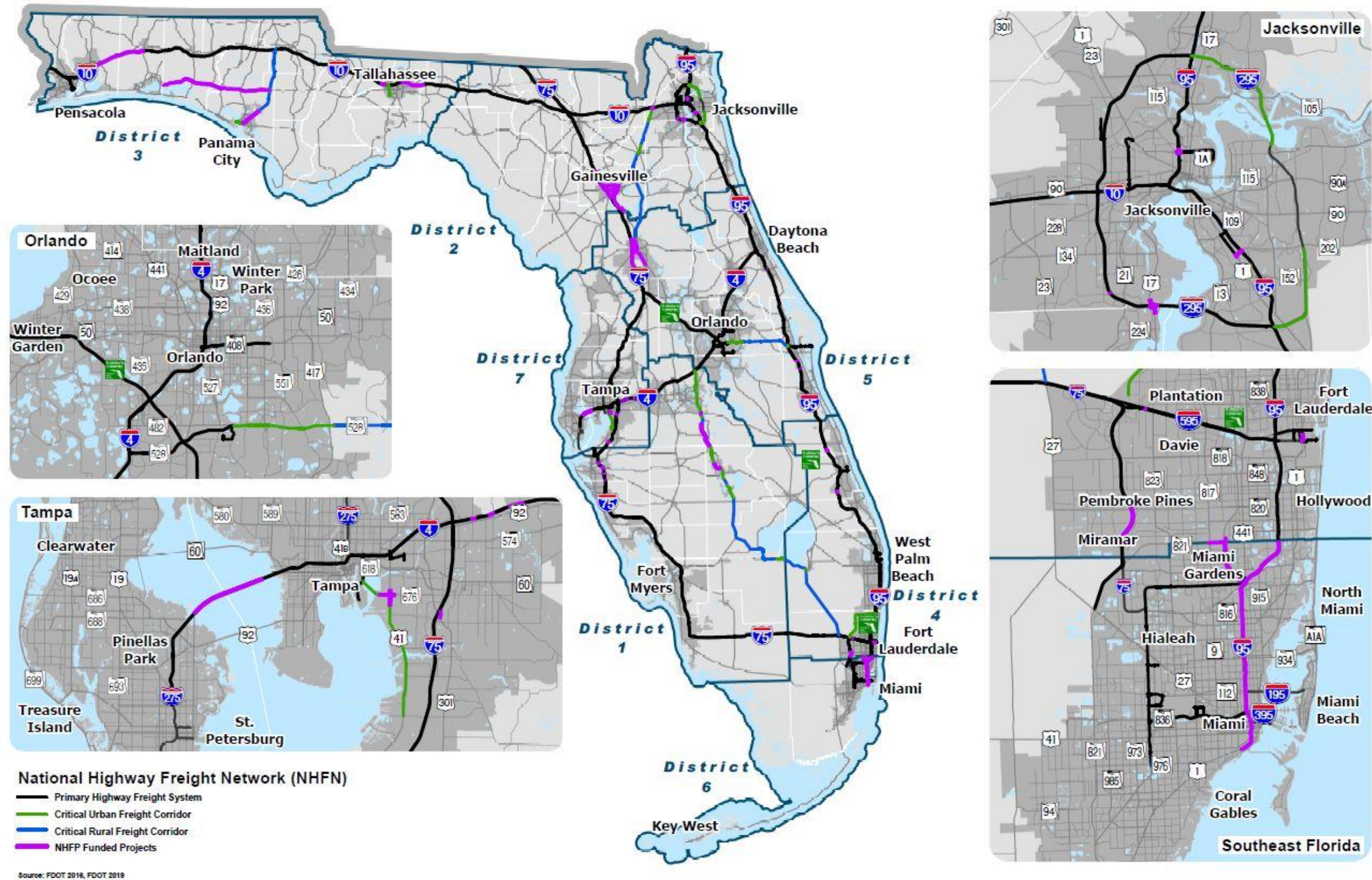


Figure 1 | NHFP Funded Programs Map



Table 2 | 5-Year NHFP Estimated Project Funding

Project Type	# of projects	Estimated Funding
Capacity	40	\$377,551,912
ITS	3	\$14,183,578
Pre-Planning	15	\$85,327,302
Truck Parking	1	\$15,420,479

NHFP Match

NHFP investments are supported by a significant match of state and local funds pursuant to FAST Act requirements. Totalling \$1 billion, these matching funds are utilized in conjunction with NHFP funding. Total funds allocated to projects on the NHFP are \$2.5 billion, with anticipated NHFP funds making up 20% of that total. Appendix E provides more detail on matching funds.

NHFP Critical Urban and Rural Freight Corridors

Of the 59 total NHFP projects in Florida, 8 are on the CUFC and 4 are on the CRFC. The third of projects on the CRFC receive 18 percent of the total Critical Corridor funds. This is due to the relatively lower development costs in rural areas compared to urban areas. These projects can be found in Appendices B and C.

Freight Funding in Adopted Work Program

Within the AWP there is a significant set of freight-focused projects that are of strategic importance to achieving FMTP objectives. Totalling \$3 billion over the next 5 years (see Table 3), these 300 projects are designated with the group identifier FRGT (freight). The projects have been designated due to their impact on the Florida freight system (Figure 2). The projects utilize multiple funding sources from across the FDOT. 214 of these initiatives are traditional highway capacity projects. Table 4 shows FRGT identified project types including ITS and modal projects. A complete listing of projects can be found in Appendix A.

Table 3 | AWP FRGT Identified Estimated Project Funding

Fiscal Year	Estimated Funding
2020	\$1,220,320,600
2021	\$697,406,883
2022	\$431,125,590
2023	\$372,604,397
2024	\$281,005,409
Total	\$3,002,462,879

Table 4 | AWP FRGT Identified Project Types and Funding Through 2024

Project Type	# of Projects	Estimated Funding total
Capacity	214	\$2.26B
Airport Expansion	44	\$64M
Bridge Maintenance	3	\$448M
Grade Separation	9	\$70M
ITS	6	\$12.5M
ILC	1	\$300k
Seaport Expansion	10	\$57.5M
Truck Parking	1	\$15.3M
Studies	9	\$10M
Resilience & Safety	2	\$45k
Toll	1	\$65M



Freight *Mobility* and Trade Plan

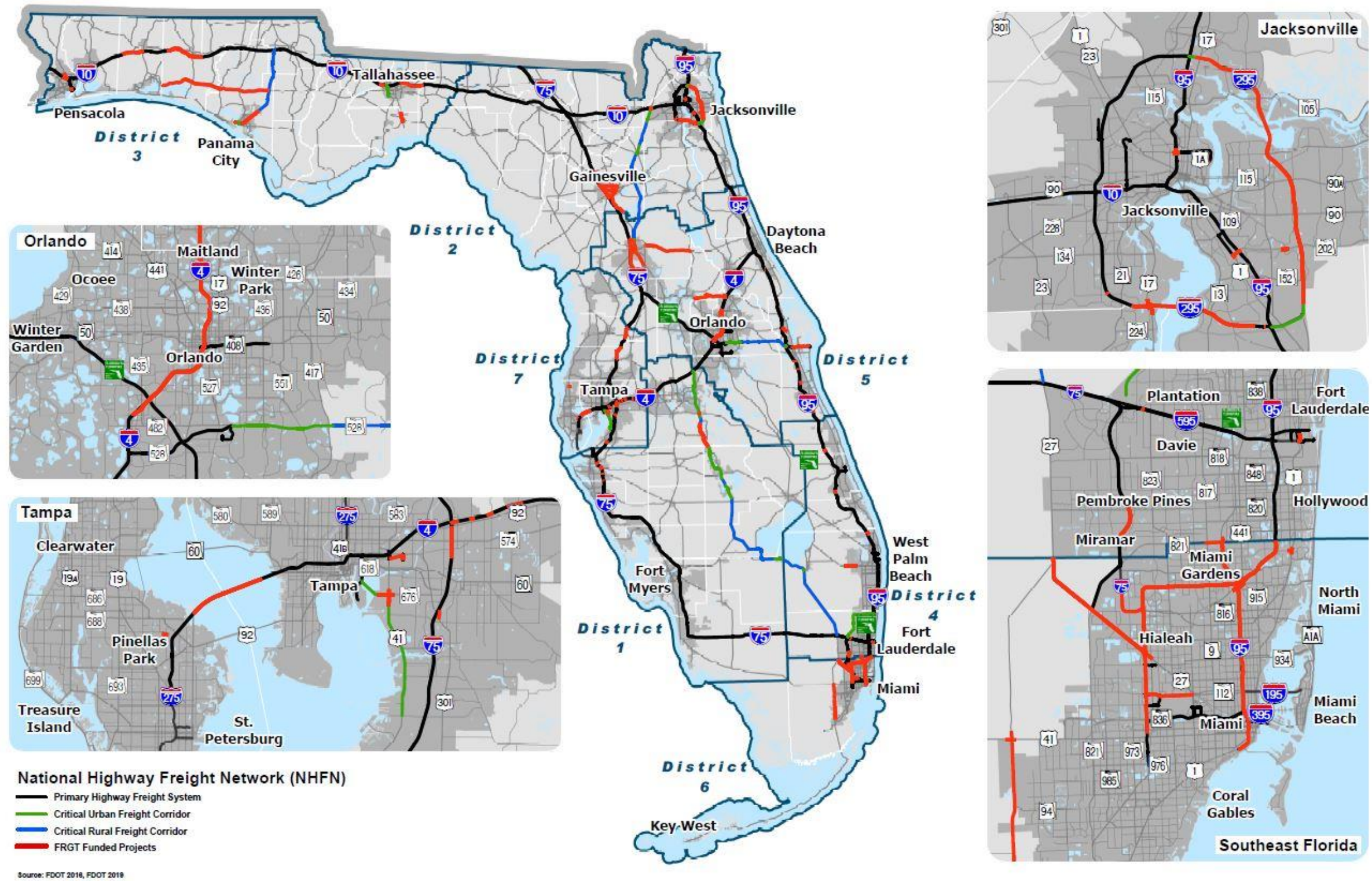


Figure 2 | AWP FRGT Identified Projects



SIS Adopted 5-Year Plan

The SIS First Five Year Plan consists of 145 highway freight projects at a total of \$6.1 billion (Table 5). 18 rail projects at \$231 million, 17 airport and spaceport projects at \$701 million, 14 seaport projects at \$545 million, and 1 multi-modal project at \$511,000. Highway freight projects consist of capacity projects while rail, air, and seaport projects vary from berth improvements to dredging and increased cargo handling facilities.

Table 5 | Highway Freight Projects Estimated funding - SIS 2020-2024

Fiscal Year	Estimated Funding
2020	\$1,882,246,000.00
2021	\$897,006,000.00
2022	\$716,445,000.00
2023	\$1,546,737,000.00
2024	\$1,063,540,000.00
Total	\$6,105,974,000.00

Summary of Highway Projects

The SIS First Five Year Plan represents the projects that are funded by the legislature in the Work Program (Year 1) and projects that are programmed for proposed funding in the next 2 to 5 years. FDOT evaluated how these projects address bottlenecks and congestion in terms of need and priority to provide insight into how well the FDOT project selection and prioritization process address these issues.



Freight *Mobility* and Trade Plan

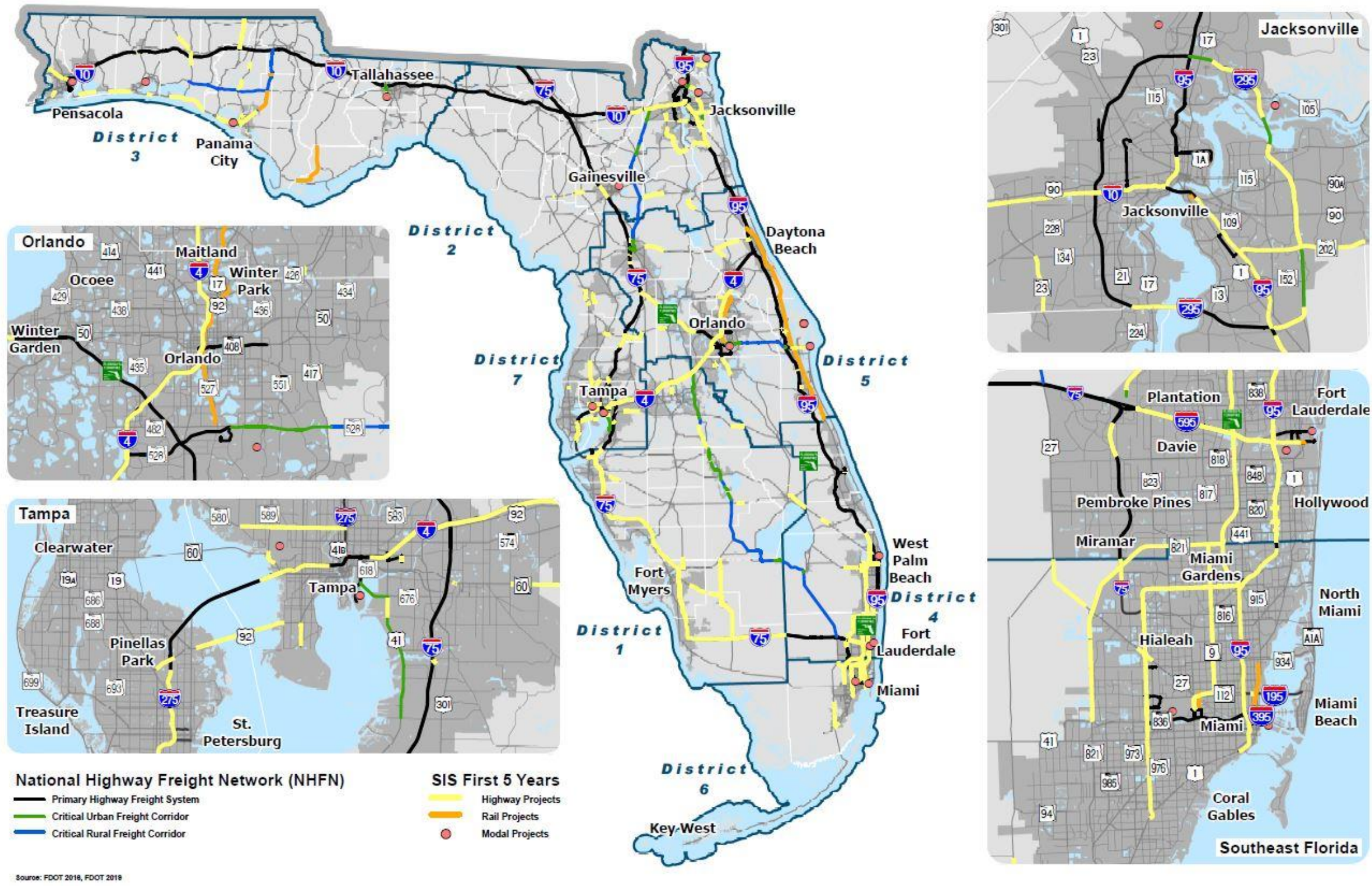


Figure 3 | SIS First Five Funded Projects



All of the highway projects in the SIS First Five Year Plan are of strategic significance to Florida freight networks. With over 70% of Florida truck traffic travelling through the SIS network, all SIS highway investments encourage and promote freight efficiency.⁴

The SIS plans are an important tool for FDOT in meeting existing and immediate freight needs. Its effectiveness hinges on how well the projects align with freight needs and priorities. Due to the expansive nature of the SIS network and its overlap with the National Highway Freight Network, even those projects which are not directly managed by FMO influence freight movement on Florida's highways and seaports. Analysis of the project types and priority shows that reliability and safety are the two most important goal areas to stakeholders and the SIS network. This aligns with the FMTP goals.

SIS CFP

The SIS CFP functions as a twenty-five year roadmap for the SIS First Five Year and Second Five Year plan. By identifying funds that are proactively likely to be available and keeping them tracked in this fashion, projects can be phased into the nearer term as funds become programmed and finalized. If projects maintain their prioritization from the CFP into the Second Five and First Five, they will be programmed and then funded as the year of their implementation comes closer in their adoption to the SIS First Five Year. In this way, the SIS plans utilize a 'continuous planning' format that ensures funds are programmed in compliance with Section 339.64 of Florida statutes.

Prioritization adjustments are made on a yearly basis as the projects are updated. If a project is re-prioritized or removed for any reason the programmed funds can be utilized for other projects that have received higher priority.

Discretionary Funding Projects for FMO

Discretionary grant opportunities are competitive and must be pursued after the Notice of Funding Opportunity (NOFO) is released by the parent agency. The following projects represent a sample of freight focused efforts to affect FMO's strategic goals through the use of targeted grant funding. FDOT and partner agencies are utilizing these funds to accomplish mutual goals. These funds are not limited to state agencies and may be sought after by any agency pursuant to grant guidelines.

⁴ <https://www.fdot.gov/planning/systems/programs/mspi/plans/>

Table 6 | Discretionary Freight Funding

Grant	Project	Grant Award
INFRA/FASTLANE	Cape Canaveral Spaceport Indian River Bridge Replacement	\$90,000,000
	PortMiami Bulkhead Rehabilitation and Capacity Expansion	\$8,046,741
	Truck Parking Availability System (TPAS)	\$10,778,237
ATCMTD	Connecting the East Orlando Communities	\$11,946,279
CRISI	South Florida East Coast Rail Corridor Intrusion Prevention Project	\$2,373,441
	Amtrak Sanford Subdivision Infrastructure Renewal Project	\$3,850,000
	Florida Strategies for Reducing Railway Trespassing	\$157,683
	Mitigating Jacksonville’s Freight Train-Vehicle/Pedestrian Conflicts	\$17,615,500
TIGER/BUILD	Port Manatee Marine Highway	\$9,000,000
	Port of Miami Rail Access	\$22,767,000
	Dames Point Marine Terminal Intermodal	\$10,000,000
	Tampa Downtown Multimodal improvement	\$10,943,100
	JAXPORT International Cargo Terminal Modernization Project	\$20,000,000
	The Underline Multimodal Mobility Corridor	\$22,360,352
	Immokalee Complete Streets	\$13,132,691
	Broward MPO Regional Complete Streets Initiative	\$11,443,371
FRA PTC Grant	FDOT I-ETMS PTC system from DeLand to Poinciana	\$14,914,238
MARAD	M-95 Fernandina Beach to Charleston Barge Service	TBA
	Miami, FL – Glasstech, Corp. for 65-ton vessel transporter	\$715,688
AIP	Significant Airport Improvement Programs across Florida – FAA	\$203,472,903
PHMSA TAG	Pipeline Technical Assistance Grant – East Florida Regional Planning Council pipeline safety training	\$78,000
CMVOST	Commercial Vehicle Operator Safety Training Grant Program – South Florida State College	\$16,124
HP-ITD	High Priority Innovative Technology Deployment – Florida	\$475,375
AID	Accelerated Innovation Deployment – Commercial Vehicle Parking System Project I-95 & I-4	\$1,000,000
EDA	Economic Development Research and National Technical Assistance	\$36,481,469



Summary

This technical memorandum outlines the currently allocated fiscally constrained funding for the next five years. The programmed funds for the next five years are separate from the unfunded needs. This fiscally constrained funding plan meets FAST Act requirements and represents an important implementation tool for FDOT. Implementation of these projects and the FMTP recommendations is critical.



Appendix A: FRGT Projects

Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
238275-7	SR429/46(WEKIVA PKW) FROM W OF OLD MCDONALD RD TO E OF WEKIVA RIVER RD	\$311,782					\$311,782
240200-2	SR429/46 (WEKIVA PKWY) FROM E OF OSPREY HAMMOCK TRAIL TO ORANGE BLVD	\$649,112					\$649,112
430596-1	PORT EVERGLADES SOUTHPORT TURNING NOTCH EXPANSION	\$3,375,510					\$3,375,510
201217-8	I-4 AT CSX RAILROAD	\$2,000,000	\$3,000,000				\$5,000,000
222476-1	SR 8 (I-10) @ SR 95 (US 29) INTERCHANGE		\$148,200				\$148,200
251688-1	SR 836/I-395 FROM WEST OF I-95 TO MACARTHUR CSWY BRIDGE	\$254,702					\$254,702
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434	\$41,605,410	\$8,376,016	\$2,659,911		\$333,400	\$52,974,737
432687-1	SR 826 FROM FLAGLER ST TO NW 154 ST. & I-75 FROM SR 826 TO NW 170 ST.	\$73,561					\$73,561
422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$24,312,797					\$24,312,797
201217-8	I-4 AT CSX RAILROAD	\$2,000,000	\$50,000				\$2,050,000
251688-1	SR 836/I-395 FROM WEST OF I-95 TO MACARTHUR CSWY BRIDGE	\$1,084,600					\$1,084,600
411014-2	I-75 (SR 93) FROM N OF SR 52 TO PASCO/HERNANDO CO/L	\$325,601					\$325,601
433414-1	PORT EVERGLADES DREDGING AND WIDENING	\$14,802,042					\$14,802,042
433511-2	NE 203 STREET INTERSECTION IMPROVEMENTS BETWN SR 5/US-1 & W. DIXIE HWY	\$55,772	\$752,513				\$808,285
433880-1	GATEWAY EXPRESSWAY FM SR690 @ US19 & SR686 EXT @ CR611 TO W OF I-275	\$39,641					\$39,641
201032-2	I-75 AT SR 70 INTERCHANGE	\$31,163					\$31,163
201032-6	I-75 AT SR 64	\$77,073					\$77,073
217910-4	SR 75 (US 231) FROM SR 30A (US 98) 15TH ST TO SOUTH OF PIPE LINE RD		\$8,511,000				\$8,511,000
220635-2	SR 20 FROM OKALOOSA COUNTY LINE TO WASHINGTON COUNTY LINE	\$498,679					\$498,679
220635-4	SR 20 FROM WALTON COUNTY LINE TO E OF SR 79			\$1,100,000			\$1,100,000
220635-5	SR 20 FROM SR 79 TO BAY COUNTY LINE		\$300,000				\$300,000
220635-6	SR 20 FROM WASHINGTON COUNTY LINE TO SR 75 (US 231)		\$2,000,000				\$2,000,000
220635-7	SR 20 FROM KING ROAD TO WASHINGTON COUNTY LINE			\$15,081,550			\$15,081,550
222530-5	SR 8 (I-10) FROM W OF SR 10 (US 90) TO LEON CO LINE/OCHLOCKONEE RIVER	\$8,663					\$8,663
222530-6	SR 8 (I-10) FROM GADSDEN CO LINE TO WEST OF SR 263 CAPITAL CIRCLE	\$9,752					\$9,752
406585-3	SR 8 (I-10) FROM E OF SR 261 CAPITAL CIRCLE TO W OF SR 59 GAMBLE RD	\$34,007					\$34,007



Freight Mobility and Trade Plan

Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
407918-5	SR 8 (I-10) INTERCHANGE WEST OF CRESTVIEW		\$5,967,400				\$5,967,400
413048-2	SR-9/I-95 @ OSLO ROAD INTERCHANGE	\$2,823,959	\$7,930,840				\$10,754,799
414964-1	SR 9A/I-95 FROM N. OF NW 151 STREET TO BROWARD COUNTY LINE					\$18,300,000	\$18,300,000
414964-7	SR 9A/I-95 FROM US-1/SOUTH DIXIE HIGHWAY TO SOUTH OF NW 62ND STREET			\$6,500,000		\$9,400,000	\$15,900,000
414964-8	SR 9A/I-95 FROM SOUTH OF NW 62ND STREET TO NORTH OF NW 151 STREET			\$3,500,000		\$5,200,000	\$8,700,000
415152-1	SR-93/I-75 INTERCHNG @SR-820/PINES BLVD F N OF MIRAMAR PKWY T N OF PIN	\$50,000					\$50,000
419243-2	US 27 (SR 25) FROM HIGHLANDS COUNTY LINE TO CR 630A		\$1,240,791	\$2,570,968	\$50,000	\$100,000	\$3,961,759
419243-3	US 27 FROM CR 630A TO PRESIDENTS DRIVE		\$4,633,096	\$1,963,630		\$70,000	\$6,666,726
422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$26,257,820					\$26,257,820
423071-4	I-75(SR93)@ SR24(ARCHER RD)	\$36,000					\$36,000
423373-4	GOLDEN GLADES TRUCK TRAVEL CENTER		\$1,995,000		\$13,332,000		\$15,327,000
427454-3	I-75 NB ON RAMP FROM NB US 301 TO I-75 NB	\$46,196					\$46,196
428865-2	US301(SR200) @ I-10 IMPROVEMENTS	\$1,000,560		\$5,354,663		\$8,192,704	\$14,547,927
433651-1	CR 484 FROM SW 20TH AVENUE TO CR 475A		\$8,897,821		\$49,995		\$8,947,816
433899-2	I-95(SR9) @ SR115(US1)/ML KING/20TH STREET	\$31,622	\$26,444	\$300,000	\$40,504,675	\$343,200	\$41,205,941
435575-1	I-295(SR9A) @ US17 TO SOUTH OF WELLS ROAD	\$241,049	\$1,285,609	\$19,245,359		\$257,400	\$21,029,417
436125-1	WICKHAM RD AT I-95 RAMP IMPROVEMENTS AND MAST ARMS		\$2,094,441				\$2,094,441
436426-1	SR 948/NW 36 ST FROM SR 826/PALMETTO EXPY TO SR 5/ US1			\$1,500,000			\$1,500,000
438842-1	PORTMIAMI TUNNEL FREIGHT MOBILITY EVALUATION STUDY	\$515					\$515
438928-2	SR202/JTB FM EAST OF I-95 TO US1 & US1 FM S OF JTB TO N OF MUSTANG RD	\$2,500,000					\$2,500,000
439123-1	SR 519/FISKE BLVD @ I-95 SB RAMP AND NB RAMPS/BARNES RD		\$6,397,328				\$6,397,328
439484-1	I-295 INTERCHANGE @ COLLINS ROAD	\$4,870,667	\$263,781				\$5,134,448
439761-1	SR-9/I-95 NORTHBOUND AND SOUTHBOUND OFF-RAMPS AT GATLIN BLVD.		\$20,000	\$3,571,118			\$3,591,118
440749-1	US 41/SR 45/S 50TH ST @ CSX GRADE SEPARATION SOUTH OF CAUSEWAY BLVD	\$10,000,000					\$10,000,000
440877-1	SITE FEASIBLTY STUDY FOR TRUCK PARKING FACILITIES PHASE II	\$500,000					\$500,000
440898-1	INSTALLATION OF VARIOUS ITS DEVICES IN ALACHUA COUNTY	\$1,699,109					\$1,699,109
440900-1	I-75 FRAME ON SYSTEM	\$249,776					\$249,776



Freight Mobility and Trade Plan

Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
440900-2	I-75 FRAME - ARTERIALS	\$1,312,934					\$1,312,934
441038-1	SR 8 (I-10) FROM W OF CR 189 LOG LAKE RD TO E OF SR 85 FERDON BLVD	\$13,409,205					\$13,409,205
441083-2	I-75/SR 93A SB REST AREA FROM BEG OF SB RAMP TO END OF SB RAMP	\$14,580,253					\$14,580,253
442932-1	SR 44 FROM SOUTHBOUND I-95 TO MEMORIAL MEDICAL PARKWAY	\$511,713	\$939,523				\$1,451,236
443316-1	I-4 FROM WEST OF PARK ROAD TO EAST OF PARK ROAD			\$122,421		\$889,726	\$1,012,147
443317-1	I-4 FROM WEST OF THONOTOSASSA RD TO EAST OF THONOTOSASSA RD			\$251,172		\$1,825,463	\$2,076,635
443318-1	I-4 FROM WEST OF BRANCH FORBES RD TO EAST OF BRANCH FORBES RD			\$244,003		\$1,773,359	\$2,017,362
443319-1	I-4 FROM EAST OF EB WEIGH STATION TO EAST OF MCINTOSH ROAD			\$384,716		\$2,796,028	\$3,180,744
443320-1	I-4 FROM EAST OF MANGO RD TO WEIGH STATION ON-RAMP		\$151,920		\$1,072,270		\$1,224,190
443321-1	I-4 FROM WEST OF MANGO RD TO EAST OF MANGO RD			\$154,284		\$1,121,297	\$1,275,581
443589-1	SR-5/US-1 SOUTH BOUND ON RAMP TO WEST BOUND I-595	\$1,045,000		\$800,000	\$5,013,949		\$6,858,949
422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$72,632,701					\$72,632,701
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434		\$14,684,674	\$14,684,675			\$29,369,349
410674-2	SR 40 FROM END OF 4 LANES TO EAST OF CR 314	\$2,717,094					\$2,717,094
413048-2	SR-9/I-95 @ OSLO ROAD INTERCHANGE	\$80,000					\$80,000
439484-1	I-295 INTERCHANGE @ COLLINS ROAD	\$250,000					\$250,000
410674-2	SR 40 FROM END OF 4 LANES TO EAST OF CR 314	\$1,294,160					\$1,294,160
433651-1	CR 484 FROM SW 20TH AVENUE TO CR 475A	\$1,156,406					\$1,156,406
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434	\$11,000,000	\$11,000,001				\$22,000,001
201032-6	I-75 AT SR 64	\$52,995					\$52,995
201217-8	I-4 AT CSX RAILROAD		\$25,507,066				\$25,507,066
209301-4	I-295(SR9A) FROM SOUTHSIDE CONNECTOR(SR113) TO SR202 JTB				\$409,561	\$2,652,376	\$3,061,937
217910-3	SR 75 (US 231) FROM SOUTH OF PIPE LINE RD TO NORTH OF PENNY ROAD				\$1,470,500	\$10,475,000	\$11,945,500
217910-4	SR 75 (US 231) FROM SR 30A (US 98) 15TH ST TO SOUTH OF PIPE LINE RD	\$10,455,300	\$2,117,300		\$52,100		\$12,624,700
222476-1	SR 8 (I-10) @ SR 95 (US 29) INTERCHANGE		\$3,707,500	\$303,946	\$564,500		\$4,575,946
251688-1	SR 836/I-395 FROM WEST OF I-95 TO MACARTHUR CSWY BRIDGE	\$2,137,833					\$2,137,833
407918-5	SR 8 (I-10) INTERCHANGE WEST OF CRESTVIEW	\$1,363,266	\$11,703,333				\$13,066,599



Freight Mobility and Trade Plan

Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
411011-4	I-75 (SR 93) FM S OF US98/SR50/CORTEZ TO N OF US98/SR50/CORTEZ	\$13,479					\$13,479
411012-2	I-75 (SR 93) FROM N OF SR 50 TO HERNANDO/SUMTER CO/L	\$49,366					\$49,366
413048-2	SR-9/I-95 @ OSLO ROAD INTERCHANGE	\$87,259			\$200,000		\$287,259
414964-1	SR 9A/I-95 FROM N. OF NW 151 STREET TO BROWARD COUNTY LINE		\$12,534,606				\$12,534,606
415152-1	SR-93/I-75 INTERCHNG @SR-820/PINES BLVD F N OF MIRAMAR PKWY T N OF PIN		\$100,000				\$100,000
418423-5	SR 826/PALMETTO EXPY FROM I-75 TO GOLDEN GLADES INTERCHANGE	\$3,192,661	\$89,593,723				\$92,786,384
419243-2	US 27 (SR 25) FROM HIGHLANDS COUNTY LINE TO CR 630A					\$400,000	\$400,000
422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$98,693,861					\$98,693,861
423251-3	SR 25/OKEECHOBEE RD FROM EAST OF NW 87 AVE TO NW 79 AVE (CONCRETE)		\$421,752			\$42,747,886	\$43,169,638
427369-1	SR 997/KROME AVENUE FROM SW 296 STREET TO S OF SW 232 STREET	\$5,130,000		\$820,000			\$5,950,000
427369-2	SR 997/KROME AVENUE FROM SW 232 STREET TO S OF SW 184TH ST/EUREKA DR.	\$83,268					\$83,268
427369-3	SR 997/KROME AVENUE FROM SW 184 STREET TO SOUTH OF SW 136 STREET	\$83,268					\$83,268
428358-1	SR 826/PALMETTO EXPY - SR 826 EASTBOUND RAMP TO SR 9A/I-95 NORTHBOUND		\$22,330,395				\$22,330,395
428358-3	SR 826/PALMETTO XWAY FROM W. OF NW 17TH AVENUE TO I-95 (EXPRESS LANES)	\$17,000,000					\$17,000,000
428865-1	I-10 (SR 8) / SR 200 (US 301) INTERCHANGE OPERATIONAL IMPROVEMENTS	\$13,550					\$13,550
429251-1	I-75 (SR 93A) FM S OF CSX/BROADWAY AVE TO EB/WB I-4 EXIT RAMP			\$91,260,947			\$91,260,947
430335-1	I-4 (SR 400) FM E OF I-75 (SR 93A) TO EAST OF WILLIAMS RD	\$47,848					\$47,848
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434	\$7,500,002	\$15,386,252	\$3,000,000	\$23,688,721	\$22,393,154	\$71,968,129
432687-1	SR 826 FROM FLAGLER ST TO NW 154 ST. & I-75 FROM SR 826 TO NW 170 ST.	\$9,844					\$9,844
433071-2	N 62ND STREET FROM CSX INTRMD ENTRANCE TO NORTH OF E COLUMBUS DRIVE	\$3,438,900		\$3,102,209			\$6,541,109
433796-1	US 19 (SR 55) FROM S OF TIMBERLANE RD TO S OF LAKE ST				\$1,193,800		\$1,193,800
433880-1	GATEWAY EXPRESSWAY FM SR690 @ US19 & SR686 EXT @ CR611 TO W OF I-275	\$13,400,000					\$13,400,000
436122-1	SR 405 SPACEPORT CONNECTOR SIS INTERSECTION IMPROVEMENTS	\$3,439,054					\$3,439,054
436123-1	SR 405 AT SISSON RD SPACEPORT CONNECTOR SIS INTERSECTION IMPROVEMENTS	\$1,562,708					\$1,562,708
436565-1	SR 25/OKEECHOBEE RD. & SR 826/PALMETTO EXPRESSWAY INTERCHANGE					\$54,374,137	\$54,374,137
439778-1	SR518/W EAU GALLIE BLVD - E OF I-95 NB OFF RAMP TO W OF INT @ SARNO RD		\$2,504,790				\$2,504,790
439779-1	SR518/W EAU GALLIE BLVD-JONES ROAD TO 200FT E OF I-95 INTERCHG RAMPS		\$3,246,953				\$3,246,953



Freight Mobility and Trade Plan

Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$278,064,277					\$278,064,277
201032-2	I-75 AT SR 70 INTERCHANGE		\$3,500,000				\$3,500,000
201217-8	I-4 AT CSX RAILROAD		\$500,000				\$500,000
209301-3	I-295 (SR 9A) FROM SR 202 JTB BLVD TO SR 9B (MANAGED LANES)	\$2,618,461					\$2,618,461
209301-4	I-295(SR9A) FROM SOUTHSIDE CONNECTOR(SR113) TO SR202 JTB	\$750,000					\$750,000
209658-4	I-295(SR9A) FROM: DAME POINT BRIDGE TO: NORTH OF PULASKI	\$9,997					\$9,997
226781-6	TALLAHASSEE INTERNATIONAL AIRPORT TERMINAL REHAB IMPROVEMENTS	\$354,134	\$44,743				\$398,877
238275-7	SR429/46(WEKIVA PKW) FROM W OF OLD MCDONALD RD TO E OF WEKIVA RIVER RD	\$225,180					\$225,180
240200-2	SR429/46 (WEKIVA PKWY) FROM E OF OSPREY HAMMOCK TRAIL TO ORANGE BLVD	\$1,206,047					\$1,206,047
251688-1	SR 836/I-395 FROM WEST OF I-95 TO MACARTHUR CSWY BRIDGE	\$668					\$668
407402-3	SR 528 FROM E OF SR524(INDUSTRY) TO EAST OF SR 3	\$1,705,000					\$1,705,000
407402-4	SR 528 FROM EAST OF SR 3 TO PORT CANAVERAL INTERCHANGE	\$1,400,000					\$1,400,000
410674-2	SR 40 FROM END OF 4 LANES TO EAST OF CR 314	\$68,445	\$759,363				\$827,808
413048-2	SR-9/I-95 @ OSLO ROAD INTERCHANGE	\$700,000					\$700,000
416010-6	TALLAHASSEE REGIONAL AIRPORT HANGAR DEVELOPMENT III	\$142,200					\$142,200
419345-2	SR-80 FROM W OF LION COUNTRY SAFARI RD TO FOREST HILL/CRESTWOOD BLVD.	\$102,600					\$102,600
420652-1	SOUTHWEST FLORIDA INT'L ARP - PARALLEL RUNWAY 6R/24L PHASE I	\$2,505,653	\$2,621,266	\$5,239,547	\$1,364,215		\$11,730,681
422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$986,938			\$9,310,000	\$6,500,000	\$16,796,938
423251-3	SR 25/OKEECHOBEE RD FROM EAST OF NW 87 AVE TO NW 79 AVE (CONCRETE)	\$30,860	\$269,805	\$800,000			\$1,100,665
425615-4	DESTIN EXECUTIVE AIRPORT REPAINT/RESTRIPE		\$100,922				\$100,922
425631-4	NORTHWEST FL BEACHES INTERNATIONAL AIRPORT CONST DUAL TAXIWAY/RUNWAY	\$246,500					\$246,500
425751-1	VERO BEACH MUNICIPAL AIRPORT REHAB/MARK TAXIWAY B		\$960,000				\$960,000
426904-3	I-95 INT @ ST JOHNS HERITAGE PKWY/PALM BAY PK WY N OF MICCO RD	\$930,925					\$930,925
427369-1	SR 997/KROME AVENUE FROM SW 296 STREET TO S OF SW 232 STREET	\$7,502,907	\$1,249,736	\$1,980,000			\$10,732,643
427369-2	SR 997/KROME AVENUE FROM SW 232 STREET TO S OF SW 184TH ST/EUREKA DR.	\$773,427	\$840,000				\$1,613,427
427369-3	SR 997/KROME AVENUE FROM SW 184 STREET TO SOUTH OF SW 136 STREET	\$2,855	\$220,000				\$222,855
428358-1	SR 826/PALMETTO EXPY - SR 826 EASTBOUND RAMP TO SR 9A/I-95 NORTHBOUND	\$498,530	\$214,200	\$6,844,962	\$8,249,684		\$15,807,376



Freight Mobility and Trade Plan

Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
428830-1	GAINESVILLE REGIONAL AIRPORT FUEL FACILITY PFL0008725	\$250,000					\$250,000
429251-1	I-75 (SR 93A) FM S OF CSX/BROADWAY AVE TO EB/WB I-4 EXIT RAMP	\$2,230,000	\$17,000				\$2,247,000
429271-1	MIAMI INT'L AIRPORT PERIMETER ROAD WIDENING & REALIGNMENT		\$72,056				\$72,056
429710-1	BOCA RATON AIRPORT SECURITY ENHANCEMENTS PHASE 4	\$600,000					\$600,000
431229-2	MIAMI INT'L AIRPORT CENTRAL BASE PAVEMENT REHABILITATION	\$5,183,294					\$5,183,294
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434	\$16,126,000	\$28,439,070	\$38,155,173	\$36,499,758	\$35,773,205	\$154,993,206
432687-1	SR 826 FROM FLAGLER ST TO NW 154 ST. & I-75 FROM SR 826 TO NW 170 ST.	\$4,155					\$4,155
432969-1	TAMPA INTERNATIONAL AIRPORT - RAMP FEDEX/EMORY AND TAXIWAY K				\$67,606		\$67,606
433240-1	PORT TAMPA BAY - EASTPORT BERTH DEVELOPMENT			\$1,500,000			\$1,500,000
433511-2	NE 203 STREET INTERSECTION IMPROVEMENTS BETWN SR 5/US-1 & W. DIXIE HWY		\$2,303,217				\$2,303,217
433880-1	GATEWAY EXPRESSWAY FM SR690 @ US19 & SR686 EXT @ CR611 TO W OF I-275	\$3,000,000	\$1,000,000				\$4,000,000
435717-3	PENSACOLA INTERNATIONAL AIRPORT ILS/GPS APPROACH FOR RUNWAY 17/35 EXT	\$50,000					\$50,000
436122-1	SR 405 SPACEPORT CONNECTOR SIS INTERSECTION IMPROVEMENTS	\$143,640					\$143,640
436123-1	SR 405 AT SISSON RD SPACEPORT CONNECTOR SIS INTERSECTION IMPROVEMENTS	\$148,258					\$148,258
436125-1	WICKHAM RD AT I-95 RAMP IMPROVEMENTS AND MAST ARMS		\$105,300				\$105,300
436426-1	SR 948/NW 36 ST FROM SR 826/PALMETTO EXPY TO SR 5/ US1	\$800,000					\$800,000
436565-1	SR 25/OKEECHOBEE RD. & SR 826/PALMETTO EXPRESSWAY INTERCHANGE		\$1,100,000	\$30,491		\$1,305,178	\$2,435,669
436832-1	TAMPA INTERNATIONAL AIRPORT - REHAB RUNWAY 10/28 E OF RUNWAY 19L				\$1,349,920		\$1,349,920
437062-1	SARASOTA-BRADENTON INT'L APT AIR CENTER UTILITIES	\$810,090					\$810,090
439758-1	SR-9/I-95 NORTHBOUND OFF-RAMP AT INDIANTOWN ROAD				\$526,126		\$526,126
439761-1	SR-9/I-95 NORTHBOUND AND SOUTHBOUND OFF-RAMPS AT GATLIN BLVD.		\$20,000				\$20,000
439779-1	SR518/W EAU GALLIE BLVD-JONES ROAD TO 200FT E OF I-95 INTERCHG RAMPS	\$150,000	\$15,795				\$165,795
442065-1	CENTRAL FL COMMUTER RAIL SYS POSITIVE TRAIN CONTROL (PTC) MAINTENANCE		\$2,150,000				\$2,150,000
209301-4	I-295(SR9A) FROM SOUTHSIDE CONNECTOR(SR113) TO SR202 JTB	\$1,200,000					\$1,200,000
436832-1	TAMPA INTERNATIONAL AIRPORT - REHAB RUNWAY 10/28 E OF RUNWAY 19L				\$826,500		\$826,500
407918-5	SR 8 (I-10) INTERCHANGE WEST OF CRESTVIEW		\$84,983,933				\$84,983,933
410674-2	SR 40 FROM END OF 4 LANES TO EAST OF CR 314	\$125,211					\$125,211



Freight Mobility and Trade Plan

Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
433651-1	CR 484 FROM SW 20TH AVENUE TO CR 475A	\$650,000					\$650,000
422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$6,558,502					\$6,558,502
423251-3	SR 25/OKEECHOBEE RD FROM EAST OF NW 87 AVE TO NW 79 AVE (CONCRETE)	\$2,192,800					\$2,192,800
439484-1	I-295 INTERCHANGE @ COLLINS ROAD	\$575,603					\$575,603
251688-1	SR 836/I-395 FROM WEST OF I-95 TO MACARTHUR CSWY BRIDGE	\$69,771					\$69,771
423599-2	NORTHWEST FL BEACHES INTERNATIONAL AIRPORT NORTH CONCOURSE EXPANSION	\$735,000					\$735,000
423599-3	NORTHWEST FL BEACHES INTERNATIONAL AIRPORT BAGGAGE SYSTEM EXPANSION	\$270,000					\$270,000
427369-1	SR 997/KROME AVENUE FROM SW 296 STREET TO S OF SW 232 STREET	\$28,900					\$28,900
433511-2	NE 203 STREET INTERSECTION IMPROVEMENTS BETWN SR 5/US-1 & W. DIXIE HWY	\$17,721,773	\$1,872,929				\$19,594,702
436693-1	MIAMI INT'L AIRPORT TERMINAL HARDSTAND & GSE FACILITY		\$3,000,000	\$5,500,000			\$8,500,000
436794-1	ST PETE-CLEARWATER INTERNATIONAL AIRPORT - APRON EXPANSION SEPARATION	\$4,500,000					\$4,500,000
437062-1	SARASOTA-BRADENTON INT'L APT AIR CENTER UTILITIES	\$1,000,000					\$1,000,000
440323-1	BREVARD-PORT CANAVERAL NORTH CARGO BERTH IMPROVEMENTS	\$10,000,000					\$10,000,000
440749-1	US 41/SR 45/S 50TH ST @ CSX GRADE SEPARATION SOUTH OF CAUSEWAY BLVD		\$14,000,000	\$18,500,000			\$32,500,000
209301-3	I-295 (SR 9A) FROM SR 202 JTB BLVD TO SR 9B (MANAGED LANES)	\$74,618					\$74,618
209301-3	I-295 (SR 9A) FROM SR 202 JTB BLVD TO SR 9B (MANAGED LANES)		\$568,480	\$568,480			\$1,136,960
213345-7	I-295 (SR 9A) FROM BUCKMAN BRIDGE TO I-95 MANAGED LANES		\$965,000	\$965,000			\$1,930,000
209301-3	I-295 (SR 9A) FROM SR 202 JTB BLVD TO SR 9B (MANAGED LANES)	\$419,000	\$300,000	\$300,000			\$1,019,000
213345-7	I-295 (SR 9A) FROM BUCKMAN BRIDGE TO I-95 MANAGED LANES	\$369,000	\$369,000	\$369,000			\$1,107,000
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434		\$9,212,931	\$18,087,282	\$18,800,332	\$19,405,143	\$65,505,688
418423-5	SR 826/PALMETTO EXPY FROM I-75 TO GOLDEN GLADES INTERCHANGE	\$69,636					\$69,636
423251-3	SR 25/OKEECHOBEE RD FROM EAST OF NW 87 AVE TO NW 79 AVE (CONCRETE)		\$5,160,808	\$1,394,982			\$6,555,790
427369-1	SR 997/KROME AVENUE FROM SW 296 STREET TO S OF SW 232 STREET	\$3,988,058	\$3,343,801				\$7,331,859
427369-2	SR 997/KROME AVENUE FROM SW 232 STREET TO S OF SW 184TH ST/EUREKA DR.	\$5,078,116	\$680,000				\$5,758,116
427369-3	SR 997/KROME AVENUE FROM SW 184 STREET TO SOUTH OF SW 136 STREET	\$1,275,166	\$680,000				\$1,955,166
428358-1	SR 826/PALMETTO EXPY - SR 826 EASTBOUND RAMP TO SR 9A/I-95 NORTHBOUND	\$1,882,958	\$108,096,969				\$109,979,927
209301-4	I-295(SR9A) FROM SOUTHSIDE CONNECTOR(SR113) TO SR202 JTB			\$1,520,000	\$8,000,000		\$9,520,000



Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
217910-3	SR 75 (US 231) FROM SOUTH OF PIPE LINE RD TO NORTH OF PENNY ROAD				\$4,194,800		\$4,194,800
217910-4	SR 75 (US 231) FROM SR 30A (US 98) 15TH ST TO SOUTH OF PIPE LINE RD	\$4,200,000	\$40,598,500	\$40,576,000	\$30,000,000		\$115,374,500
218603-1	SR 95 (US 29) FROM SR 8 (I-10) TO N OF SR 10 (US 90A) 9 MILE ROAD	\$14,033					\$14,033
222476-1	SR 8 (I-10) @ SR 95 (US 29) INTERCHANGE				\$525,000		\$525,000
249614-7	SR 997/KROME AVENUE FROM S. OF SW 136TH ST. TO S. OF SR 94/KENDALL DR.	\$1,195,777					\$1,195,777
411014-2	I-75 (SR 93) FROM N OF SR 52 TO PASCO/HERNANDO CO/L	\$375,000					\$375,000
423251-3	SR 25/OKEECHOBEE RD FROM EAST OF NW 87 AVE TO NW 79 AVE (CONCRETE)		\$3,000,000	\$4,000,000	\$3,237,529		\$10,237,529
427369-3	SR 997/KROME AVENUE FROM SW 184 STREET TO SOUTH OF SW 136 STREET	\$311,090					\$311,090
433796-1	US 19 (SR 55) FROM S OF TIMBERLANE RD TO S OF LAKE ST				\$11,894,300		\$11,894,300
436565-1	SR 25/OKEECHOBEE RD. & SR 826/PALMETTO EXPRESSWAY INTERCHANGE			\$88,300			\$88,300
413048-2	SR-9/I-95 @ OSLO ROAD INTERCHANGE	\$2,343					\$2,343
217976-3	SR 30 (US 98) @ SR 368 23RD STREET INTERSECTION PHASE I & II	\$201,661					\$201,661
430596-1	PORT EVERGLADES SOUTHPORT TURNING NOTCH EXPANSION	\$3,600,000					\$3,600,000
433363-1	PORT OF MIAMI CRUISE TERMINAL IMPROVEMENTS	\$3,900,000					\$3,900,000
435130-1	PORT TAMPA BAY - HOOKERS POINT IMPROVEMENTS	\$3,000,000					\$3,000,000
444623-1	JAXPORT BLOUNT ISLAND UPLAND IMPROVEMENTS	\$3,850,000					\$3,850,000
422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$6,206,510		\$3,461,266	\$3,461,266	\$3,461,266	\$16,590,308
201217-8	I-4 AT CSX RAILROAD		\$25,000				\$25,000
217910-3	SR 75 (US 231) FROM SOUTH OF PIPE LINE RD TO NORTH OF PENNY ROAD	\$1,380,260					\$1,380,260
217910-4	SR 75 (US 231) FROM SR 30A (US 98) 15TH ST TO SOUTH OF PIPE LINE RD	\$699,907					\$699,907
218603-1	SR 95 (US 29) FROM SR 8 (I-10) TO N OF SR 10 (US 90A) 9 MILE ROAD	\$29,872					\$29,872
222476-1	SR 8 (I-10) @ SR 95 (US 29) INTERCHANGE			\$7,287,500	\$128,906,124		\$136,193,624
251688-1	SR 836/I-395 FROM WEST OF I-95 TO MACARTHUR CSWY BRIDGE	\$8,472	\$569,000				\$577,472
407402-3	SR 528 FROM E OF SR524(INDUSTRY) TO EAST OF SR 3					\$2,800,000	\$2,800,000
407402-4	SR 528 FROM EAST OF SR 3 TO PORT CANAVERAL INTERCHANGE					\$800,000	\$800,000
418423-5	SR 826/PALMETTO EXPY FROM I-75 TO GOLDEN GLADES INTERCHANGE	\$57,834					\$57,834
419243-3	US 27 FROM CR 630A TO PRESIDENTS DRIVE	\$500,000					\$500,000



Freight Mobility and Trade Plan

Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
423251-3	SR 25/OKEECHOBEE RD FROM EAST OF NW 87 AVE TO NW 79 AVE (CONCRETE)			\$6,605,018		\$1,742,574	\$8,347,592
427369-2	SR 997/KROME AVENUE FROM SW 232 STREET TO S OF SW 184TH ST/EUREKA DR.	\$1,526	\$89,032				\$90,558
428358-1	SR 826/PALMETTO EXPY - SR 826 EASTBOUND RAMP TO SR 9A/I-95 NORTHBOUND	\$66,691	\$33,000				\$99,691
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434			\$6,000,631	\$565,000		\$6,565,631
436565-1	SR 25/OKEECHOBEE RD. & SR 826/PALMETTO EXPRESSWAY INTERCHANGE					\$19,488,927	\$19,488,927
226781-6	TALLAHASSEE INTERNATIONAL AIRPORT TERMINAL REHAB IMPROVEMENTS	\$45,866	\$55,257				\$101,123
412210-3	TALLAHASSEE REGIONAL AIRPORT RUNWAY 18/36 RE-CONSTRUCTION	\$2,250,000					\$2,250,000
416010-6	TALLAHASSEE REGIONAL AIRPORT HANGAR DEVELOPMENT III	\$357,800					\$357,800
420652-1	SOUTHWEST FLORIDA INT'L ARP - PARALLEL RUNWAY 6R/24L PHASE I			\$206,278	\$3,865,126		\$4,071,404
422301-5	TALLAHASSEE INTERNATIONAL AIRPORT AIRFIELD PRESERVATION		\$100,000				\$100,000
423290-2	MIAMI INT'L AIRPORT CONCOURSE H INTERNALIZATION		\$2,500,000				\$2,500,000
425615-4	DESTIN EXECUTIVE AIRPORT REPAINT/RESTRIPE	\$500,000	\$399,078				\$899,078
425615-5	DESTIN EXECUTIVE AIRPORT EXPAND/RECONSTRUCT PARKING APRON PH I	\$150,000					\$150,000
425616-2	BOB SIKES AIRPORT DESIGN EASTSIDE AIRCRAFT PARKING APRON		\$300,000				\$300,000
425616-3	BOB SIKES AIRPORT OVERLAY AIRCRAFT PARKING APRON	\$250,000					\$250,000
425616-4	BOB SIKES AIRPORT TREE REMOVAL	\$240,000					\$240,000
425751-1	VERO BEACH MUNICIPAL AIRPORT REHAB/MARK TAXIWAY B		\$1,000,000				\$1,000,000
428830-1	GAINESVILLE REGIONAL AIRPORT FUEL FACILITY PFL0008725		\$250,000				\$250,000
428832-1	GAINESVILLE REGIONAL APT TAXIWAY A DRAINAGE/ RETENTION PFL008733					\$49,170	\$49,170
429271-1	MIAMI INT'L AIRPORT PERIMETER ROAD WIDENING & REALIGNMENT		\$480,785				\$480,785
429531-1	MIAMI INT'L AIRPORT TERMINAL ROOF DRAINS, REROOFING AND SCUPPERS		\$50,000				\$50,000
431229-2	MIAMI INT'L AIRPORT CENTRAL BASE PAVEMENT REHABILITATION	\$2,185,755	\$1,676,262				\$3,862,017
432969-1	TAMPA INTERNATIONAL AIRPORT - RAMP FEDEX/EMORY AND TAXIWAY K				\$417,394		\$417,394
432971-1	TAMPA INTERNATIONAL AIRPORT - RAMP RED (DELTA) CONCRETE/SLAB REHAB				\$350,000		\$350,000
433240-1	PORT TAMPA BAY - EASTPORT BERTH DEVELOPMENT		\$1,500,000				\$1,500,000
435226-1	TAMPA INTERNATIONAL AIRPORT - AIRFIELD SLAB REPLACEMENT.	\$275,000					\$275,000
436397-1	FT. LAUDERDALE/HOLLYWOOD INT'L AIRPORT REHABILITATION OF TAXIWAY T	\$312,500	\$312,500				\$625,000



Freight Mobility and Trade Plan

Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
436693-1	MIAMI INT'L AIRPORT TERMINAL HARDSTAND & GSE FACILITY	\$5,500,000					\$5,500,000
437033-1	VOLUSIA-ORMOND BEACH BUSINESS PARK DEVELOPMENT	\$41,000					\$41,000
437061-1	SARASOTA-BRADENTON INT'L APT N QUAD PUBLIC ASSESS RD-DESIGN AND CONST			\$2,050,000			\$2,050,000
437062-1	SARASOTA-BRADENTON INT'L APT AIR CENTER UTILITIES	\$189,910					\$189,910
429251-1	I-75 (SR 93A) FM S OF CSX/BROADWAY AVE TO EB/WB I-4 EXIT RAMP			\$3,686,982			\$3,686,982
422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$168,837,989					\$168,837,989
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434		\$30,000,000	\$50,000,000			\$80,000,000
209301-4	I-295(SR9A) FROM SOUTHSIDE CONNECTOR(SR113) TO SR202 JTB			\$3,000,000			\$3,000,000
238275-7	SR429/46(WEKIVA PKW) FROM W OF OLD MCDONALD RD TO E OF WEKIVA RIVER RD	\$426					\$426
251688-1	SR 836/I-395 FROM WEST OF I-95 TO MACARTHUR CSWY BRIDGE	\$6,890					\$6,890
410674-2	SR 40 FROM END OF 4 LANES TO EAST OF CR 314		\$1,120,508				\$1,120,508
411011-4	I-75 (SR 93) FM S OF US98/SR50/CORTEZ TO N OF US98/SR50/CORTEZ	\$23,029					\$23,029
415152-1	SR-93/I-75 INTERCHNG @SR-820/PINES BLVD F N OF MIRAMAR PKWY T N OF PIN					\$350,000	\$350,000
423251-3	SR 25/OKEECHOBEE RD FROM EAST OF NW 87 AVE TO NW 79 AVE (CONCRETE)		\$94,104		\$989,884		\$1,083,988
427369-1	SR 997/KROME AVENUE FROM SW 296 STREET TO S OF SW 232 STREET		\$116,118				\$116,118
427369-2	SR 997/KROME AVENUE FROM SW 232 STREET TO S OF SW 184TH ST/EUREKA DR.	\$14,930	\$67,635				\$82,565
427369-3	SR 997/KROME AVENUE FROM SW 184 STREET TO SOUTH OF SW 136 STREET	\$85,846					\$85,846
428358-1	SR 826/PALMETTO EXPY - SR 826 EASTBOUND RAMP TO SR 9A/I-95 NORTHBOUND	\$200,000					\$200,000
429251-1	I-75 (SR 93A) FM S OF CSX/BROADWAY AVE TO EB/WB I-4 EXIT RAMP			\$450,000			\$450,000
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434	\$501,000	\$1,325,000	\$200,000			\$2,026,000
433796-1	US 19 (SR 55) FROM S OF TIMBERLANE RD TO S OF LAKE ST	\$25,000					\$25,000
433880-1	GATEWAY EXPRESSWAY FM SR690 @ US19 & SR686 EXT @ CR611 TO W OF I-275	\$420,000					\$420,000
437947-1	FREIGHT VILLAGE ANALYSIS STUDY COUNTYWIDE		\$450,000				\$450,000
437950-1	DISTRICT INTERMODAL LOGISTIC CENTER (ILC) DEVELOPMENT			\$300,000			\$300,000
437999-1	HOMESTEAD FREIGHT IMPROVEMENT PLAN STUDY	\$450,000					\$450,000
438822-1	DISTRICTWIDE FREIGHT MOBILITY OPTIMIZATION STUDY					\$300,000	\$300,000
439758-1	SR-9/I-95 NORTHBOUND OFF-RAMP AT INDIANTOWN ROAD	\$10,000	\$30,000	\$199,000	\$6,412,821		\$6,651,821



Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
440749-1	US 41/SR 45/S 50TH ST @ CSX GRADE SEPARATION SOUTH OF CAUSEWAY BLVD	\$75,000					\$75,000
442065-1	CENTRAL FL COMMUTER RAIL SYS POSITIVE TRAIN CONTROL (PTC) MAINTENANCE	\$2,500,000					\$2,500,000
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434					\$128,037	\$128,037
251688-1	SR 836/I-395 FROM WEST OF I-95 TO MACARTHUR CSWY BRIDGE		\$307,476	\$315,652			\$623,128
410674-2	SR 40 FROM END OF 4 LANES TO EAST OF CR 314		\$20,693				\$20,693
414964-1	SR 9A/I-95 FROM N. OF NW 151 STREET TO BROWARD COUNTY LINE				\$10,000		\$10,000
415152-1	SR-93/I-75 INTERCHNG @SR-820/PINES BLVD F N OF MIRAMAR PKWY T N OF PIN	\$1,509,110					\$1,509,110
433880-1	GATEWAY EXPRESSWAY FM SR690 @ US19 & SR686 EXT @ CR611 TO W OF I-275	\$13,145,030	\$18,097,892	\$811,109			\$32,054,031
435575-1	I-295(SR9A) @ US17 TO SOUTH OF WELLS ROAD	\$182,150					\$182,150
410674-2	SR 40 FROM END OF 4 LANES TO EAST OF CR 314		\$606,093	\$19,476			\$625,569
433651-1	CR 484 FROM SW 20TH AVENUE TO CR 475A	\$210,194	\$645,436				\$855,630
249614-3	SR 997/KROME AVENUE FROM SR 94/KENDALL DR TO 1 MI N OF SW 8TH ST	\$8,997					\$8,997
410674-2	SR 40 FROM END OF 4 LANES TO EAST OF CR 314	\$252,657	\$93,343	\$203,888			\$549,888
433651-1	CR 484 FROM SW 20TH AVENUE TO CR 475A	\$30,873	\$1,000,000	\$106,000			\$1,136,873
209301-3	I-295 (SR 9A) FROM SR 202 JTB BLVD TO SR 9B (MANAGED LANES)	\$94,912					\$94,912
436469-1	QUIET ZONE/SAFETY IMPROVEMENTS FEC CROSSINGS, MIAMI-DADE COUNTYWIDE	\$4,430					\$4,430
439484-1	I-295 INTERCHANGE @ COLLINS ROAD	\$4,961,537					\$4,961,537
427369-2	SR 997/KROME AVENUE FROM SW 232 STREET TO S OF SW 184TH ST/EUREKA DR.	\$493					\$493
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434	\$584		\$1,125,000			\$1,125,584
433414-1	PORT EVERGLADES DREDGING AND WIDENING	\$10,059,321					\$10,059,321
433511-2	NE 203 STREET INTERSECTION IMPROVEMENTS BETWN SR 5/US-1 & W. DIXIE HWY	\$3,975,234					\$3,975,234
440749-1	US 41/SR 45/S 50TH ST @ CSX GRADE SEPARATION SOUTH OF CAUSEWAY BLVD	\$5,102,859	\$4,500,000	\$15,000,000			\$24,602,859
422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$142,105,263					\$142,105,263
442065-1	CENTRAL FL COMMUTER RAIL SYS POSITIVE TRAIN CONTROL (PTC) MAINTENANCE	\$2,500,000	\$2,150,000				\$4,650,000
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434		\$10,928,300				\$10,928,300
214011-1	PLANNING STUDIES - VARIOUS	\$702,000	\$500,000	\$300,000	\$300,000	\$300,000	\$2,102,000
252094-1	METROPOLITAN PLANNING ORGANIZATION (MPO) SUPPORT	\$500,000	\$400,000	\$600,000	\$500,000	\$500,000	\$2,500,000



Item #	Item Description	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Grand Total
259122-1	DISTRICT WIDE SIS STUDIES	\$500,000	\$500,000	\$600,000	\$600,000	\$600,000	\$2,800,000
423781-2	DISTRICTWIDE BDI PROJECTS	\$719,818	\$150,000				\$869,818
432193-1	I-4 MANAGED LANES FROM KIRKMAN TO SR 434		\$11,809,479	\$3,703,001	\$3,778,941	\$3,856,779	\$23,148,200
238275-7	SR429/46(WEKIVA PKW) FROM W OF OLD MCDONALD RD TO E OF WEKIVA RIVER RD	\$311,782					\$311,782



Appendix B: CUFC Projects

Item #	DESCRIPTION	Total Estimated Funding
217910-7	SR 75 (US 231) FROM SR 30A (US 98) 15TH ST TO SR 368 23RD STREET	\$ 13,039,664
419243-2	SR 25 (US 27) FROM HIGHLANDS COUNTY LINE TO CR 630A	\$ 950,000
419243-3	SR 25 (US 27) FROM CR 630A TO PRESIDENTS DRIVE	\$ 620,000
428865-2	US301(SR200) @ I-10 IMPROVEMENTS	\$ 6,327,595
435575-1	I-295(SR9A) @ US17 TO SOUTH OF WELLS ROAD	\$ 25,985,273
439484-1	I-295 INTERCHANGE @ COLLINS ROAD	\$ 4,178,515
440225-1	ADAPTIVE SYSTEM ON US 27 FROM HIGHLANDS AVE TO SEBRING PKWY	\$ 1,055,308
440749-1	US 41/SR 45/S 50TH ST @ CSX GRADE SEPARATION SOUTH OF CAUSEWAY BLVD	\$ 11,450,000

* Estimated project funding as of 3/4/2020. Estimate amounts and years will be refined as the projects are developed further and cost estimates are refined.
Totals in this table may differ from State Transportation Improvement Program (STIP) NHFP amounts as these estimates are more recent. ***Italics represent projects with estimated costs more recent or not yet reflected in the Approved STIP.***
** Fiscal years beyond 2020 include projects tentatively programmed based on potential future NHFP funding at similar levels as FAST Act.



Appendix C: CRFC Projects

Item #	DESCRIPTION	Total Estimated Funds
220635-2	SR 20 FROM OKALOOSA COUNTY LINE TO WASHINGTON COUNTY LINE	\$ 2,100,000
220635-5	SR 20 FROM SR 79 TO BAY COUNTY LINE	\$ 315,000
220635-6	SR 20 FROM WASHINGTON COUNTY LINE TO SR 75 (US 231)	\$ 2,100,000
220635-7	SR 20 FROM KING ROAD TO CR 3280 BLACK CREEK BLVD	\$ 9,350,000

* Estimated project funding as of 3/4/2020. Estimate amounts and years will be refined as the projects are developed further and cost estimates are refined.
Totals in this table may differ from State Transportation Improvement Program (STIP) NHFP amounts as these estimates are more recent. ***Italics represent projects with estimated costs more recent or not yet reflected in the Approved STIP.***
** Fiscal years beyond 2020 include projects tentatively programmed based on potential future NHFP funding at similar levels as FAST Act.



Appendix D: NHFP Funded Projects – Yearly Totals

District	Federal Project #	Item #	Description	National Highway Freight Program (NHFP) Funding by Fiscal Year*						NHFP Fund Total
				2016-2019	2020	2021**	2022**	2023**	2024**	
1	D117-115-B	201032-2	I-75 AT SR 70 INTERCHANGE	\$ 76,636,069	\$ 136,332	\$ -	\$ -	\$ -	\$ -	\$ 76,772,401
1	0757-443-I	201032-6	I-75 AT SR 64	\$ 44,410,230	\$ 551,579	\$ -	\$ -	\$ -	\$ -	\$ 44,961,809
1		419243-2	SR 25 (US 27) FROM HIGHLANDS COUNTY LINE TO CR 630A	\$ -	\$ -	\$ 900,000	\$ -	\$ -	\$ 50,000	\$ 950,000
1		419243-3	SR 25 (US 27) FROM CR 630A TO PRESIDENTS DRIVE	\$ -	\$ -	\$ 600,000	\$ -	\$ -	\$ 20,000	\$ 620,000
1	D118-091-B	440225-1	ADAPTIVE SYSTEM ON US 27 FROM HIGHLANDS AVE TO SEBRING PKWY	\$ -	\$ -	\$ 1,055,308	\$ -	\$ -	\$ -	\$ 1,055,308
2	D218-018-B	423071-4	I-75(SR93)@ SR24(ARCHER RD)	\$ 7,505,372	\$ 123,425	\$ -	\$ -	\$ -	\$ -	\$ 7,628,797
2	D219-014-B	428865-2	US301(SR200) @ I-10 IMPROVEMENTS	\$ 52,886	\$ 912,546	\$ -	\$ 5,362,163	\$ -	\$ -	\$ 6,327,595
2	D218-125-B	433899-2	I-95(SR9) @ SR115(US1)/ML KING/20TH STREET	\$ 2,393,049	\$ -	\$ 3,265	\$ 300,000	\$ 42,264,190	\$ 730,608	\$ 45,691,112
2	D218-025-B	435575-1	I-295(SR9A) @ US17 TO SOUTH OF WELLS ROAD	\$ 86,016	\$ 262,642	\$ 1,295,609	\$ 24,083,606	\$ -	\$ 257,400	\$ 25,985,273
2	D219-016-B	438928-2	SR202/JTB FM EAST OF I-95 TO US1 & US1 FM S OF JTB TO N OF MUSTANG RD	\$ 74,949	\$ 2,334,338	\$ -	\$ -	\$ -	\$ -	\$ 2,409,287
2	D218-056-B	439484-1	I-295 INTERCHANGE @ COLLINS ROAD	\$ 5,049	\$ 3,955,117	\$ 218,349	\$ -	\$ -	\$ -	\$ 4,178,515
2	D217-157-B	440898-1	INSTALLATION OF VARIOUS ITS DEVICES IN ALACHUA COUNTY	\$ 1,881,848	\$ 1,596,735	\$ -	\$ -	\$ -	\$ -	\$ 3,478,583
3	D320-004-B	217910-7	SR 75 (US 231) FROM SR 30A (US 98) 15TH ST TO SR 368 23RD STREET	\$ -	\$ 4,528,664	\$ 8,511,000	\$ -	\$ -	\$ -	\$ 13,039,664
3	D317-026-B	220635-2	SR 20 FROM OKALOOSA COUNTY LINE TO WASHINGTON COUNTY LINE	\$ 1,601,321	\$ 498,679	\$ -	\$ -	\$ -	\$ -	\$ 2,100,000
3		220635-5	SR 20 FROM SR 79 TO BAY COUNTY LINE	\$ -	\$ -	\$ -	\$ 315,000	\$ -	\$ -	\$ 315,000
3		220635-6	SR 20 FROM WASHINGTON COUNTY LINE TO SR 75 (US 231)	\$ -	\$ -	\$ -	\$ 2,100,000	\$ -	\$ -	\$ 2,100,000
3		220635-7	SR 20 FROM KING ROAD TO CR 3280 BLACK CREEK BLVD	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 9,350,000	\$ 9,350,000
3	D319-158-B	222530-5	SR 8 (I-10) FROM W OF SR 10 (US 90) TO LEON CO LINE/OCHLOCKONEE RIVER	\$ 991,337	\$ 50,000	\$ -	\$ -	\$ -	\$ -	\$ 1,041,337
3	D319-159-B	222530-6	SR 8 (I-10) FROM GADSDEN CO LINE TO WEST OF SR 263 CAPITAL CIRCLE	\$ 590,248	\$ 2,086,207	\$ -	\$ -	\$ -	\$ -	\$ 2,676,455
3	D319-156-B	406585-3	SR 8 (I-10) FROM E OF SR 261 CAPITAL CIRCLE TO W OF SR 59 GAMBLE RD	\$ 1,965,993	\$ 134,007	\$ -	\$ -	\$ -	\$ -	\$ 2,100,000
3	D320-012-B	407918-5	SR 8 (I-10) INTERCHANGE WEST OF CRESTVIEW	\$ -	\$ -	\$ 6,057,400	\$ -	\$ -	\$ -	\$ 6,057,400
3	D319-157-B	413062-4	SR 8 (I-10) FROM SR 281 AVALON BLVD TO OKALOOSA COUNTY LINE	\$ 2,313,187	\$ 766,813	\$ -	\$ -	\$ -	\$ -	\$ 3,080,000
3		413062-5	SR 8 (I-10) FROM SANTA ROSA COUNTY TO W OF CR 189 LOG LAKE ROAD	\$ -	\$ 2,090,000	\$ -	\$ -	\$ -	\$ -	\$ 2,090,000



Freight Mobility and Trade Plan

District	Federal Project #	Item #	Description	National Highway Freight Program (NHFP) Funding by Fiscal Year*							NHFP Fund Total
				2016-2019	2020	2021**	2022**	2023**	2024**		
4	D319-155-B	441038-1	SR 8 (I-10) FROM W OF CR 189 LOG LAKE RD TO E OF SR 85 FERDON BLVD	\$ 2,499,095	\$ 125,000	\$ -	\$ -	\$ -	\$ -	\$ 2,624,095	
4	D319-160-B	441038-2	SR 8 (I-10) FROM W OF CR 189 LOG LAKE RD TO 2MI W WILKERSON BLUFF RD	\$ -	\$ 3,190,000	\$ -	\$ -	\$ -	\$ -	\$ 3,190,000	
4	D319-161-B	441038-3	SR 8 (I-10) FROM 2 MILES W OF WILKERSON BLUFF RD TO E OF YELLOW RIVER	\$ -	\$ 5,280,000	\$ -	\$ -	\$ -	\$ -	\$ 5,280,000	
4	D319-162-B	441038-4	SR 8 (I-10) FROM EAST OF YELLOW RIVER TO SR 85 FERDON BLVD	\$ -	\$ 4,189,130	\$ -	\$ -	\$ -	\$ -	\$ 4,189,130	
4	D417-092-B	413048-2	SR-9/I-95 @ OSLO ROAD INTERCHANGE	\$ 568,348	\$ 207,343	\$ 6,696,931	\$ -	\$ -	\$ -	\$ 7,472,622	
4	D418-110-B	415152-1	SR-93/I-75 INTERCHNG @SR-820/PINES BLVD F N OF MIRAMAR PKWY T N OF PIN	\$ 4,232,466	\$ 183,232	\$ -	\$ -	\$ -	\$ -	\$ 4,415,698	
4		439761-1	SR-9/I-95 NORTHBOUND AND SOUTHBOUND OFF-RAMPS AT GATLIN BLVD.	\$ -	\$ -	\$ -	\$ 20,000	\$ 3,825,963	\$ -	\$ 3,845,963	
4	D420-051-B	443589-1	SR-5/US-1 SOUTH BOUND ON RAMP TO WEST BOUND I-595	\$ -	\$ 1,080,000	\$ 25,000	\$ 267,151	\$ -	\$ 800,000	\$ 2,172,151	
4		443590-1	SR-9/I-95 SOUTH BOUND ON-RAMP FROM PGA BLVD - ADD AUXILIARY LANE	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ 5,999,710	\$ 6,249,710	
4		446168-1	SR-68/ORANGE AVE FROM SR-713/KINGS HWY TO E OF SR-9/I-95 SB RAMP	\$ -	\$ -	\$ -	\$ 310,000	\$ -	\$ 487,924	\$ 797,924	
5	D519-072-B	433651-1	CR 484 FROM SW 20TH AVENUE TO CR 475A WICKHAM RD AT I-95 RAMP IMPROVEMENTS AND MAST ARMS	\$ -	\$ -	\$ -	\$ 9,125,700	\$ -	\$ 49,995	\$ 9,175,695	
5	D519-006-B	436125-1	I-95 INTERCHANGE AT PIONEER TRAIL	\$ 713,371	\$ 22,408	\$ -	\$ 3,119,938	\$ -	\$ -	\$ 3,855,717	
5		436292-1	SR 519/FISKE BLVD FROM PROSPERITY PLACE TO I-95 NB RAMPS/BARNES BLVD	\$ -	\$ -	\$ 7,951,587	\$ -	\$ -	\$ -	\$ 7,951,587	
5	D517-070-B	440900-1	I-75 FRAME ON SYSTEM	\$ 2,988,604	\$ 249,776	\$ -	\$ -	\$ -	\$ -	\$ 3,238,380	
5	D517-071-B	440900-2	I-75 FRAME - ARTERIALS	\$ 5,058,396	\$ 1,352,911	\$ -	\$ -	\$ -	\$ -	\$ 6,411,307	
5	D519-089-B	442932-1	SR 44 FROM SOUTHBOUND I-95 TO MEMORIAL MEDICAL PARKWAY	\$ -	\$ 531,713	\$ 888,246	\$ -	\$ -	\$ -	\$ 1,419,959	
6		414964-1	SR 9A/I-95 FROM S OF MIAMI GARDENS DRIVE TO BROWARD COUNTY LINE	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 20,130,000	\$ 20,130,000	
6		414964-7	SR 9A/I-95 FROM US-1/SOUTH DIXIE HIGHWAY TO SOUTH OF NW 62ND STREET	\$ -	\$ -	\$ -	\$ 6,700,000	\$ -	\$ 10,340,000	\$ 17,040,000	
6		414964-8	SR 9A/I-95 FROM SOUTH OF NW 62ND STREET TO NORTH OF NW 143RD STREET	\$ -	\$ -	\$ -	\$ 3,700,000	\$ -	\$ 5,720,000	\$ 9,420,000	
6		436426-1	SR 948/NW 36 ST FROM SR 826/PALMETTO EXPY TO SR 5/ US1	\$ -	\$ -	\$ -	\$ 1,500,000	\$ -	\$ -	\$ 1,500,000	
6	D617-033-B	438842-1	PORTMIAMI TUNNEL FREIGHT MOBILITY EVALUATION STUDY	\$ 849,484	\$ 515	\$ -	\$ -	\$ -	\$ -	\$ 849,999	
6	D619-017-B	440877-1	SITE FEASIBILTY STUDY FOR TRUCK PARKING FACILITIES PHASE II	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ -	\$ 500,000	
6		445984-1	GOLDEN GLADES TRUCK TRAVEL CENTER	\$ -	\$ -	\$ 2,195,000	\$ -	\$ 16,575,675	\$ -	\$ 18,770,675	



District	Federal Project #	Item #	Description	National Highway Freight Program (NHFP) Funding by Fiscal Year*						NHFP Fund Total
				2016-2019	2020	2021**	2022**	2023**	2024**	
7	D718-055-B	422904-2	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	\$ -	\$ 26,297,958	\$ -	\$ -	\$ -	\$ -	\$ 26,297,958
7	D718-043-B	427454-3	I-75 NB ON RAMP FROM NB US 301 TO I-75 NB	\$ 854,478	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 854,478
7	D719-016-B	440749-1	US 41/SR 45/S 50TH ST @ CSX GRADE SEPARATION SOUTH OF CAUSEWAY BLVD	\$ 1,450,000	\$ 5,000,000	\$ 5,000,000	\$ -	\$ -	\$ -	\$ 11,450,000
7	D719-005-B	441083-2	I-75/SR 93A SB REST AREA FROM BEG OF SB RAMP TO END OF SB RAMP	\$ 1,201,531	\$ 14,218,948	\$ -	\$ -	\$ -	\$ -	\$ 15,420,479
7		443316-1	I-4/SR 400 FROM PARK ROAD TO EAST OF PARK ROAD	\$ -	\$ -	\$ -	\$ 346,931	\$ -	\$ 918,452	\$ 1,265,383
7		443317-1	I-4/SR 400 FROM WEST OF THONOTOSASSA RD TO EAST OF THONOTOSASSA RD	\$ -	\$ -	\$ -	\$ 443,959	\$ -	\$ 2,067,277	\$ 2,511,236
7		443318-1	I-4/SR 400 FROM WEST OF BRANCH FORBES RD TO EAST OF BRANCH FORBES RD	\$ -	\$ -	\$ -	\$ 724,631	\$ -	\$ 2,031,334	\$ 2,755,965
7		443319-1	I-4 FROM EAST OF EB WEIGH STATION TO EAST OF MCINTOSH ROAD	\$ -	\$ -	\$ -	\$ 796,853	\$ -	\$ 3,109,788	\$ 3,906,641
7		443320-1	I-4/SR 400 FROM EAST OF MANGO RD TO W OF WB WEIGH STATION ON-RAMP	\$ -	\$ -	\$ 414,726	\$ -	\$ 946,777	\$ -	\$ 1,361,503
7		443321-1	I-4/SR 400 FROM WEST OF MANGO RD TO MANGO RD	\$ -	\$ -	\$ -	\$ 544,807	\$ -	\$ 1,235,823	\$ 1,780,630
7		446131-1	I-4 WB AUXILIARY LANE FROM E OF 50TH ST T W OF MLK JR BLVD	\$ -	\$ -	\$ -	\$ -	\$ 461,000	\$ -	\$ 461,000
99		439240-1	NATIONAL FREIGHT PROGRAM - RESERVE	\$ -	\$ 6,721,642	\$ 1,846,760	\$ 3,262,763	\$ 1,663,776	\$ 2,683,909	\$ 16,178,850
Total				\$ 160,923,327	\$ 89,177,660	\$ 43,659,181	\$ 66,753,502	\$ 65,987,381	\$ 65,982,220	\$ 492,483,271

* Estimated project funding as of 3/4/2020. Estimate amounts and years will be refined as the projects are developed further and cost estimates are refined.

Totals in this table may differ from State Transportation Improvement Program (STIP) NHFP amounts as these estimates are more recent. Italics represent projects with estimated costs more recent or not yet reflected in the Approved STIP.

** Fiscal years beyond 2020 include projects tentatively programmed based on potential future NHFP funding at similar levels as FAST Act.



Appendix E: NHFP Funding Source Totals

District	Federal Project #	Item	NHFP Funds		Federal Funding Sources								State/Local Funding Sources												Project Total				
			ACFP	NFP	NHPP	ACNP	SA	REPE	SL	SN	SIWR	Other**	DIH	DI	DDR	DS	DSB	GMR	LF	STED	GFSU	SU	BNBR	OTHER ***					
1	D117-115-B	201032-2	\$23,369,016	\$53,955,464	\$11,915,427								\$ 186,497	\$10,438,128		\$ 2,174,132									\$ 102,038,664				
1	0757-443-I	201032-6	\$ 3,797,461	\$42,121,456	\$ 1,263,906	\$ 618,847	\$ 2,871,931						\$ 2,483	\$ 118	\$ 4,139,178	\$ 490,529									\$ 149,755	\$ 55,455,664			
1		419243-2	\$ 4,066,661		\$62,713,760					\$42,793,299			\$ 49,577	\$ 6,713,441	\$ 32,929	\$ 1,900,000									\$ 118,269,667				
1		419243-3	\$ 6,765,071		\$23,953,967								\$ 45,899	\$22,342,633	\$ 21,958	\$15,176,255	\$ 100,000	\$11,248,684					\$ 79,654,467						
1	D118-091-B	440225-1	\$ 1,078,474		\$ 2,610,982																				\$ 3,689,456				
2	D218-018-B	423071-4	\$ 7,441,352	\$ 189,190									\$ 60,545	\$ 1,316,423	\$ 184,878	\$ 617,228									\$ 9,809,616				
2	D219-014-B	428865-2	\$ 14,951,177	\$ 4,001																					\$ 14,955,178				
2	D218-125-B	433899-2	\$ 43,982,576	\$ 165,298						\$ 690,709								\$ 479									\$ 44,839,062		
2	D218-025-B	435575-1	\$ 21,342,406	\$ 29,878				\$ 182,150	\$ 1,205,967					\$ 169,762	\$ 1,349,599	\$ 30	\$ 197,747						\$ 2,116	\$ 24,479,655					
2	D219-016-B	438928-2	\$ 2,829,949																						\$ 2,829,949				
2	D218-056-B	439484-1	\$ 5,230,869	\$ 1,379						\$ 260,530				\$ 152,062		\$ 167,978	\$ 582,098	\$ 386,023	\$ 575,603	\$ 5,737,371				\$ 13,093,913					
2	D217-157-B	440898-1	\$ 3,440,719	\$ 494,949												\$ 71,028	\$ 35,650						\$ 168,825	\$ 4,211,171					
3	D320-004-B	217910-7	\$ 13,039,664		\$68,992,300								\$ 2,172,884	\$56,311,449										\$81,090,062	\$90,600,070	\$312,206,429			
3	D317-026-B	220635-2	\$ 2,100,000										\$ 2,760,346			\$ 48,864													\$ 4,909,210
3		220635-5	\$ 315,000																						\$ 315,000				
3		220635-6	\$ 2,100,000																						\$ 2,100,000				
3		220635-7	\$ 16,589,705																						\$ 16,589,705				
3	D319-158-B	222530-5	\$ 1,050,000																						\$ 1,050,000				
3	D319-159-B	222530-6	\$ 630,000																						\$ 630,000				
3	D319-156-B	406585-3	\$ 2,100,000																						\$ 2,100,000				
3	D320-012-B	407918-5	\$ 6,057,400		\$16,265,656								\$84,983,933								\$80,513,933				\$ 187,820,922				
3	D319-157-B	413062-4	\$ 3,080,000																						\$ 3,080,000				
3		413062-5	\$ 2,090,000													\$ 1,000						\$ 10,072				\$ 2,101,072			
3	D319-155-B	441038-1	\$ 17,374,130																						\$ 17,374,130				
3	D319-160-B	441038-2	\$ 3,190,000																						\$ 3,190,000				
3	D319-161-B	441038-3	\$ 5,280,000																						\$ 5,280,000				
3	D319-162-B	441038-4	\$ 4,189,130																						\$ 4,189,130				
4	D417-092-B	413048-2	\$ 11,061,482	\$ 264,010	\$ 2,136,556	\$46,548,718	\$ 176,591						\$ 132,397	\$ 770,356										\$ 2,288,936	\$ 63,379,046				
4	D418-110-B	415152-1	\$ 4,256,487	\$ 158,278				\$67,348,121	\$ 1,509,110										\$ 14,858	\$ 350,000							\$ 73,636,854		
4		439761-1	\$ 3,729,879										\$ 12,896	\$ 968,256	\$ 20,000									\$ 4,731,031					
4	D420-051-B	443589-1	\$ 6,992,287																						\$ 6,992,287				
4		443590-1	\$ 6,249,710										\$ 159,482						\$ 7,391,993							\$ 13,801,185			
4		446168-1	\$ 797,924																						\$ 797,924				
5	D519-072-B	433651-1	\$ 8,968,876							\$ 1,171,614	\$ 5,720,320																\$ 15,860,810		
5	D519-006-B	436125-1	\$ 2,826,037	\$ 8,669														\$ 122,300	\$ 5,753							\$ 2,962,759			
5		436292-1	\$ 2,130,000							\$ 20,000					\$ 89,461	\$ 1,520,000	\$ 1,491,383						\$ 980,000	\$ 6,230,844					
5	D519-070-B	439123-1	\$ 6,418,388		\$ 1,467,736												\$ 80,027									\$ 7,966,151			
5	D517-070-B	440900-1	\$ 2,269,778	\$ 968,604						\$ 10,058									\$ 75,000	\$ 373,969						\$ 717,232	\$ 4,414,641		
5	D517-071-B	440900-2	\$ 6,092,350	\$ 318,959						\$ 10,000									\$ 49,000					\$ 6,470,309					
5	D519-089-B	442932-1	\$ 1,492,296																						\$ 1,492,296				
6		414964-1	\$ 20,130,000		\$13,034,606					\$ 10,000																\$ 33,174,606			
6		414964-7	\$ 17,040,000																						\$ 17,040,000				



District	Federal Project #	Item	NHFP Funds		Federal Funding Sources								State/Local Funding Sources												Project Total
			ACFP	NFP	NHPP	ACNP	SA	REPE	SL	SN	SIWR	Other**	DIH	DI	DDR	DS	DSB	GMR	LF	STED	GFSU	SU	BNBR	OTHER ***	
6		414964-8	\$ 9,420,000																						\$ 9,420,000
6		436426-1	\$ 1,500,000												\$ 800,000								\$ 5,000		\$ 2,305,000
6	D617-033-B	438842-1	\$ 850,000				\$ 665,277	\$ 1,602,360																	\$ 3,117,637
6	D619-017-B	440877-1	\$ 500,000																						\$ 500,000
6		445984-1	\$ 18,770,675																						\$ 18,770,675
7	D718-055-B	422904-2	\$ 26,257,820			\$101,935,594						\$245,890,226	\$ 500,000	\$ 1,388	\$49,296,938	\$ 607,300	\$176,001,901			\$ 6,558,502		\$278,064,277	\$ 1,288,261		\$ 886,402,207
7	D718-043-B	427454-3	\$ 856,007	\$ 44,667									\$ 93,094	\$ 5,550,783		\$ 116,074							\$24,552,707		\$ 31,213,332
7	D719-016-B	440749-1	\$ 11,450,000			\$72,780,989							\$ 56,676		\$ 154,601	\$ 146,145	\$32,500,000						\$26,102,859		\$ 143,191,270
7	D719-005-B	441083-2	\$ 15,944,374	\$ 43,194												\$ 8,320									\$ 15,995,888
7		443316-1	\$ 1,025,504																						\$ 1,025,504
7		443317-1	\$ 2,102,988																						\$ 2,102,988
7		443318-1	\$ 2,042,992																						\$ 2,042,992
7		443319-1	\$ 3,220,578																						\$ 3,220,578
7		443320-1	\$ 1,240,083																						\$ 1,240,083
7		443321-1	\$ 1,292,154																						\$ 1,292,154
7		446131-1	\$ 461,000																						\$ 461,000
99		439240-1	\$ 56,642,167																						\$ 56,642,167
		Total	\$471,512,596	\$98,767,996	\$ 3,400,462	\$490,186,703	\$ 5,715,647	\$ 3,499,036	\$ 1,171,614	\$ 8,480,666	\$42,793,299	\$330,876,642	\$ 3,931,214	\$179,207,083	\$63,716,122	\$14,702,759	\$176,001,901	\$49,965,191	\$ 2,386,023	\$92,338,746	\$ 7,134,105	\$ 6,717,371	\$368,664,347	\$52,986,755	\$2,474,156,278

* Approved State Transportation Improvement Program (STIP) funding as of 7/1/2019. Estimate amounts, years, and all hard and soft match amounts will be refined as the projects are developed further and cost estimates are refined.

Totals in this table may differ from National Highway Freight Program amounts by year as the Approved STIP is not updated as often, and the line item for National Freight Program - Reserve includes preliminary programming for FY2025 to allow FDOT to begin the process of selecting projects in the new 5th year. Italics represent projects with estimated costs not yet reflected in the Approved STIP.

** Federal Other includes the following funding codes: IMD, ACBR, ACSS, TAL, TIMP, SIB1, SIBF, ACBR

***State Other includes the following funding codes: EB, DC, DITS, HPP, PKYI, D, BRP, CM, PKED, DIS

Fund Source	Fund Code	Fund Name
Federal	ACFP	AC FREIGHT PROG (NFP)
Federal	NFP	NATIONAL FREIGHT PROGRAM
Federal	NHPP	IM, BRDG REPL, NATNL HWY-MAP21
Federal	ACNP	ADVANCE CONSTRUCTION NHPP
Federal	SA	STP, ANY AREA
Federal	IMD	INTERSTATE MAINTENANCE DISCRETION
Federal	REPE	Repurposed Federal Earmarks
Federal	ACBR	ADVANCE CONSTRUCTION (BRT)
Federal	SL	STP, AREAS <= 200K
Federal	SIBF	FEDERAL FUNDED SIB
Federal	ACSS	ADVANCE CONSTRUCTION (SS,HSP)
Federal	TAL	Transportation ALTS

Fund Source	Fund Code	Fund Name
State/local	DIH	STATE IN-HOUSE PRODUCT SUPPORT
State/local	DDR	DISTRICT DEDICATED REVENUE
State/local	DS	STATE PRIMARY HIGHWAYS & PTO
State/local	DI	ST. - S/W INTER/INTRASTATE HWY
State/local	EB	EQUITY BONUS
State/local	DSB2	Turnpike
State/local	LF	Local Funds
State/local	STED	2012 SB1998-STRATEGIC ECON COR
State/local	DC	STATE PRIMARY PE CONSULTANTS
State/local	GFSU	GF STPBG >200 (URBAN)
State/local	BRP	State Bridge
State/local	CM	CONGESTION MITIGATION - AQ
State/local	HPP	High Priority Projects
State/local	D	UNRESTRICTED STATE PRIMARY
State/local	BNBR	AMENDMENT 4 BONDS (BRIDGES)
State/local	PKED	2012 SB1998-TURNPIKE FEEDER RD
State/local	PKYI	Turnpike Improvement
State/local	SIB1	State Infrastructure Bank



Appendix F: NHFP Project Descriptions

District	Item Segment	Improvement	Description & Map*	Detail Description	Location	Project Type**
1	201032-2	INTERCHANGE - ADD LANES	I-75 AT SR 70 INTERCHANGE	This project consists of reconstructing the existing I-75 at SR 70 interchange to provide for the Ultimate I-75 10-lane typical section (two express lanes and three general use lanes in each direction). The project includes widening I-75 for an auxiliary lane in each direction from the SR 70 interchange to the University Parkway interchange. Project is approximately one mile.	Primary Highway Freight Network	2, 7
1	201032-6	INTERCHANGE IMPROVEMENT	I-75 AT SR 64	This project consists of reconstructing the existing I-75 at the SR 64 partial clover-leaf interchange into a diamond configuration that provides for the ultimate ten-lane I-75 typical section (two express lanes and three general use lanes in each direction).	Primary Highway Freight Network	2, 7
1	419243-2	ADD LANES & RECONSTRUCT	US 27 (SR 25) FROM HIGHLANDS COUNTY LINE TO CR 630A	This project consists of reconstructing the existing I-75 at the SR 64 partial clover-leaf interchange into a diamond configuration that provides for the ultimate ten-lane I-75 typical section (two express lanes and three general use lanes in each direction).	Critical Urban and Rural Freight Corridors	2, 19
1	419243-3	ADD LANES & RECONSTRUCT	US 27 FROM CR 630A TO PRESIDENTS DRIVE	This project includes the widening of US 27 from CR 630A to Presidents Drive from 4 to 6 lanes to allow for increased capacity. US 27 is a major north-south freight route through peninsular Florida.	Critical Urban and Rural Freight Corridors	2, 19
1	440225-1	ATMS - ARTERIAL TRAFFIC MGMT	ADAPTIVE SYSTEM ON US 27 FROM HIGHLANDS AVE TO SEBRING PKWY	Construction phase for Adaptive Signals System on this heavily congested segment of US 27. This segment has the highest number of signals through this congested urban area causing many problems for smooth flow of truck traffic on top of local resident concerns. This will be the control section of the three main signal zones in the Sebring-Avon Park urban area on US 27.	Critical Urban and Rural Freight Corridors	2, 3, 12
2	423071-4	INTERCHANGE - ADD LANES	I-75(SR93)@ SR24(ARCHER RD)	Interchange Add Lanes-Operational Improvement. This segment of I-75 experiences on average 15,336 Average Annual Daily Traffic (AADT), 20% of which is truck traffic. This interchange serves as key connection to regional retail shopping destinations, the largest trauma center and medical complex (UF, VA) in the region, warehousing & distribution and manufacturing centers in eastern Gainesville.	Primary Highway Freight Network	2, 7
2	428865-2	INTERCHANGE RAMP (NEW)	US301(SR200) @ I-10 IMPROVEMENTS	Series of median access management controls to improve safety and operations to US-301 immediately south of the I-10/US-301 interchange. The closely spaced full median openings with unrestricted left turns cause chaotic operations, safety issues and delay. The project proposes to close one median opening and convert the remaining three to directional openings.	Critical Urban and Rural Freight Corridors	2, 7
2	433899-2	INTERCHANGE - ADD LANES	I-95(SR9) @ SR115(US1)/ML KING/20TH STREET	Lower SR 115 under I-95 to increase substandard vertical clearance from 14.7' to 16'-6". Improve ingress/egress to existing loop ramps. Improves drainage. MLK Expressway serves as SIS-Connector between JAXPORT's Talleyrand Marine Terminal (TMT) and I-95.	Primary Highway Freight Network	2, 7
2	435575-1	INTERCHANGE - ADD LANES	I-295(SR9A) @ US17 TO SOUTH OF WELLS ROAD	I-295 off-ramp widening and intersection improvements at US 17 Eldridge Ave., Old Orange Park Road and Wells Road to reduce excessive delays and heavy queuing impacting the I-295 mainline. This segment of I-295 experiences 14,410 AADT for trucks. This interchange also provides a direct connection to Naval Air Station Jacksonville, which is a multi-mission base hosting more than 100 tenant commands.	Primary Highway Freight Network	2, 7
2	438928-2	INTERSECTION IMPROVEMENT	SR202/JTB FM EAST OF I-95 TO US1 & US1 FM S OF JTB TO N OF MUSTANG RD	Florida East Coast Railway (FEC) Bowden Yard in Jacksonville, FL currently has access from US-1 0.1 miles south of the US-1/ SR-202 intersection (0.5 miles from I-95) and 0.6 miles south of the US-1/SR-109 intersection (1 mile from I-95). Approximately 85% of the traffic is to and from the north. Access at both locations is difficult due to the length of travel on congested arterials and no signalized access for trucks to turn left into or out onto US-1. The proposed connector will provide a short (0.4 miles) congestion free connection to I-95 from the rail yard with all conflict points either being free flow or signal controlled for rail yard traffic.	Primary Highway Freight Network	2, 7
2	439484-1	INTERCHANGE - ADD LANES	I-295 INTERCHANGE @ COLLINS ROAD	Ramp widening and turning radius improvements. The interchange experiences severe A.M. and P.M. congestion. Project significantly improves the geometry for trucks turning eastbound to NB (trucks occasionally misjudge the turn and have to stop and back up).	Primary Highway Freight Network	2, 7



District	Item Segment	Improvement	Description & Map*	Detail Description	Location	Project Type**
2	440898-1	TRAFFIC SIGNAL UPDATE	INSTALLATION OF VARIOUS ITS DEVICES IN ALACHUA COUNTY	I-75 Florida's Regional Advanced Mobility Elements (FRAME) to efficiently manage traffic during incidents and special/emergency events improve safety and connectivity for all types of road users. I-75 FRAME deploys a Multimodal Integrated Corridor Management (MMICM) plan on I-75 and US 301/441 using connected vehicle (CV) technologies, advanced signal control, and multi-jurisdictional coordination. This project covers 74 miles of I-75 and 82 miles of US 301/US 441; both extend from Wildwood on the south to Alachua on the north along with several east west corridors connecting I-75 and US 301.	Supports Primary Highway Freight System	2, 3, 12
3	217910-7	RIGHT OF WAY - FUTURE CAPACITY	SR 75 (US 231) FROM SR 30A (US 98) 15TH ST TO SOUTH OF PIPE LINE RD	This project is Phase II of the multi-laning of US 231, with intersection improvements. The project includes widening US 231 from 4 to 6 lanes in Bay County.	Critical Urban Freight Corridor	2, 19
3	220635-2	ADD LANES & RECONSTRUCT	SR 20 FROM OKALOOSA COUNTY LINE TO WASHINGTON COUNTY LINE	This project includes multi-laning and intersection improvements along key freight corridor SR 20 in Walton County.	Critical Rural Freight Corridor	1, 19
3	220635-5	PD&E/EMO STUDY	SR 20 FROM SR 79 TO BAY COUNTY LINE	This project includes multi-laning and intersection improvements along key freight corridor SR 20 in Washington County.	Critical Rural Freight Corridor	1, 19
3	220635-6	PD&E/EMO STUDY	SR 20 FROM WASHINGTON COUNTY LINE TO SR 75 (US 231)	This project includes multi-laning and intersection improvements along key freight corridor SR 20 in Bay County.	Critical Rural Freight Corridor	1, 19
3	220635-7	PD&E/EMO STUDY	SR 20 FROM KING ROAD TO WASHINGTON COUNTY LINE	This project includes multi-laning and intersection improvements along key freight corridor SR 20 in Bay County.	Critical Rural Freight Corridor	1, 19
3	222530-5	PD&E/EMO STUDY	SR 8 (I-10) FROM W OF SR 10 (US 90) TO LEON CO LINE/OCHLOCKONEE RIVER	This project includes widening, interchange improvements in Midway at US 90, and widening bridges over the Ochlockonee.	Primary Highway Freight Network	1, 19
3	222530-6	PD&E/EMO STUDY	SR 8 (I-10) FROM GADSDEN CO LINE TO WEST OF SR 263 CAPITAL CIRCLE	This project includes widening, interchange improvements at the rest area, and widening bridges over the Ochlockonee.	Primary Highway Freight Network	1, 19
3	406585-3	PD&E/EMO STUDY	SR 8 (I-10) FROM E OF SR 261 CAPITAL CIRCLE TO JEFFERSON COUNTY LINE	PD&E FOR MULTILANE - 6 LANE PROJECT GOES INTO JEFFERSON CO. <.5 MILES DESIGN & CONST S/O TO -4, -5, & -6	Primary Highway Freight Network	1, 19
3	407918-5	INTERCHANGE (NEW)	SR 8 (I-10) INTERCHANGE WEST OF CRESTVIEW	This project includes PD&E for a new interchange west of Crestview to reduce congestion headed south to access military facilities.	Primary Highway Freight Network	2, 7
3	413062-4	PD&E/EMO STUDY	SR 8 (I-10) FROM SR 281 AVALON BLVD TO OKALOOSA COUNTY LINE	PD&E MULTILANE TO 4 TO 6L, STUDY INCLUDES IMR; MILTON PD&E STUDY WITH 413062-5; DESIGN UNDER - 6 THRU -9 R/W NEEDS TBD IN PD&E & PGM'D ON VARIOUS DESIGN SEGMENTS CONST EST BASED FROM COST PER MILE MODELS ONLY	Primary Highway Freight Network	1, 19
4	441038-1	ADD LANES & RECONSTRUCT	SR 8 (I-10) FROM W OF CR 189 LOG LAKE RD TO E OF SR 85 FERDON BLVD	PD&E MULTILANE TO 4 TO 6L, STUDY INCLUDES IMR DESIGN & CONST TO S/O TO -2, -3, -4, & 413062-5 IN 07/2019 NO R/W REQUIRED FROM CR 189 TO SR 85 11/2/17	Primary Highway Freight Network	1, 19
4	441038-2	ADD LANES & RECONSTRUCT	SR 8 (I-10) FROM W OF CR 189 LOG LAKE RD TO 2MI W WILKERSON BLUFF RD	MULTILANE FROM 4L TO 6L NO R/W REQUIRED 11/2/17; PD&E UNDER 441038-1 CAP 3 W/ MTG DESIGN TO BE GROUPED W/ 413062-5 BRIDGE NO.'S 570046 & 570066 TO BE REPLACED	Primary Highway Freight Network	1, 19
4	441038-3	ADD LANES & RECONSTRUCT	SR 8 (I-10) FROM 2 MILES W OF WILKERSON BLUFF RD TO E OF YELLOW RIVER	MULTILANE FROM 4L TO 6L NO R/W REQUIRED 11/2/17; PD&E UNDER 441038-1 CAP 3 W/ MTG BR NO.'S TO BE REPLACED - 570049, 570050, 570951, & 570067	Primary Highway Freight Network	1, 19
4	441038-4	ADD LANES & RECONSTRUCT	SR 8 (I-10) FROM EAST OF YELLOW RIVER TO SR 85 FERDON BLVD	MULTILANE FROM 4L TO 6L; PD&E UNDER 441038-1 REPLACE BRIDGES OVER SR 85 NO R/W REQUIRED 11/2/17; IF 220171-6 IS FUNDED FOR CONST FIRST, I-10 BRIDGES WILL BE REPLACED UNDER 220171-6 (BR NO. 570008 & 570052) CAP 3 W/ MTG	Primary Highway Freight Network	1, 19



District	Item Segment	Improvement	Description & Map*	Detail Description	Location	Project Type**
4	413048-2	INTERCHANGE (NEW)	SR-9/I-95 @ OSLO ROAD INTERCHANGE	The I-95/Oslo Road (new) interchange is needed in order to provide improved regional connectivity for people and freight. The proposed interchange would improve regional connectivity and travel time for area travelers, provide an additional evacuation route for area residents, improve incident response time along I-95 in this area and complement and facilitate the County's planned vision for the area.	Primary Highway Freight Network	2, 7
4	415152-1	INTERCHANGE - ADD LANES	SR-93/I-75 INTERCHNG @SR-820/PINES BLVD F N OF MIRAMAR PKWY	This project involves reconstructing the "Partial Clover Leaf Type B" interchange at I-75 to an urbanized version at Pines Blvd and the replacement of the Pines Blvd Overpass. This project will provide a more efficient last mile connection for people and freight accessing the western portions of Broward County including the Miramar freight district as well as the northern portion of Miami-Dade County that includes a heavy freight industry to the south of this project.	Primary Highway Freight Network	2, 7
4	439761-1	INTERCHANGE - ADD LANES	SR-9/I-95 NORTHBOUND AND SOUTHBOUND OFF-RAMPS AT GATLIN BLVD.	This project at Gatling Blvd and I-95 involves short-term improvements to both the NB and SB off-ramps which include: adding triple left and right turn lanes on the SB off-ramp with minor widening to the receiving lanes on Gatling Blvd and adding a third left turn lane and dual right turn lanes on the NB off-ramp.	Primary Highway Freight Network	2, 7
4	443589-1	WIDEN/RESURFACE EXIST LANES	SR-5/US-1 SOUTH BOUND ON RAMP TO WEST BOUND I-595	Widening SB US-1 to WB I-595 on-ramp. Bridge widening over SE 6th Ave, FEC rail and SW 34th St/Perimeter Rd. Install overhead cantilever and truss signs. Milling/Resurfacing. Install new signing and pavement marking.	Primary Highway Freight Network	2, 7
4	446168-1	INTERCHANGE - ADD LANES	SR-68/ORANGE AVE FROM SR-713/KINGS HWY TO E OF SR-9/I-95 SB RAMP	ADD EB RIGHT TURN LANE FROM ORANGE AVE/SR-68 TO I-95 SB ON-RAMP & ADD WB RIGHT-TURN LANE FR ORANGE AVE/SR-68 TO NB KINGS HWY/SR-713. NB & WB PROTECTED RIGHT TURN PHASES TO BE ADDED AT INTERSECTION OF ORANGE AVE/SR-68 AND KINGS HWY/ SR-713. EB TO SB ON-RAMP ENTRANCE TO BE RELOCATED TO THE EXISTING SIGNALIZED INTERSECTION FOR THE WB TO SB (SEE WP45)	Primary Highway Freight Network	2, 7
5	433651-1	INTERCHANGE IMPROVEMENT	CR 484 FROM SW 20TH AVENUE TO CR 475A	Improvements include additional turn lanes and turn lane extensions at both the CR 484/I-75 interchange and the CR 484/CR 475A intersection, reconstruction of the westbound through lanes, and modification of the existing I-75 bridge to accommodate the widening. The purpose of the project is to improve safety and traffic flow. The project will also improve bicycle lane and pedestrian sidewalk connectivity through the project limits. Modifications to the existing median will be required for the roadway improvements.	Primary Highway Freight Network	2, 7
5	436125-1	ADD LEFT TURN LANE(S)	WICKHAM RD AT I-95 RAMP IMPROVEMENTS AND MAST ARMS	Add dual receiving lanes to the Wickham Road ramps to I-95. Wickham Road is proposed to be a 6 lane divided urban arterial with single left turn lanes servicing the NB and SB I-95 on-ramps. (Ramp No. 060 SB and 063 NB). Sufficient pavement width is being provided to permit restriping for dual lefts.	Primary Highway Freight Network	2, 7
5	436292-1	ADD LEFT TURN LANE(S)	SR 519/FISKE BLVD @ I-95 SB RAMP AND NB RAMPS/BARNES RD	This ramp supports rapidly-growing development in the area, such as Viera and the Florida Hospital Health Park, as well as east-west coastal evacuation. Pavement conditions were identified in need of repair to support freight and passenger mobility. The project improvements will rehabilitate the asphalt pavement to extend the longevity of the roadway, improve operational safety, and enhance freight mobility. A new adjacent interchange is also projected to induce additional development in the future and cause further operational stress to the interchange.	Primary Highway Freight Network	2, 7
5	439123-1	ADD LEFT TURN LANE(S)	SR 519/FISKE BLVD @ I-95 SB RAMP AND NB RAMPS/BARNES RD	This ramp supports rapidly-growing development in the area, such as Viera and the Florida Hospital Health Park, as well as east-west coastal evacuation. Pavement conditions were identified in need of repair to support freight and passenger mobility. The project improvements will rehabilitate the asphalt pavement to extend the longevity of the roadway, improve operational safety, and enhance freight mobility. A new adjacent interchange is also projected to induce additional development in the future and cause further operational stress to the interchange.	Primary Highway Freight Network	2, 7
5	440900-1	ITS COMMUNICATION SYSTEM	I-75 FRAME ON SYSTEM	I-75 Florida's Regional Advanced Mobility Elements (FRAME) to efficiently manage traffic during incidents and special/emergency events improve safety and connectivity for all types of road users. I-75 FRAME deploys a Multimodal Integrated Corridor Management (MMICM) plan on I-75 and US 301/441 using connected vehicle (CV) technologies, advanced signal control, and multi-jurisdictional coordination. This project covers 74 miles of I-75 and 82 miles of US 301/US 441; both extend from Wildwood on the south to Alachua on the north along with several east west corridors connecting I-75 and US 301.	Supports Primary Highway Freight System	2, 3, 12



District	Item Segment	Improvement	Description & Map*	Detail Description	Location	Project Type**
5	440900-2	ITS COMMUNICATION SYSTEM	I-75 FRAME - ARTERIALS	I-75 Florida's Regional Advanced Mobility Elements (FRAME) to efficiently manage traffic during incidents and special/emergency events improve safety and connectivity for all types of road users. I-75 FRAME deploys a Multimodal Integrated Corridor Management (MMICM) plan on I-75 and US 301/441 using connected vehicle (CV) technologies, advanced signal control, and multi-jurisdictional coordination. This project covers 74 miles of I-75 and 82 miles of US 301/US 441; both extend from Wildwood on the south to Alachua on the north along with several east wet corridors connecting I-75 and US 301.	Supports Primary Highway Freight System	2, 3, 12
5	442932-1	INTERCHANGE IMPROVEMENT	SR 44 FROM SOUTHBOUND I-95 TO MEMORIAL MEDICAL PARKWAY	The project includes interchange improvements at I-95 and SR 44 to improve freight safety and operations within the I-95 corridor, which include widening of SR 44 EB, additional left turn lane for I-95 NB off ramp, and deceleration lane for I-95 NB on ramp	Primary Highway Freight Network	2, 7
6	414964-1	PD&E/EMO STUDY	SR 9A/I-95 FROM N. OF NW 151 STREET TO BROWARD COUNTY LINE	This project is intended to develop and evaluate capacity improvements for the Interstate 95 (SR 9A) corridor within District 6 to meet existing and future traffic needs. The study will evaluate existing conditions and identify improvement alternatives for the evaluation of all interchanges, interchange influence areas, and ramp junctions, as well as post-implementation operational conditions of the 95 Express corridor improvements.	Primary Highway Freight Network	1, 19
6	414964-7	PD&E/EMO STUDY	SR 9A/I-95 FROM US-1/SOUTH DIXIE HIGHWAY TO SOUTH OF NW 62ND STREET	This project is intended to develop and evaluate capacity improvements for the Interstate 95 (SR 9A) corridor within District 6 to meet existing and future traffic needs. The study will evaluate existing conditions and identify improvement alternatives for the evaluation of all interchanges, interchange influence areas, and ramp junctions, as well as post-implementation operational conditions of the 95 Express corridor improvements.	Primary Highway Freight Network	1, 19
6	414964-8	PD&E/EMO STUDY	SR 9A/I-95 FROM SOUTH OF NW 62ND STREET TO NORTH OF NW 151 STREET	This project is intended to develop and evaluate capacity improvements for the Interstate 95 (SR 9A) corridor within District 6 to meet existing and future traffic needs. The study will evaluate existing conditions and identify improvement alternatives for the evaluation of all interchanges, interchange influence areas, and ramp junctions, as well as post-implementation operational conditions of the 95 Express corridor improvements.	Primary Highway Freight Network	1, 19
6	436426-1	8705 - Modal Systems Planning	The Miami-Dade Freight Plan Study	The Miami-Dade Freight Plan Update 2014 documents a multitude of geometric and operational issues throughout NW 36th Street. This roadway, which serves as an extension of SR 112/Airport Expressway and abuts the northern border of the Miami International Airport, is an important arterial for the mobility a goods in Miami-Dade County. This planning study will assess existing/future conditions and develop/evaluate improvements to address identified mobility operations and multimodal needs along the corridor. This study also evaluates the entire corridor from SR 826/Palmetto Expressway to US-1. Considerations of a superarterial express roadway will also be evaluated preceding a more comprehensive PD&E Study to select the most appropriate improvement to be designed and constructed.	National Highway Freight Network	1, 19
6	438842-1	PTO STUDIES	PORTMIAMI TUNNEL FREIGHT MOBILITY EVALUATION STUDY	The PortMiami Tunnel has greatly improved access to this critical regional freight hub upon its opening in August 2014. The purpose of this project is to define and implement a program to monitor and assess the transportation performance of the tunnel in view of preserving the investment to provide better access and increased capacity for freight and cruise traffic to PortMiami, and to shift traffic from the Port Boulevard Bridge and downtown Miami streets directly to the I-395 corridor.	Primary Highway Freight Network	2, 3, 12
6	440877-1	PTO STUDIES	SITE FEASIBILITY STUDY FOR TRUCK PARKING FACILITIES PHASE II	This project is a planning study for the development and evaluation of a truck parking facility and amenities on parcels of land under the control of the Department. It aims to serve as Phase II of the Assessment for Potential Truck Parking Locations within Miami-Dade County planning study and will recommended additional locations for potential development since the truck parking shortage in the County will not be resolved by previously identified potential developments.	Supports Primary Highway Freight System	1, 2, 11
6	445984-1	MODAL SYSTEMS PLANNING	GOLDEN GLADES TRUCK TRAVEL CENTER	A 10-acre lot owned by the Department has been recommended to be developed as a truck travel center by the 2006 Golden Glades Multimodal Transportation Facility PD&E Study and the follow-up 2017 Reevaluation Study. This project is intended to design and construct a motor carrier facility with essential amenities for the safe and efficient transportation of goods.	Supports Primary Highway Freight System	1, 2, 11



District	Item Segment	Improvement	Description & Map*	Detail Description	Location	Project Type**
7	422904-2	BRIDGE-REPLACE AND ADD LANES	I-275 (HOWARD FRKL) FROM N OF SR687(4TH ST N) TO N OF HOWARD FRANKLAND	Tampa Bay Next is a program to modernize Tampa Bay's transportation infrastructure and a process for engaging the public. Within the majority of the program area, the addition of express lanes is being considered to provide additional capacity, relieve congestion and provide a more reliable travel time option. In addition, improvements address safety and traffic operations on the interstates.	Primary Highway Freight Network	2, 19
7	427454-3	INTERCHANGE - ADD LANES	I-75 NB ON RAMP FROM NB US 301 TO I-75 NB	This project will improve the operational efficiency of the US 301 NB ramp to I-75. This includes the widening of the ramp to remove the bottleneck on US 301.	Primary Highway Freight Network	2, 7
7	440749-1	NEW BRIDGE CONSTRUCTION	US 41/SR 45/S 50TH ST @ CSX GRADE SEPARATION SOUTH OF CAUSEWAY BLVD	This project will construct a railroad grade separation on US 41 over the CSX railroad tracks south of Causeway Blvd. This project includes PD&E, design, right of way, and construction.	Critical Urban Freight Corridor	2, 6
7	441083-2	REST AREA	I-75/SR 93A SB REST AREA FROM BEG OF SB RAMP TO END OF SB RAMP	This project will reconstruct and expand the SB rest area in Southern Hillsborough County including an expansion of the truck parking areas.	Primary Highway Freight System	1, 2, 11
7	443316-1	INTERCHANGE IMPROVEMENT	I-4 FROM WEST OF PARK ROAD TO EAST OF PARK ROAD	Add a second left turn with 720 ft of storage on WB off-ramp. This project will improve access to the truck route facility of Park Rd and improve mainline operations on I-4. This project will also improve access to 8 distribution centers on the southern end of this corridor.	Primary Highway Freight System	2, 7
7	443317-1	INTERCHANGE IMPROVEMENT	I-4 FROM WEST OF THONOTOSASSA RD TO EAST OF THONOTOSASSA RD	Install traffic signal at I-4 WB ramp termini intersection. Widen Thonotosassa Rd from two to four lanes between ramp termini intersections. Add an exclusive NB to EB right turn lane at I-4 EB ramp intersection. This project will improve access to the industrial properties around the Plant City Airport and near the Florida State Farmers market.	Primary Highway Freight System	2, 7
7	443318-1	INTERCHANGE IMPROVEMENT	I-4 FROM WEST OF BRANCH FORBES RD TO EAST OF BRANCH FORBES RD	Install Traffic Signal at both I-4 EB and WB Ramp termini intersections. Extend NB and SB left turn lanes to 260 ft storage. Add 840 ft right turn lane at the I-4 EB off-ramp. This project will improve mainline operations on I-4 and provide improved access to agricultural land in eastern Hillsborough County.	Primary Highway Freight System	2, 7
7	443319-1	INTERCHANGE IMPROVEMENT	I-4 FROM EAST OF EB WEIGH STATION TO EAST OF MCINTOSH ROAD	Add 1,500 ft auxiliary lane on EB and WB I-4 mainline. Extend NB and SB turn lanes to 240 ft. This project will provide access to the agricultural land in eastern Hillsborough County.	Primary Highway Freight System	2, 7
7	443320-1	INTERCHANGE IMPROVEMENT	I-4 FROM EAST OF MANGO RD TO WEIGH STATION ON-RAMP	Lengthen the merge lanes for the WB weigh station on I-4 in Hillsborough County. This extended merge lane will allow trucks to get up to speed leaving the weigh station so they can safely merge into the flow of traffic.	Primary Highway Freight System	2, 7
7	443321-1	INTERCHANGE IMPROVEMENT	I-4 FROM WEST OF MANGO RD TO EAST OF MANGO RD	Add an additional lane at EB off-ramp to create dual left turn lanes. Increase storage of WB off ramp to 500 feet. These improvements will help ease access to two truck travel centers off Mango Road. These improvements will also help reduce mainline disruptions of vehicles queuing onto the interstate.	Primary Highway Freight System	2, 7
7	446131-1	Capacity Improvement - Aux Lane	WB I-4 Aux lane MLK to 50th Street	This project will improve the operational efficiency of I-4 by reducing the friction at interchanges. This project will construct a 12' wide asphalt auxiliary lane and full depth 12' wide asphalt shoulder. Approximately 3,550' in length	National Highway Freight Network	2, 10, 19

* Click on the text in the Description & Map column to view a map of the project

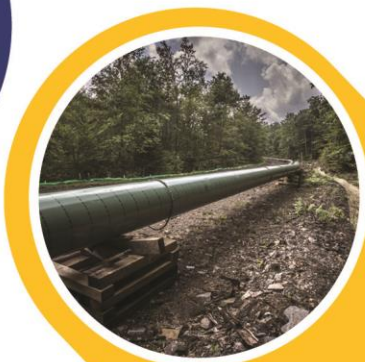
** Project types are based on 23 U.S.C. 167(i)(5)(C)



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Freight Mobility and Trade Plan

Technical Memorandum 8
Recommendations, Funding and
Implementation

April 2020



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Introduction

This technical memorandum is designed to provide guidance for FMO's project development. In creating a set of recommendations, the first portion builds a roadmap for FMO to take action. A funding section summarizes the potential funding opportunities in Florida for advancing the recommendations established. Lastly, the implementation section provides the impetus to achieve the recommendations and objectives outlined in this plan.

Recommendations

Recommendations for action steps are aligned with the FMTP objectives. Five recommendations have been developed for each FMTP objective based on technical analysis results, capturing stakeholder input, and considering emerging market trends and opportunities.

Objective 1: Leverage multisource data and technology to improve freight system safety and security. Recommendations to achieve this objective are:

- Identify commercial vehicle high crash segments and intersections, analyze causal factors, and develop counter measures
- Provide more safe and secure truck parking facilities
- Identify and implement freight related automated and connected vehicle projects to improve safety and mobility
- Prioritize rail-highway at-grade separation needs and implement select projects depending on funding availability
- Partner with freight related industries to support development of electronic freight management systems that enhance freight flow visibility throughout the entire supply chain, expedite communication among supply chain partners and government agencies, and enhance system security

Objective 2: Create a more resilient multi-modal system. Recommendations to achieve this objective are:

- Analyze and assess resiliency of the freight system
- Conduct vulnerability and risk assessments to identify possible freight system disruptions and establish risk tolerance thresholds
- Develop a contingency plan to support private sector freight mobility continuance of operations and to support disaster relief logistics operations
- Ensure supply chain resiliency of critical commodities (like fuel) considering all four phases of emergency management (prepare, respond, recover, and mitigate)
- Include resiliency considerations into project life-cycle and decision making processes



Objective 3: Ensure the Florida Freight system is in a state of good repair. Recommendations to achieve this objective are:

- Consider data-driven asset management approach to guide multimodal freight investments
- Optimize the functionality, efficiency, and reliability of existing freight systems
- Preserve and maintain the existing State Highway System
- Maximize use of existing and unused facilities and properties for truck parking
- Apportion dedicated funding for truck parking projects either through legislative request or by leveraging NHFP funds

Objective 4: Drive innovation to reduce congestion, bottlenecks and improve travel time reliability. Recommendations to achieve this objective are:

- Promote and support use of Intelligent Transportation Systems (ITS) and Connected and Automated Vehicle (CAV) technologies to increase efficiency and reliability of freight movement
- Identify and implement low-cost, operational improvements on the freight system in coordination with the SIS Quick Fix program
- Identify feasibility of truck-only lane projects from a statewide perspective
- Enhance TPAS commensurate with trucking needs
- Clear legislative and funding pathways for automated systems

Objective 5: Remove institutional, policy and funding bottlenecks to improve operational efficiencies and reduce costs in supply chains. Recommendations to achieve this objective are:

- Establish Truck Parking Program similar to Rest Area Program and Park and Ride Program
- Advocate for regulatory reform to increase freight funding and to reduce impediments to goods movement (e.g., weight limits)
- Enhance and institutionalize the freight network designation process and the freight project prioritization and selection process
- Develop strategies for maximizing discretionary grant opportunities focusing on identifying “competitive” projects and developing a federal grants portfolio
- Optimize statewide freight network to understand opportunities to reduce freight costs and increase productivity



Objective 6: Improve last mile connectivity for all freight modes. Recommendations to achieve this objective are:

- Identify and implement freight movement gap-closing improvements
- Improve the convenience and efficiency of connecting between multiple freight modes
- Consider emerging last mile logistics trends in planning, project development and design processes
- Incorporate innovative curb management strategies into freight design considerations in order to decrease curbside congestion and ensure safety of all road users
- Improve off-system connections between local freight hot spots and the Strategic Intermodal System in coordination with local government partners

Objective 7: Continue to forge partnerships between the public and private sectors to improve trade and logistics. Recommendations to achieve this objective are:

- Collaborate with public and private sector partners to address freight transportation and logistics needs and workforce development
- Communicate and collaborate with other agencies and stakeholders to establish a state freight mobility task force to effectively and successfully implement the FMTP policy and program recommendations
- Explore public private partnership (P3) opportunities related to truck parking and truck stop electrification
- Collaborate with adjacent states to facilitate seamless multistate freight corridors
- Ensure strategic representation of Florida at the national level to help shape Federal decisions on trade and logistics

Objective 8: Capitalize on emerging freight trends to promote economic development.

Recommendations to achieve this objective are:

- Support the strategic advantages of Florida's transportation hubs for trade and logistics
- Support projects that improve the efficiency of goods movement throughout the State
- Consider freight needs in the development of multimodal and multi-use corridors
- Prepare the freight system for smart cities and emerging urban freight delivery patterns
- Leverage global economic trends to support the growth of jobs in trade, transportation, logistics, export-oriented manufacturing, and related value-added services



Objective 9: Increase freight-related regional and local transportation planning and land-use coordination. Recommendations to achieve this objective are:

- Provide transportation and land use planning guidance to local and regional agencies for economic development and freight efficiencies that support community goals
- Coordinate freight-related plans and programs of the private sector and local agencies with FDOT's plans for integrated and informed decision-making
- Utilize truck empty backhaul patterns to identify target areas for attracting and expanding manufacturing, distribution, and other industries that generate and export goods and products out of Florida
- Understand unique needs of rural freight transportation and develop/enhance process to designate CRFC
- Understand unique needs of urban freight transportation and develop/enhance process to designate CUFC

Objective 10: Promote and support the shift to alternatively fueled freight vehicles.

Recommendations to achieve this objective are:

- Support the adoption and transformation of CNG/LNG and electric power use for trucking
- Participate in the FHWA Alternative Fuel Corridor Program – develop a statewide application for key freight corridors in coordination with MPOs and local government partners
- Support development of natural gas and other alternative fuel infrastructure at seaports and intermodal logistics centers, and along major trade corridors
- Collaborate with the Florida Department of Agriculture and Consumer Services Office of Energy (FDACS OOE) on developing Electric Vehicle (EV) Roadmap for freight corridors
- Evaluate the impacts of alternative fueled vehicles on freight funding programs and develop innovative funding strategies



Funding

Florida has one of the more unique freight systems in the country due to its geography, environment, population and culture. Residents, visitors, businesses, federal and state governments all invest resources into Florida's transportation system. This consistent, on-going investment is key to Florida's economic competitiveness and viability by providing superior transportation infrastructure and associated services for all transportation modes. Investment in Florida's freight system requires the ability to finance up-front costs, as well as sources of revenue to pay for other costs such as operating and maintenance expenditures. Likewise, funding is necessary to advance projects through programming, design, and construction.

This portion of the technical memorandum provides an overview of available funding sources and financing mechanisms for freight-related projects at FDOT.

State & Federal Funding

Florida has a multitude of funding options available from the private, local, state and federal level. These funding opportunities are connected to the respective level of government which provides the funding and are beholden to government agency investment requirements. Federal funding requires that state investments abide by federal investment guidelines and nationwide freight objectives such as the NHFN and FAST Act. State investments can require similar investment qualifications on a regional or state level. Investments at local and regional levels are managed by those regional organizations which oversee their maintenance.

Florida's Transportation Trust Funds

The FDOT uses state trust funds and related accounts to manage its financial resources. Significant trust funds include the Surface Transportation Trust Fund (STTF), the Right-of-Way Acquisition and Bridge Construction Trust Fund, and the Transportation Disadvantaged Trust Fund. State funding for transportation projects in Florida originates from the STTF. The STTF is funded through several revenue sources that include, but are not limited to, the statewide fuel sales tax, state motor fuel excise tax, state comprehensive enhanced transportation tax, aviation fuel tax, initial vehicle registration fees, vehicle title fees, documentary stamps and rental car fees.

Florida has a long history of toll finance for specific transportation facilities such as the Turnpike. The state has a Turnpike Enterprise Finance Plan, with potential for expansion of toll facilities in the future. Generally, these revenues support bridge maintenance and improvements within the local area in which the tolls are collected. Most tolling is located in Central and South Florida with a few others peppered throughout the state (Orchard Pond in Leon County). Tolling is calculated by axle (vehicle type) but with the adoption of further technologies to make tolling



more streamlined, new pricing models may become available based on the vehicle registered to the toll pass.

Overarching Federal Funding for Freight

The federal government offers several opportunities for financing and funding freight transportation projects. Starting with ISTEA and further refined with the passage of MAP-21 and the FAST Act, USDOT has brought a stronger focus to freight issues and has provided additional funding and financing options concentrated on enhancing freight movement throughout the nation.

A significant portion of revenue for transportation projects comes from federal aid; therefore, it is essential for federal and state partners to work together to fund priority improvements to the transportation network.

Modal Funding

Funding for each program requires knowledge of how the programs' needs and functions will fit into a variety of separate possible grant programs. Appendix A breaks down each grant funding opportunity by mode and type according to the specific needs and expectations of the FDOT Districts as well as whether it is federal or state funding. These are guidelines for the most likely use case of these grant funding opportunities. However, grant opportunities can be utilized across other modes or needs.

Public Private Partnerships

Florida has long been a key advocate in the utilization of Public Private Partnerships. Due to the funding match requirements attached to a significant number of grant and funding programs, FDOT has created specific statutes to ensure that these opportunities are pursued and utilized where feasible. Under statutes 334.30 and 339.2825, F.S., FDOT is allowed the ability to explore all possible venues for establishing P3 projects, whether through advertisement of services or solicitation by a private enterprise. Pursuant to Sections 334.30(1), F.S., P3 projects must be: "... programmed into the adopted 5-year work program or projects increasing transportation capacity and greater than \$500 million in the 10-year Strategic Intermodal Plan." Final agreement is based on a bid to ensure private parties have had an opportunity to provide input and a chance at the contract plan. Partnership can be with any enterprise regardless of modality, and are utilized mostly to meet the needs of the funding match requirements. Other benefits are an increased partnership with stakeholders which allows for outreach and public facing opportunities to improve Florida's freight facilities.



Cross-Organizational Funding Opportunities

There may be opportunities to supplement transportation funding with funding from other state agencies. Departments such as HUD and DEO, which focus on improving quality of life and job opportunities may opt to support transportation investments that share common goals.

Funding Matrix

Grant funding opportunities and their guidance can be found in the Appendix A, Funding Matrix. This matrix reviews what types of projects can be considered given the respective funding program requirements for each funding opportunity.

Implementation

The recommendations established were created based on the goals, objectives and needs of Florida's freight transportation system. These needs, categorized in short-term, medium-term, and long-term horizons are expected to change periodically based on the dynamic nature of the economy, political environment, and regulatory framework. The FMTP is designed to be flexible and support regular updates to project lists.

Implementation Process

Recommendations are wishes without a pathway to implementation. The FMTP's recommendations are an integrated group of policies, programs, and projects designed to improve freight mobility and foster economic growth. This implementation plan includes a timeline based on short-term (less than 2 years), mid-term (2-5 years) and long-term (5+ years) horizons for initiating recommendations for policies, programs, and projects.

Policy Implementation

The implementation of freight policies sets conditions for improving Florida's freight system. A policy recommendation requires legislative action and/or organizational changes. Short-term implementation actions are meant to be initial steps that will facilitate the implementation of medium and long-term policy initiatives. To ensure the success of Florida's freight system, continuous policy implementation is required to maintain an efficient regulatory environment. Figure 1 highlights the strategic horizons of FMO's policy direction.



Figure 1 | FMTP Freight Policy Implementation



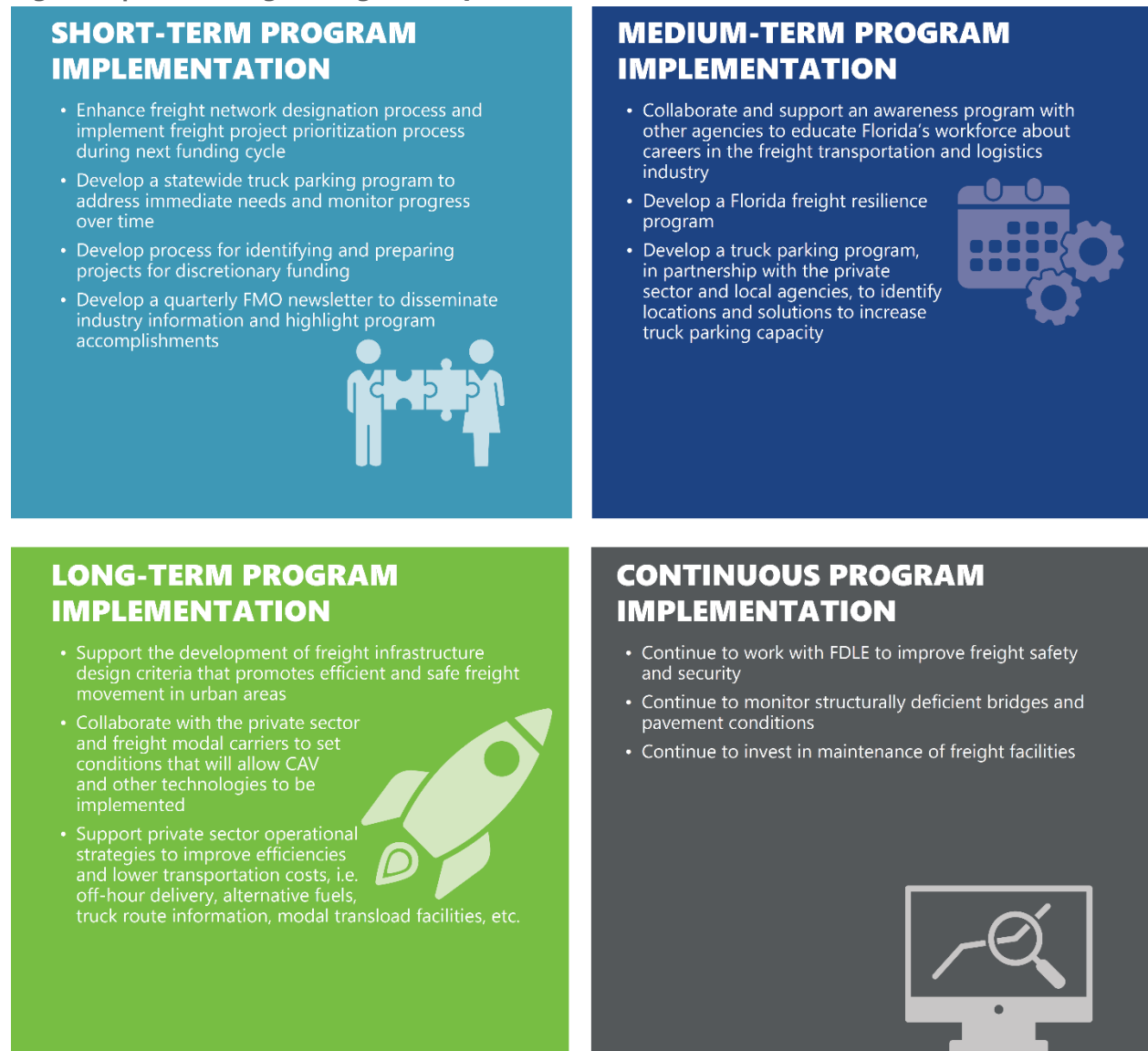


Program Implementation

The institution of programs creates the structure by which FDOT maintains and enhances the state freight system. Programs are designed to improve internal processes, enhance stakeholder outreach and education, establish and strengthen public-private partnerships, develop network design guidelines and standards, and increase freight planning knowledge and awareness.

Figure 2 highlights the strategic horizons of FMO's programmatic direction.

Figure 2 | FMTP Freight Program Implementation





Project Implementation

Projects are planned actions and work that results in a tangible solution that solve a freight mobility issue. Projects are categorized in several ways: purpose, type, size, etc. These project factors delineate eligibility of funding sources and financing options. Table 1 is an example of how FMO categorizes freight projects. Size represents likely funding costs.

Table 1 | Example Freight Projects by Category

Project Examples				
Issue / Focus	Solution	Type	Size	Time Frame
Bottleneck	Efficiency and fluidity	Operational, ITS/CAV	Small	Near-term (1-2 yrs)
Truck parking	Capacity, information	Reconfigure & repurpose, IT	Small	Near-term (1-2 yrs)
Unsafe conditions	Safety	Engineering, enforcement, education, and emergency response	Medium	Mid-term (3-5 yrs)
Connectivity	Last-mile connector	Capacity and operations	Small to Medium	Mid-term (3-5 yrs)
Congestion	Reliability	New capacity	Large	Long-term (5+ yrs)
Resilience	Reliability, durability	Rehabilitation	Medium to Large	Mid-term to Long-term
Economic development	Efficiency, productivity	Any	Medium to Large	Mid-term to Long-term
Environmental	Quality of life	Any	Medium to Large	Mid-term to Long-term

Next Steps

Implementation is the final step in developing the FMTP, but more importantly, it is the first step to transform the plan into action. An FMTP Action Plan has been developed to break down each recommendation into specific action items for implementation. Ensuring success requires constant monitoring and continuous planning. FDOT is poised to initiate the implementation action items in order to continue enhancing Florida's economy and communities.

Appendix A: Funding Matrix

These funding programs are organized first by their respective abilities to fund freight projects or project components and then by potential applicant (program manager). Modal application can be flexible and should be clarified with the funding agency.

Legend:

	Has or can fund freight projects
	Has or can fund transportation projects that include freight.

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Formula	Strategic Intermodal System Program (FDOT)	State	339.61 – 339.65, Florida Statutes	<p>The purpose is to focus the State's limited transportation resources on the facilities most significant for interregional, interstate, and international travel. Funding for SIS projects originates from a number of difference sources. Potential State sources of funding for SIS projects include:</p> <ol style="list-style-type: none"> 1. State and federal funds allocated to the SIS; 2. Statewide managed funds allocated for public transportation modes (aviation, spaceports, seaports, rail, and transit); and 3. State and federal discretionary funds allocated to FDOT districts.
Formula	Intermodal Development Program (FDOT)	State	Section 341.053, Florida Statutes	<p>The purpose is to provide for major capital investments in fixed-guideway transportation systems, access to seaports, airports and other transportation terminals for the construction of intermodal or multimodal terminals; as well as to facilitate the intermodal or multimodal movement of people and goods. The program is intended to connect Florida's airports, deepwater seaports, rail systems serving both passenger and freight, and major intermodal connectors to the Strategic Intermodal System highway corridors as the primary system for the movement of people and freight.</p>



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Formula	National Highway Freight Program (USDOT/FHWA)	State	Fast Act of 2015	<p>The purpose is to improve the efficient movement of freight and support several goals. The FAST Act establishes a new NHFP for the efficient movement of freight and address the following goals:</p> <ol style="list-style-type: none">1. Invest in infrastructure and operational improvements that strengthen economic competitiveness, reduce congestion, reduce the freight transportation cost, improve reliability, and increase productivity;2. Improve the safety, security, efficiency, and resiliency of freight transportation in rural and urban areas;3. Improve the state of good repair of the NHFN;4. Use innovation and advanced technology to improve NHFN safety, efficiency, and reliability;5. Improve the efficiency and productivity of the NHFN;6. Improve State flexibility to support multi-State corridor planning and address highway freight connectivity; and7. Reduce the environmental impacts of freight movement on the NHFN. [23 U.S.C. 167 (a), (b)]



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Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	Strategic Port Investment Initiative Program (FDOT)	Port authorities	311.10, Florida Statutes	<p>Projects will meet the State's economic development goal of becoming a hub for trade, logistics, and export-oriented activities by:</p> <ol style="list-style-type: none">1. Providing important access and major on-port capacity improvements;2. Providing capital improvements to strategically position the State to maximize opportunities in international trade, logistics, or the cruise industry;3. Achieving State goals of an integrated intermodal transportation system; and4. Demonstrating the feasibility and availability of matching funds through local or private partners. Beginning in fiscal year 2012-2013, a minimum of \$35 million annually shall be made available from the State Transportation Trust Fund to fund the Strategic Port Investment Initiative.
Discretionary	FL Seaport Transp. and Econ. Dev. Funding Program (FDOT)	Port Authorities	311.07 & 311.09, Florida Statutes	<p>The purpose is to finance port transportation projects on a 50-50 matching basis, with recognition of the importance of Florida's international trade to the State's economic progress and job creation and transportation capacity building to satisfy the consumer demands of Florida's growing population. This program provides \$25 million dollars annually in grants, in addition to the \$35 million allocated by FDOT annually to support bonded state revenues, for a total of \$60 million dollars in combined annual State support for the Seaports. State funding is matched by the local port, usually on a 50/50 basis.</p>



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Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	Intermodal Logistics Center Infrastructure Support Program (FDOT)	State, local, and private entities with local support and match.	Section 311.101(3), Florida Statutes	<p>The purpose is to improve transportation including goods movement and economic activity, depending on the purpose (e.g., seaports, economic activity, etc.). Projects must:</p> <ol style="list-style-type: none">1. Serve a strategic State interest;2. Facilitate the cost-effective and efficient movement of goods;3. Demonstrate the contribution to economic activity, including job creation, increased wages, and revenues;4. Demonstrate interaction with and support of the transportation network,5. Include commitment of a funding match;6. Identify amount of investment or commitments made by the owner or developer of the existing or proposed facility;7. Identify any of the owner's commitments, including memoranda of understanding or agreements, with private sector businesses planning to locate operations at the intermodal logistics center; and8. Demonstrate local financial support and commitment to the project. ILCs must support or be supported by conveyance or shipping through one or more seaports listed in s. 311.09. <p>Overall, the program focuses on freight "access."</p>



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	America's Marine Highway Program (USDOT/MARAD)	Designated project sponsors	Nat'l Defense Author. Act of 2019/ Consolidated Appropriations Act of 2019 (Pub. L. 116-6)	<p>The purpose is to create new marine highway services or to expand existing marine highway services. The National Defense Authorization Act of 2016 added the carriage by a documented vessel of cargo that is:</p> <ol style="list-style-type: none">1. Shipped in discrete units, or packages that are handled individually palletized or,2. Utilized for purposes of transportation or freight vehicles carried aboard commuter ferry boats. <p>As part of its systematic review of existing regulations, MARAD is updating its AMHP implementing regulations to conform to the above-referenced statutory changes and streamline the regulations for ease of use. Accordingly, the AMHP regulations are revised to add:</p> <ol style="list-style-type: none">1. "Promote short sea shipping" as a purpose of the AMHP;2. Re-designate "corridors, connectors, and crossings" as used in the rule as "Routes" for purposes of simplicity;3. Expand and clarify the definition of AMHP-eligible cargo to include discrete units or packages that are handled individually, palletized, or unitized as well as freight vehicles carried aboard commuter ferry boats;4. Add a requirement for the project sponsors to provide updates on project status;5. Expand the eligibility criteria for services and Routes that may participate in AMHP;6. Clarify criteria for Project Designation; and7. Reorganize the regulations for ease of use in 46 CFR Part 393.



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	FY 2019 National Infrastructure Investments - BUILD Program (USDOT/OST)	State	Consol. Approp. Act of 2019	The purpose is to invest in surface transportation infrastructure projects having a significant local or regional impact on a competitive basis. As with previous rounds, funds for the FY 2019 BUILD Transportation program are to be awarded on a competitive basis for projects that will have a significant local or regional impact. The Act also allows DOT to use a small portion of the \$900 million for oversight and administration of grants.
Discretionary	Nationally Significant Freight and Highway Projects: INFRA - formerly FASTLANE Grants (USDOT/FHWA)	State	Fast Act of 2015	The purpose is to provide financial assistance—competitive grants, known as INFRA grants, or credit assistance—to nationally and regionally significant freight and highway projects that align with the program goals to improve the safety, efficiency, and reliability of the movement of freight and people; generate national or regional economic benefits and an increase in global economic competitiveness of the U.S.; reduce highway congestion and bottlenecks; improve connectivity between modes of freight transportation; enhance the resiliency of critical highway infrastructure and help protect the environment; improve roadways vital to national energy security; and address the impact of population growth on the movement of people and freight. Both INFRA and FASTLANE considered project readiness, geographic diversity, safety, environmental review, economics, and cost-share. FASTLANE included mobility, partnership and innovation while INFRA included innovation and performance and accountability.



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	Port Infrastructure Development Program (USDOT/MARAD)	Port authority, State, or Tribal government	Consol. Approp Act of 2019	<p>The purpose is to improve the safety, efficiency, or reliability of the movement of goods into, out of, around, or within a coastal seaport, as well as the unloading and loading of cargo at a coastal seaport. Possible project outcomes include projects that will:</p> <ol style="list-style-type: none">1. Advance technology-supported safety and design efficiency improvements;2. Bring facilities to a state of good repair and improve resiliency;3. Promote efficient trade in energy resources;4. Promote exports of manufacturing, agriculture, or other goods; and5. For only the top 15 coastal ports, support the safe flow of agricultural and food products, free of pests and disease, domestically and internationally. <p>Accordingly, the Department expects to award at least one project that advances each of the aforementioned project outcomes, but a project does not need to address one or more of these outcomes to be awarded.</p>
Discretionary	Railroad Rehabilitation & Improvement Financing (USDOT/FRA)	State	FAST Act of 2015	<p>The purpose is to provide direct loans and loan guarantees up to \$35.0 billion to finance development of railroad infrastructure. Under this program the FRA Administrator is authorized to provide direct loans and loan guarantees up to \$35.0 billion to finance development of railroad infrastructure.</p>



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	Advanced Transportation and Congestion Management Technologies Deployment Initiative (USDOT/FHWA)	State	Infr. Dev.	The purpose is to make competitive grants for the development of model deployment sites for large scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment. The program provides competitive grants for the development of model deployment sites for large scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment.
Discretionary	Port Security Grant Program (DHS/FEMA)	Port Authority, State, marine terminal facility operators	Program Authorization: MTSA 2002; Appropriation Authority: DHS Appropriations Act 2019	The purpose is to provide funding to port authorities, facility operators, and State and local agencies for activities associated with implementing Area Maritime Security Plans (AMSPs), facility security plans, and other port-wide risk management efforts. The FY19 Port Security Grant Program (PSGP) is 1-4 grant programs that constitute DHS/FEMA's focus on transportation infrastructure security activities. These grant programs are part of a comprehensive set of measures authorized by Congress and implemented by the Administration to help strengthen the Nation's critical infrastructure against risks associated with potential terrorist attacks.



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	Clean Diesel National Grants (EPA)	State	Diesel Emission Reduction Act (DERA)	The purpose is to achieve significant reductions in diesel emissions in terms of tons of pollution produced and exposure, particularly from fleets operating in areas designated by the Administrator as poor air quality areas. Seventy percent of the DERA appropriation is to be used for national competitive grants and rebates to fund projects that use EPA or California Air Resources Board (CARB) verified or certified diesel emission reduction technologies. In contrast, thirty percent of the DERA appropriation is allocated to the States and territories to fund programs for clean diesel projects, while a Base funding is distributed to States and territories using a formula based on overall participation. Additional incentive funding is available to States and territories that provide matching funds.
Formula	Surface Transportation Block Grant Program (USDOT/FHWA)	State	Fast Act of 2015	The FAST Act converts the long-standing Surface Transportation Program into the Surface Transportation Block Grant Program acknowledging that this program has the most flexible eligibilities among all Federal-aid highway programs and aligning the program's name with how FHWA has historically administered it. [FAST Act § 1109(a)]. The purpose of the STBG program is to promote flexibility in State and local transportation and provide flexible funding for State and local transportation needs and border congestion designated by the Governor.



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Formula	Transportation Regional Incent. Program (FDOT)	MPOs comprised of 3+ counties, 2 + contiguous MPOs, 1+ MPO and 1+ contiguous counties that are not MPO members, 2+ counties that are not MPO members, or multi-county regional transp. authority.	339.2819, Florida Statutes	The purpose is to improve growth management planning and the provision of transportation infrastructure, to help accomplish that objective. Eligible applicants as partners are required to identify a regional transportation area through an interlocal agreement, and develop an associated regional transportation plan that identifies and prioritizes regionally significant facilities within the identified area. Funding from the TRIP Program also requires a local or regional fund match. Local/regional funding can include federal funds ⁶⁶ and in-kind match such as right-of-way donations and private funds. TRIP funding can be provided for up to 50 percent in conjunction with the local/regional match. 100 percent of funding can be provided in areas of critical economic concern. Unlike many of the programs identified, the TRIP Program is funded through the General Revenue Fund.
Discretionary	Freight Connector (Operational Quick Fix) Funding Program	State		The purpose is to fund strategic first/last mile connections to provide immediate mobility enhancements where the freight industry needs it most.
Formula	Railway-Highway Crossings Program	State	FAST Act of 2015	The Railway-Highway Crossings (Section 130) Program provides funds for the elimination of hazards at railway-highway crossings. The Section 130 Program has been correlated with a significant decrease in fatalities at railway-highway grade crossings.



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Formula	FY 2020 - Motor Carrier Safety Assistance Program Planning and Application (USDOT/FMCSA)	State Motor Carrier Lead Agencies	Fast Act of 2015	The purpose is to reduce the number and severity of crashes, injuries and fatalities and hazardous material incidents involving commercial motor vehicles. MCSAP is comprised of national program elements derived from 49 U.S.C. § 31102, and further outlined in 49 CFR § 350.109. Please refer to Section 3.3 within the MCSAP Comprehensive Policy (MCP) for a detailed description of these program elements for inclusion in the CVSP
Formula	Rural Economic Development Initiative (FL DEO)	Municipality/ County	Section 288.0656, Florida Statutes	The purpose is to better serve Florida's rural communities by providing a more focused and coordinated effort among State and regional agencies that provide programs and services for rural areas. Various programs with varying structures and amounts - some are loans, tax credits, or grants that require a match.
Discretionary	Public-Private Partnerships (FDOT) Financing Corporation)	State	Section 339.0809 and 334.30, Florida Statutes	The purpose is to finance and refinance projects approved in FDOT's Work Program. Private sector entities contributing capital in partnership with the government, in exchange for rights to share or capture future revenue generated from the facilities.
Discretionary	Econ Dev. Transp. Fund (Enterprise FL)	Local gov't	Sections 399.2821 and 288.063, Florida Statutes	The purpose is to alleviate a transportation impediment as an inducement for a business to remain, expand, or locate in Florida. Up to \$3,000,000 may be provided to a local government to implement the improvements. The actual amount funded is based on the cost of the necessary improvements.



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Formula	National Highway Performance Program (USDOT/FHWA)	State	Fast Act of 2015	The purpose is to support the condition and performance of the NHS for the construction of new facilities and ensure investments of Federal-aid funds in highway construction will support progress the achievement of performance targets established in a State's asset management plan (for the NHS). FAST Act Funding under MAP-21 - lump sum amount to each State to divide among apportioned programs.
Formula	Highway Safety Improvement Program (USDOT/FHWA)	State	Fast Act of 2015	The purpose is to achieve a significant reduction in traffic fatalities and serious injuries on all public roads, including non-State-owned public roads and roads on tribal lands. The HSIP requires a data-driven, strategic approach to improving highway safety on all public roads that focuses on performance. Primary features of the current HSIP are retained, including the requirement for a comprehensive, data-driven, SHSP that defines State safety goals and describes a program of strategies to improve safety. To obligate HSIP funds, a State must develop, implement and update a SHSP, produce a program of projects or strategies to reduce identified safety problems, and evaluate the SHSP on a regular basis. Also, the SHSP remains a statewide coordinated plan developed in cooperation with a broad range of multidisciplinary stakeholders. Further, States are required to have a safety data system to perform problem identification and countermeasure analysis on all public roads, adopt strategic and performance-based goals, advance data collection, analysis, and integration capabilities, determine priorities for the correction of identified safety problems, and establish evaluation procedures.



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Formula	Innovative Technology Deployment (USDOT/FMCSA)	State	Fast Act of 2015	The purpose is to improve safety and productivity of motor carriers, commercial vehicles, and their drivers; simplify enforcement operations; improve efficiency and effectiveness of commercial vehicle safety programs through targeted enforcement; improve security of data and improve sharing of commercial vehicle data within States and between States and FMCSA; reduce Federal/State and industry regulatory and administrative costs; and achieve nationwide deployment of the program with all participating jurisdictions. The FAST Act established the ITD discretionary grant program to deploy, support, and maintain commercial motor vehicle information systems and networks (49 U.S.C. § 31102(l)(3)).
Formula	Congestion Mitigation and Air Quality Improvement Program (USDOT/FHWA)	State	Fast Act of 2015	The purpose is to provide a flexible funding source to State and local governments for transportation projects and programs to help meet the requirements of the Clean Air Act for nonattainment and former attainment areas. As under MAP-21, the FAST Act directs FHWA to apportion funding as a lump sum for each State then divide that total among apportioned programs. Once each State's combined total apportionment is calculated, funding is set-aside for the State's CMAQ Program. Note that this program has funded domestic short sea shipping.



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Formula	Emergency Relief Program (USDOT/FHWA)	State	Fast Act of 2015	The purpose is to provide funds for emergency repairs and permanent repairs on Federal-aid highways and roads, tribal transportation facilities, and roads on Federal lands that the Secretary finds have suffered serious damage as a result of natural disasters or catastrophic failure from an external cause. 100 percent Federal share for repair work on Federal land transportation facilities, tribal transportation facilities, and other Federally-owned roads open to public travel. Under MAP-21, Federal Lands Access Program Facilities also had been eligible for this 100 percent Federal share; the FAST Act eliminated that eligibility. Per § 421 of the Department of Transportation Appropriations Act, 2016 (P.L. 114-113), the FAST Act amendment applies to projects to repair or reconstruct facilities damaged as a result of a qualifying natural disaster or catastrophic failure that occurs after October 1, 2015.
Varies	Value Capture (USDOT/OIDP)	State/Local	Varies based on type. See https://www.fhwa.dot.gov/ipd/value_capture/legislation/ for more information	The purpose is to derive monetary value from transportation improvements to help defray the cost of their implementation. The FHWA Center for Innovative Finance Support encourages State and local jurisdictions to look for new revenue sources to address funding shortfalls and is available to provide technical assistance in these areas.
Discretionary	Transportation Infrastructure Finance and Innovation Act Credit Assistance (USDOT/OIDP)	Public and private sponsors with public agency approval/support	Fast Act of 2015	The purpose is to leverage limited Federal resources and stimulate capital market investment in transportation infrastructure by providing credit assistance through direct loans, loan guarantees, and standby lines of credit (rather than grants) to projects of national or regional significance.



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Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	Grant Anticipation Revenue Vehicles (USDOT/OIDP)	A State or political subdivision of a state or a public authority. (A State law may also specify authorized entities for GARVEE debt issuance.)	Section 122 of Title 23	The purpose is to provide reimbursement of debt service and related financing costs. States can thus receive Federal-aid reimbursements for a wide array of debt-related costs incurred in connection with an eligible debt financing instrument, such as a bond, note, certificate, mortgage, or lease; the proceeds of which are used to fund a project eligible for assistance under Title 23. In the broadest sense, a GARVEE is a type of anticipation vehicle, which are securities (debt instruments) issued when moneys are anticipated from a specific source to advance the upfront funding of a particular need. In the case of transportation finance the anticipation vehicles' revenue source is expected Federal-aid grants. Specific to highways, a GARVEE is used as a term for a debt instrument that has a pledge of future Title 23 Federal-aid funding.



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	Private Activity Bonds (USDOT/OIDP)	Privately developed infrastructure interests can leverage tax-exempt financing issued through a public conduit. (Applications may be submitted by either a private developer or a public sector entity before selecting a private developer.)	Section 11143 of Title XI of SAFETEA-LU amended Section 142 of the Internal Revenue Code	The purpose is to fund transportation projects with lower financing costs of tax-exempt municipal bonds and increased private sector investment. Debt instruments authorized by the Secretary of Transportation and issued by a conduit issuer on behalf of a private entity for highway and freight transfer projects, allowing a private project sponsor to benefit from the lower financing costs of tax-exempt municipal bonds. Together TIFIA and PABs should provide substantial incentives for private equity investment in highway and freight projects.
Discretionary	Section 129 Loans (USDOT/OIDP)	Regional/Local/Private	Section 129(a)(7) of Title 23	The purpose is to leverage additional transportation resources and recycle assistance to other eligible projects. Loans must be repaid to the state, beginning within five years after construction is completed and the project is open to traffic.



Freight *Mobility* and Trade Plan

Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	State Infrastructure Bank (FDOT)	State	Section 339.55, F.S. – FL State Infrastructure Bank; also, Section 215.617, F.S. - Bonds for Florida SIB	The purpose is to leverage funds to improve project feasibility, providing loans and other assistance to public or private entities carrying out or proposing to carry out projects eligible for assistance under federal and State law. The program can provide loans and other assistance to public or private entities carrying out or proposing to carry out projects eligible for assistance under federal and State law. Further, the SIB cannot provide assistance in the form of a grant.
Discretionary	Motor Carrier Safety Assistance Program - High Priority Grant Program (USDOT/FMCSA)	State	Fast Act of 2015	The purpose is to support, enrich, and augment CMV safety programs through partnerships with States, local governments, Indian tribes, other political jurisdictions, and other persons to carry out high priority activities and projects. The High Priority (HP) Grant Program is discretionary and designed to provide Federal financial assistance to enhance MCSAP Commercial Vehicle Safety Plan (CVSP) activities, maintain innovative technology and/or new project(s) not included in the CVSP with a positive impact on CMV safety. Other applicants are also eligible for HP grants that improve CMV safety. Although ITD resides within HP, the ITD grant program purpose and program eligibility requirements are separate and distinct from CMV safety related activities and projects.
Trust Fund	Right of Way Acquisition and Bridge Construction Trust Fund/ Bonds (ROWTF)	State	Section 215.605, F.S.	The purpose is to finance or refinance the cost of acquiring real property or the rights to real property for state roads as defined by law, or to finance or refinance the cost of state bridge construction, and purposes incidental to such property acquisition or state bridge construction,



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Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Trust Fund	Surface Transportation Trust Fund	State	Section 206.46, F.S.	The purpose is to provide an adequate, sustainable, and long-term source of revenue to maintain and improve conditions and meet the Florida's mobility needs. The STTF is a consolidated transportation fund that includes all major revenue sources. Revenue sources include state fuel tax revenues, federal aid reimbursements, local funds, toll operation reimbursements, and miscellaneous revenues and fees.
Trust Fund	Turnpike Enterprise Trust Fund	Florida Turnpike Enterprise	Sections 338.165 and 338.22, F.S.	The purpose of the fund is to appropriately account for revenues, operating and maintenance costs, renewal and replacement costs, general reserves, and various bond construction funds. This means the fund manages Florida Turnpike Enterprise expenditures for every toll road and bridge (a total of 483 miles) owned by the State.
Discretionary	Accelerated Innovation Deployment Demonstration (USDOT/FHWA)	State	Fast Act of 2015	The purpose is to improve highway efficiency, safety, mobility, reliability, service life, environmental protection, and sustainability; and develop and deploy new tools, techniques, and practices to accelerate the adoption of innovation in all aspects of highway transportation. The funding program is authorized within the Technology and Innovation Deployment Program (TIDP) and provides incentive funding for activities for assistance in any phase of a highway transportation project between planning and delivery including: Planning, financing, operation, structures, materials, pavements, environment, and construction that address the TIDP goals.



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Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	Consolidated Rail Infrastructure and Safety Improvements Program (USDOT/FRA)	State, Class II & III railroads, P3 with a state, TRB, UTC, et al.	Consolidated Appropriations Act, 2017, Div. K, Tit I, Public Law / ./'115-31, (Appropriations Act)	The purpose is to provide a comprehensive solution to fund Capital Project development and implementation to support infrastructure safety and improvements for both freight railroads and intercity passenger. Congress authorized this grant program to invest in a wide range of projects to improve railroad safety, efficiency, and reliability; mitigate congestion at both intercity passenger and freight rail chokepoints; enhance multi-modal connections; and lead to new or substantially improved Intercity Passenger Rail corridors. Additionally, the program includes rail safety projects, such as grade crossing enhancements, rail line Relocations and Improvements, and positive train control (PTC) deployment. Finally, funds are available to support rail regional and corridor Planning and environmental analyses.
Discretionary	Florida Aviation Grant Program	Florida airports	Section 332.003 – 332.007, F.S.	The purpose is to provide for a safe, cost-effective, and efficient statewide aviation transportation system. The Aviation Grant Program provides financial assistance to Florida's airports in the areas of safety, security, preservation, capacity improvement, land acquisition, planning, and economic development. Program funds assist local governments and airport authorities in planning, designing, constructing, and maintaining public-use aviation facilities.
Discretionary	Airport Improvement Program	Public agencies and possibly private owners and entities for the P&D of public-use airports included in the NPIAS	Airport and Airway Improve. Act of 1982	The Airport Improvement Program (AIP) provides grants to public agencies — and, in some cases, to private owners and entities — for the planning and development of public-use airports that are included in the National Plan of Integrated Airport Systems (NPIAS).



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Funding Type	Funding Program	Potential Applicant/ Program Manager	Authority	Funding Description
Discretionary	Commercial Trucks and Off-Road Applications FOA: Natural Gas, Hydrogen, Biopower, and Electrification Technologies (USDOE/Nat'l Energy Tech Lab)	Unrestricted	Energy Independ. & Sec. Act of 2017	The purpose is to address alternative energy sources such as electrification; natural gas; fuel cells, hydrogen generation, deliver, and storage systems; biopower; technology integration, including Clean Cities; and off-road vehicles for commercial trucks and off-road applications. Recognizing the advantages of collaboration across the transportation sector, this FOA brings together related activities in EERE's Transportation Offices – Vehicle Technologies, Fuel Cell Technologies, and Bioenergy Technologies – for an integrated approach to affordable, energy efficient technology development for medium- and heavy-duty vehicle, including off-road, applications. It supports a broad and multi-fuel pathway strategy that builds on successful previous research in gaseous fuels storage, biopower production, advanced batteries and electric drive systems, and fuel cell technologies.
Trust Fund	Space Transportation Infrastructure Matching Fund (Spaceport Grant Program)	Aerospace Partners	Section 331, F.S.	The purpose is to continue the development of space transportation infrastructure that supports Space Florida's legislative intent and Florida spaceport territory master plans.



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Freight **Mobility** ***and Trade Plan***

Technical Memorandum 9
Action Plan

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FMTP Action Plan

The FMTP Action Plan is the blueprint for action – the “What, Who, and When” for freight-related actions. The actions – policies, programs, and projects – are solutions to solving the problems, needs, and issues discovered and identified during the development of the FMTP.

Freight mobility is not an isolated function. The movement of goods and commodities supports private sector supply chains and consumer demand. FDOT is not able to bear the full responsibility of solving all freight mobility needs, however, the FMO office is in the best position to orchestrate and align certain actions to meet freight mobility needs. This Action Plan is a guide for how the FMTP objectives can be achieved through the guidance of the FMO office. These actions are not a direction for other offices to follow, but guidance on how FMO can direct achievement through partnerships. A time frame for implementation is included with each objective.

Intra-Agency Collaboration

Intra-agency collaboration and coordination is necessary to implement some policies, programs, and projects. Many action steps are beyond the purview and authority of FMO. Other FDOT offices are needed to support actions for solving freight mobility related issues. As the state’s proponent and expert on freight mobility, FMO will need to initiate and lead collaboration to transform the action items into reality.

Inter-Agency Collaboration

Implementation of some recommendations will require partnership with state and federal agencies, MPOs, local governments, private-sector entities, and other organizations. Therefore, a strong partnership and collaboration among all agencies and stakeholders is necessary to successfully implement the FMTP policy and program recommendations. Several of the actions will require the establishment of working groups composed of stakeholders from key agencies from across the State. An inter-agency freight working group can facilitate collaboration and coordination on matters that affect freight mobility in a holistic manner.

Timeline

Each recommendation and action is given an expected timeline for execution and completion. These will follow along the FMTP Implementation timelines of Short-term (<2 years), Medium-term (3-5 years), and Long-term (5+ years). These timelines are established with an understanding that accomplishing these goals will require the engagement of multiple agencies and stakeholders simultaneously.

Objective 1: Leverage multisource data and technology to improve freight system safety and security.

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
1.1 Identify commercial vehicle high crash segments and intersections, analyze causal factors, and develop counter measures	1.1.1 Conduct data analysis to identify commercial vehicle high crash segments and intersections	Office of Safety, Transportation Data Analytics	DHSMV	Short-term
	1.1.2 Analyze causal factors, develop countermeasures, prioritize and implement projects	FDOT Districts		Continuous
	1.1.3 Establish/ leverage Florida intra and inter agency task force	Office of Safety, Office of Maintenance, Office of Motor Carrier Size and Weight	FDLE, DHSMV	Continuous
1.2 Provide more safe, secure and utilitarian truck parking facilities	1.2.1 Create monthly 'Crime Reports' to monitor truck parking safety and security	Office of Safety, Office of Traffic Engineering and Operations	Motorola Solutions, Inc.; FDLE	Continuous
	1.2.2 Improving camera coverage of rest areas and WIM stations	Office of Maintenance, Office of Traffic Engineering and Operations	DHSMV; FDLE	Medium-term
	1.2.3 Explore additional amenities options at rest areas and WIM stations	Office of Maintenance	DHSMV	Medium-term
	1.2.4 Integrate safe haven strategies and designs into rest area and WIM stations	Office of Maintenance; Office of Design; Office of Safety	DHSMV	Short-term

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
1.3 Identify and implement freight related automated and connected vehicle projects to improve safety and mobility	1.3.1 Analyze causes of crash hot spots to identify tech safety solutions	Design; Safety; Transportation Technology; Traffic Engineering and Ops	DHSMV; FDLE	Short-term
	1.3.2 Invest in tech solutions funded through tech and connected vehicle grants that increase efficiency and throughput	Office of Policy Planning		Short-term
	1.3.3 Fund and implement Advanced Freight Mobility Solutions (AFMS) early warning systems	Transportation Technology; Safety; Rail and Motor Carrier Operations; Traffic Engineering and Ops	DHSMV	Medium-term
	1.3.4 Establish FRAME system guidelines in future roadway engineering and design	Transportation Technology; Office of Safety; Traffic Engineering and Ops; Office of Design	DHSMV	Medium-term
1.4 Prioritize rail-highway at-grade separation needs and implement select projects depending on funding availability	1.4.1 Develop prioritization methodology for at-grade separations	FDOT Districts	FRA	Short-term
	1.4.2 Obtain a list of potential grade-separation needs from the districts	FDOT Districts		Short-term
	1.4.3 Prioritize district needs from a statewide perspective and determine funding options	FDOT Districts	FRA	Short-term



Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
1.5 Partner with freight related industries to support development of electronic freight management systems that enhance freight flow visibility throughout the entire supply chain, expedite communication among supply chain partners and government agencies, and enhance system security.	1.5.1 Establish vision and identify appropriate stakeholders and vendors	Modal Offices		Short-term
	1.5.2 Create working group with industry stakeholders to create data sharing framework	Office of Transportation Data and Analytics, Modal Offices	Private Vendors, Universities, Modal partners, Bureau of Transportation Statistics	Short-term
	1.5.3 Work with stakeholders and vendors to develop freight management system	Office of Transportation Data and Analytics, Modal Offices, Procurement	Private Vendors, Universities, Modal partners, Bureau of Transportation Statistics	Medium-term

Objective 2: Create a more resilient multi-modal system.

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
2.1 Analyze and assess resiliency of the freight system	2.1.1 Establish resiliency task force	SIS, Office of Emergency Management	FEMA, USDOT, DEM, SERT	Short-term
	2.1.2 Define freight system resiliency and identify appropriate data sources	SIS, Office of Emergency Management	FEMA, USDOT, DEM, SERT	Short-term
	2.1.3 Utilize local plans and data to create statewide map and GIS dashboard for emergency freight planning efforts	FDOT Districts,	MPOAC	Medium-term
	2.1.4 Develop resiliency assessment process and program	SIS, Office of Emergency Management	FEMA, USDOT, DEM, SERT	Medium-term
2.2 Conduct vulnerability and risk assessments to identify possible freight system disruptions and establish risk tolerance thresholds	2.2.1 Conduct vulnerability and risk assessments	SIS, Office of Emergency Management	FEMA, USDOT, DEM, SERT, MPO's, Regional Planning Councils	Short-term
	2.2.2 Establish risk tolerance thresholds	SIS, Office of Emergency Management	FEMA, USDOT, DEM, SERT, MPO's, Regional Planning Councils	Short-term
	2.2.3 Identify unacceptable risks and develop strategic plan	SIS, Office of Emergency Management	FEMA, USDOT, DEM, SERT, MPO's, Regional Planning Councils	Short-term
2.3 Develop a contingency plan to support private sector freight mobility continuance of operations and to support disaster relief logistics operations	2.3.1 Utilize FLFAC relationships to identify most vulnerable private industry stakeholders	Office of Emergency Management	FLFAC Stakeholders	Short-term
	2.3.2 Secure input from industry stakeholders to identify at risk assets and operational challenges	Office of Emergency Management	Modal and Industry Stakeholders	Short-term
	2.3.3 Work with stakeholders to develop resilience solutions	Office of Emergency Management	Modal and Industry Stakeholders, DEM	Medium-term

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
2.4 Ensure supply chain resiliency of critical commodities (like fuel) considering all four phases of emergency management (prepare, respond, recover, and mitigate)	2.4.1 Create inventory of critical commodities	Office of Emergency Management, FDOT Districts	Office of agriculture and consumer services, Modal and Industry Stakeholders	Short-term
	2.4.2 Create alternative networks across district lines to create redundant supply lines	Office of Emergency Management, FDOT Districts	Office of ag and consumer services, Modal and Industry Stakeholders, DEM	Medium-term
	2.4.3 Create scenario plans for all possible events including alternate delivery methods	Office of Emergency Management, FDOT Districts	Office of ag and consumer services, Modal and Industry Stakeholders, DEM	Long-term
	2.4.4 Expand Emergency Shoulder Use (ESU) monitoring system throughout the state	Office of Emergency Management, FDOT Districts	Office of ag and consumer services, Modal and Industry Stakeholders	Short-term
2.5 Include resiliency considerations into project life-cycle and decision-making processes	2.5.1 Incorporate resiliency considerations into project life-cycle and project prioritization process	SIS, Office of Emergency Management	DEM	Medium-term
	2.5.2 Review and update resiliency policies annually	SIS, Office of Emergency Management	DEM	Short-term
	2.5.3 Develop strategies to mitigate effect of freight transportation on communities	SIS, Office of Emergency Management	DEM; HUD; DEO	Medium-term

Objective 3: Ensure the Florida Freight system is in a state of good repair.

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
3.1 Consider data-driven asset management approach to guide multimodal freight investments	3.1.1 Coordinate with risk based transportation asset management planning process to identify freight related maintenance issues	Office of Planning, Office of Maintenance	DHSMV	Short-term
	3.1.2 Work with respective offices to address system performance issues	Office of Maintenance		Short-term
3.2 Optimize the functionality, efficiency, and reliability of existing freight systems	3.2.1 Conduct assessment of local restricted and dedicated freight routes statewide	FDOT Districts, Office of Survey and Mapping	MPOAC	Short-term
	3.2.2 Continue to monitor congestion bottlenecks and travel time reliability	Office of Transportation Data and Analytics, FDOT Districts		Continuous
	3.2.3 Provide real-time information to stakeholders for improved performance	Office of Transportation Data and Analytics, Office of Forecasting and Trends	Industry and Modal Stakeholders	Short-term
	3.2.4 Establish a funding pathway for the maintenance of sea and air ports	Modal Offices		Short-Term
3.3 Preserve and maintain the existing State Highway System	3.3.1 Yearly analysis of TPAS data to identify truck parking trends	Rail and Motor Carrier Operations, TSM&O		Continuous
	3.3.2 Continue to monitor structurally deficient bridges and pavement conditions	Office of Maintenance		Continuous
	3.3.3 Coordinate with respective offices to address maintenance needs	Office of Maintenance, Modal Offices		Short-term

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
3.4 Maximize use of existing and unused facilities and properties for truck parking	3.4.1 Continue to monitor utilization of existing facilities	Office of Transportation Data and Analytics, Office of Maintenance		Continuous
	3.4.2 Develop strategies to encourage use of underutilized facilities	Office of Traffic Engineering and Operations; Office of Transportation Systems Management and Operations	Industry and Modal Stakeholders	Short-term
	3.4.3 Retrofit/redesign existing rest areas to add more capacity and improve third-party vendor operations	Office of Structures Design	Industry and Modal Stakeholders	Medium-term
	3.4.4 Update the rest area master plan	Office of Planning, Maintenance, Office of Design		Medium-term
	3.4.5 Utilize truck parking toolbox recommendations for further solutions	SIS, Maintenance, Office of Structures Design, Office of Roadway Operations, Office of Strategic Development, Office of Traffic Engineering and Operations		Long-term
3.5 Apportion dedicated funding for truck parking projects either through legislative request or by leveraging NHFP funds	3.5.1 Analyze and create financial outlook and grant funding plan for needs of truck parking	Office of Structures, Office of Design, Office of Work Program and Budget		Short-term
	3.5.2 Develop internal policy to set aside NHFP funds for truck parking	Office of Work Program and Budget		Short-term
	3.5.3 Champion legislative request for truck parking including operations and maintenance	Office of Work Program and Budget, Office of Legislative Programs		Continuous

Objective 4: Drive innovation to reduce congestion, bottlenecks and improve travel time reliability.

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
4.1 Promote and support use of Intelligent Transportation Systems (ITS) and CAV technologies to increase efficiency and reliability of freight movement	4.1.1 Leverage connected vehicle initiative to identify and fund freight related technology projects	Office of Engineering and Traffic Operations		Short-term
	4.1.2 Define FDOT role in advanced freight and connected vehicle space through creation of freight tech investment plan	Office of Engineering and Traffic Operations. TSM&O		Medium-term
	4.1.3 Expedite the implementation of recommendations and lessons learned from the Freight Advanced Traveler Information System (FRATIS) pilot	Office of Traffic Engineering and Operations; Office of Transportation Systems Management and Operations		Long-term
4.2 Identify and implement low-cost, operational improvements on the freight system in coordination with the SIS Quick Fix program	4.2.1 Identify low-cost, operational improvements to address truck bottlenecks and truck safety hotspots	Office of Design		Short-term
	4.2.2 Conduct operational analysis to address truck bottleneck and safety hotspots	Office of Safety, FDOT Districts, Office of Transportation Data and Analytics		Short-term
	4.2.3 Provide funds and implement improvements for identified hot spots	SIS		Medium-term



Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
4.3 Identify feasibility of truck-only lane projects from a statewide perspective	4.3.1 Incorporate truck only lane feasibility guidelines in the managed lanes program	Office of Roadway Design, Office of Maintenance, Traffic Engineering and Operations		Medium-term
	4.3.2 Conduct feasibility analysis of potential truck only lanes in high truck volume corridors	Office of Roadway Design, Office of Maintenance, Traffic Engineering and Operations		Short-term
	4.3.3 Work with FDLE to enforce dedicated routes		FDLE	Continuous
4.4 Enhance TPAS commensurate with trucking needs	4.4.1 Roll-out of TPAS through Phase 3 and beyond	Commercial Vehicle Operations; TSM&O		Medium-term
	4.4.2 Establish TPAS across the state where not rolled-out including private parties (write language from TPAS)	Commercial Vehicle Operations; TSM&O; FDOT Districts		Medium-term
	4.4.3 Expand TPAS to be consistent across state borders	Commercial Vehicle Operations; TSM&O	Southeast Regional state DOT's	Long-term
4.5 Clear legislative and funding pathways for automated systems	4.5.1 Partner with connected vehicle initiative to identify funding need for multi-modal automated freight systems	Commercial Vehicle Operations; TSM&O		Short-term

Objective 5: Remove institutional, policy and funding bottlenecks to improve operational efficiencies and reduce costs in supply chains.

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
5.1 Establish Truck Parking Program similar to Rest Area Program and Park and Ride Program	5.1.1 Secure dedicated funding for truck parking and statutory authority	Office of Legislative Programs	Florida Trucking Association	Short-term
	5.1.2 Develop purpose, scope, responsibilities, and implementation procedures	FDOT Districts; Office of Policy Planning; Office of Work Program and Budget		Medium-term
5.2 Advocate for regulatory reform to increase freight funding and to reduce impediments to goods movement (e.g., weight limits)	5.2.1 Analyze regulatory impacts on the trucking industry	Office of Finance and Administration, Office of Policy Planning		Short-term
	5.2.2 Analyze regulatory restrictions across state borders in the region	Office of Finance and Administration, Office of Policy Planning	Southeastern Regional State DOT's	Short-term
	5.2.3 Create outline of regulatory costs to the freight industry	Office of Finance and Administration, Office of Policy Planning	Industry and Stakeholder Partners	Medium-term
	5.2.2 Leverage cross-state groups to create regulatory solutions	Office of Policy Planning	Southeastern Regional State DOT's	Medium-term
5.3 Enhance and institutionalize the freight network designation process and the freight project prioritization and selection process	5.3.1 Institute updated FMTP prioritization and call for projects	FDOT Districts		Short-term
	5.3.2 Analyze key differences in SIS, FMO and FHWA network designations	SIS	FHWA	Short-term
	5.3.3 Update FDOT, SIS, and other inter-modal capacity movement programs to include truck parking	SIS	FHWA	Medium-term



Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
5.4 Develop strategies for maximizing discretionary grant opportunities focusing on identifying projects and developing a federal grants portfolio	5.4.1 Maintain yearly call for projects	FDOT Districts		Continuous
	5.4.2 Identify discretionary funding opportunities attached to projects	FDOT Districts		Short-term
	5.4.3 Create federal discretionary grant and NOFO announcements portfolio and guidelines linking projects to funding	FDOT Districts, Office of Grants Administration; Office of Work Program and Budget		Short-term
5.5 Optimize statewide freight network to understand opportunities to reduce freight costs and increase productivity	5.5.1 Identify funding and policy roadblocks for truck bottlenecks and safety hotspots	Office of Legislative Programs, Office of Safety, Office of Work Program and Budget		Short-term
	5.5.2 Identify solutions to legislative funding for freight issues	Office of Legislative Programs		Short-term
	5.5.3 Establish freight performance targets in alignment with FHWA Transportation Performance Management Requirements	FDOT Districts	FHWA	Medium-term

Objective 6: Improve last mile connectivity for all freight modes.

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
6.1 Identify and implement freight movement gap-closing improvements	6.1.1 Analyze major freight establishments/hubs and surrounding multi-modal transportation networks to identify first-mile/last mile gaps	SIS		Short-term
	6.1.2 Engage Industry partners to identify operational gaps and improvement needs from a private perspective		Modal and Industry Stakeholders	Short-term
	6.1.3 Identify funding opportunities for closing these gaps	Office of Work Program and Budget, SIS		Medium-term
6.2 Improve the convenience and efficiency of connecting between multiple freight modes	6.2.1 Analyze intermodal connections to determine factors which improve convenience and efficiency	Office of Transportation Data and Analytics	Florida Trucking Association	Short-term
	6.2.2 Institute design guidelines to ensure compatibility and convenience between modes	Office of Traffic Engineering and Operations; Office of Transportation Systems Management and Operations; Modal Offices	FHWA	Short-term
	6.2.3 Identify grant opportunities for multi-modal investments	Office of Grants Administration		Short-term

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
6.3 Consider emerging last mile logistics trends in planning, project development and design processes	6.3.1 Analyze effects and trends in last mile urban and rural delivery	Office of Transportation Data and Analytics, TSM&O		Short-term
	6.3.2 Leverage working group to identify solutions to same-day home deliveries and urban delivery	Office of Traffic Engineering and Operations; Office of Transportation Systems Management and Operations	Universities, Modal and Industry Stakeholders	Short-term
	6.3.3 Pilot design guidelines study for at-home delivery	Research Center	Universities, Modal and Industry Stakeholders	Medium-term
6.4 Incorporate innovative curb management strategies into freight design considerations to decrease curbside congestion and ensure safety of all road users	6.4.1 Implement District studies analyzing Urban Curb Management needs in Florida	FDOT Districts, Research Center	Universities, Modal and Industry Stakeholders	Short-term
	6.4.2 Create design guidelines for best use-case freight curb-side management	Office of Roadway Operations, Office of Roadway Design	Modal and Industry Stakeholders	Short-term
	6.4.3 Establish curbside monitoring systems to relieve burden on local law enforcement to monitor curbsides	Office of Structures Design, Office of Traffic Systems	FDLE, DHSMV	Long-term
6.5 Improve off-system connections between local freight hot spots and the Strategic Intermodal System in coordination with local government partners	6.5.1 Analyze correlation between hot spots and SIS connections	Office of Transportation Data and Analytics, SIS		Short-term
	6.5.2 Develop countermeasures and solutions to bottlenecks at connections	Office of Roadway Designs, Office of Traffic Engineering and Operations		Short-term
	6.5.3 Create methodology and identify funding opportunities for off-system connections	Systems Implementation Office		Medium-term

Objective 7: Continue to forge partnerships between the public and private sectors to improve trade and logistics.

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
7.1 Collaborate with public and private sector partners to address freight transportation and logistics needs and workforce development	7.1.2 Analyze state-wide industries to identify regions of greatest workforce needs	FDOT Districts	Modal and Industry Stakeholders	Short-term
	7.1.1 Leverage agency relations to establish unified workforce development message	FDOT Districts	Department of Economic Opportunity, Florida Chamber of Commerce, Modal and Industry Stakeholders	Short-term
	7.1.3 Leverage DEO partnerships to establish logistics career and hiring fairs or scholarships in areas of highest need	FDOT Districts	Department of Economic Opportunity, Florida Chamber of Commerce, Modal and Industry Stakeholders	Medium-term
7.2 Communicate and collaborate with other agencies and stakeholders to establish a state freight mobility task force to effectively and successfully implement the FMTP policy and program recommendations	7.2.1 Host a joint website as a portal for freight mobility and trade matters with Enterprise Florida, Workforce Florida, and the Florida Chamber of Commerce to facilitate Florida freight and manufacturing	Communications Office	Enterprise Florida, Workforce Florida, and the Florida Chamber of Commerce, Modal and Industry Stakeholders	Medium-term
	7.2.2 Continue convening FLFAC and PAC meetings beyond the publication of FMTP		Modal and Industry Stakeholders	Continuous
	7.3.3 Update FMTP Action Plan regularly to monitor progress			Continuous
	7.3.4 Ensure partnerships are maintained to succeed in action plan implementation	Intra-agency offices	Modal and Industry Stakeholders, Inter-agency offices	Continuous

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
7.3 Explore public private partnership (P3) opportunities related to truck parking and truck stop electrification	7.3.1 Leverage working groups to identify P3 opportunities related to truck parking	Office of Maintenance, Office of Structures; Office of Planning	Modal and Industry Stakeholders; DEO	Short-term
	7.3.2 Analyze need of industries for electrification (i.e. refrigeration outside of produce shippers)	Office of Maintenance, Office of Structures; Office of Planning	Modal and Industry Stakeholders	Short-term
	7.3.3 Identify and fund highest priority electrification needs	Office of Maintenance, Office of Structures; Office of Planning		Short-term
7.4 Collaborate with adjacent states to facilitate seamless multistate freight corridors	7.4.1 Leverage inter-state relations to create regional working group on cross-border regulations	Office of Legislative Affairs	Southeast Regional State DOT's	Short-term
	7.4.2 Utilize cross-border working group to identify regulatory and policy solutions	Office of Legislative Affairs	Southeast Regional State DOT's	Medium-term
7.5 Ensure strategic representation of Florida at the national level to help shape Federal decisions on trade and logistics	7.5.1 Ensure FTP and FMTP goals align with federal goals	Office of Policy Planning	FHWA	Long-term
	7.5.2 Continue to support EOG message of 'Florida is Open for Business'	Office of Legislative Affairs	Florida Chamber of Commerce, Department of Economic Opportunity	Continuous
	7.5.3 Continue to participate in AASHTO, TRB and similar bodies to share Florida's success and influence national policy			Continuous

Objective 8: Capitalize on emerging freight trends to promote economic development.

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
8.1 Support the strategic advantages of Florida's transportation hubs for trade and logistics	8.1.1 Analyze freight investments and projects that provide greatest return for Florida's business infrastructure	Modal Offices	Florida Chamber of Commerce, Department of Economic Opportunity	Short-term
	8.1.2 Create economic freight investment plan based economic scenario planning		Florida Chamber of Commerce, Department of Economic Opportunity	Short-term
	8.1.3 Invest in freight projects that provide greatest benefits to economic output	SIS, Office of Work Program and Budget		Medium-term
8.2 Support projects that improve the efficiency of goods movement throughout the State	8.2.1 Analyze potential impacts of automated freight vehicles and delivery technologies on goods movement and infrastructure	Office of Traffic Engineering and Operations	Modal and Industry Stakeholders	Short-term
	8.2.2 Partner with TSM&O on expanding truck parking availability information, signage and data collection	Office of Traffic Engineering and Operations		Medium-term
	8.2.3 Partner with industry stakeholders to analyze problem areas and explore new technologies or systems to improve efficiency	TSM&O	Modal and Industry Stakeholders	Medium-term



Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
8.3 Consider freight needs in the development of multimodal and multi-use corridors	8.3.1 Identify multi-use and multi-modal corridors in most need of freight investment	FDOT Districts		Short-term
	8.3.2 Create freight design guidelines for multi-modal and multi-use corridors	Office of Design, Office of Traffic Engineering and Operations		Short-term
	8.3.3 Leverage opportunities like M-CORES and ROUTES			Short-term
8.4 Prepare the freight system for smart cities and emerging urban freight delivery patterns	8.4.1 Expand off-hours study to include major metropolitan areas	FDOT Districts	Universities	Medium-term
	8.4.2 Analyze effects of urban one-day delivery across Florida, and possible effects of off-hours delivery in conjunction with above study	Office of Transportation Data and Analytics, FDOT Districts	Modal and Industry Stakeholders	Short-term
	8.4.3 Analyze likely effects of drones and other automated delivery methods on Florida	Office of Roadway Designs, Office of Traffic Engineering and Operations	Modal and Industry Stakeholders	Short-term
	8.4.4 Create unified smart city freight design guidelines/plan	Office of Design, Office of Traffic Engineering and Operations		Long-term



Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
8.5 Leverage global economic trends to support the growth of jobs in trade, transportation, logistics, export-oriented manufacturing, and related value-added services	8.5.1 Partner with Florida Chamber to create joint action plan supporting pillar of Infrastructure and Growth	Office of Policy Planning	Florida Chamber of Commerce, Department of Economic Opportunity	Short-term
	8.5.2 Institute freight economic task force promoting the Chambers pillars	SIS, Office of Policy Planning	Florida Chamber of Commerce, Department of Economic Opportunity	Short-term
	8.5.3 Partner with Chamber of Commerce to ensure logistics is included on future economic plans and updates	Office of Policy Planning	Florida Chamber of Commerce, Department of Economic Opportunity	Medium-term

Objective 9: Increase freight-related regional and local transportation planning and land-use coordination.

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
9.1 Provide transportation and land use planning guidance to local and regional agencies for economic development and freight efficiencies that support community goals	9.1.1 Identify land use conflicts around seaports, airports, spaceports, intermodal logistics centers, and other freight hubs	FDOT Districts;	Modal and Industry Stakeholders, MPOAC	Short-term
	9.1.2 Encourage adoption of ordinances compatible with freight needs	FDOT Districts	Modal and Industry Stakeholders, MPOAC	Medium-term
	9.1.3 Support Districts in identifying and addressing last-mile/urban truck parking needs	FDOT Districts	Modal and Industry Stakeholders, MPOAC	Short-term
9.2 Coordinate freight-related plans and programs of the private sector and local agencies with FDOT's plans for integrated and informed decision-making	9.2.1 Identify working groups and coordinate between statewide, regional, and local freight planning for freight guidance	FDOT Districts, Internal Offices	Modal and Industry Stakeholders, MPOAC, Regional Planning Councils	Continuous
	9.2.2 Establish communication lines between groups (monthly or quarterly meetings and e-mails)	FDOT Districts, Internal Offices	Modal and Industry Stakeholders, MPOAC, Regional Planning Councils	Medium-term
	9.3.3 Develop a State Multimodal Freight Policy that is consistent with National Multimodal Freight Policy	FDOT Districts, Internal Offices	USDOT, MPO's	Medium-term
	9.3.4 Work with SIO to designate freight intensive areas and freight access facilities for SIS funding eligibility	SIS	MPO	Short-term

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
9.3 Utilize truck empty backhaul patterns to identify target areas for attracting and expanding manufacturing, distribution, and other industries that generate and export goods and products out of Florida	9.3.1 Analyze Florida industries to determine level of contribution to empty backhaul	FDOT Districts, Office of Transportation Data and Analytics	Modal and Industry Stakeholders	Short-term
	9.3.2 Analyze source regions of empty backhauls to understand regional effects	FDOT Districts	Modal and Industry Stakeholders	Short-term
	9.3.3 Leverage industry partners and stakeholders to determine solutions to empty back-haul	Office of Transportation Data and Analytics	Modal and Industry Stakeholders	Medium-term
9.4 Understand unique needs of rural freight transportation and develop/enhance process to designate CRFC	9.4.1 Complete Rural Freight restrictions mapping study	FDOT Districts		Short-term
	9.4.2 Update CRFC designations yearly	FDOT Districts		Continuous
9.5 Understand unique needs of urban freight transportation and develop/enhance process to designate CUFC	9.5.1 Coordinate critical urban freight corridors with MPO partners	Office of Policy Planning	MPOs	Short-term
	9.5.2 Analyze urban freight mobility trends in districts	Office of Transportation Data and Analytics, Forecasting and Trends		Short-term
	9.5.3 Pilot alternative delivery times and formats in urban areas	Office of Traffic Engineering and Operations		Long-term
	9.5.4 Update CUFC designations yearly	FDOT Districts		Continuous

Objective 10: Promote and support the shift to alternatively fueled freight vehicles.

Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
10.1 Support the adoption and transformation of CNG/LNG and electric power use for trucking	10.1.1 Explore alternative fuel corridors options with suppliers and first-adopters	FDOT Districts	Modal and Industry Stakeholders	Short-term
	10.1.2 Coordinate investment and implementation initiatives for user conversions to CNG/LNG with stakeholders	Office of Work Program and Budget, Office of Policy Planning	Modal and Industry Stakeholders, FDAC	Medium-term
10.2 Participate in the FHWA Alternative Fuel Corridor Program	10.2.1 Identify corridors eligible for FHWA Alternative Fuel Program	FDOT Districts	FHWA	Short-term
	10.2.2 Develop a statewide application guide for FHWA Alternative Fuel Program	Office of Grants Administration	FHWA	Short-term
10.3 Support development of natural gas and other alternative fuel infrastructure at seaports and intermodal logistics centers, and along major trade corridors	10.3.1 Identify and address barriers to alternative energy source station development	Office of Structures Design; Office of Construction	Florida Department of Agriculture and Consumer Services; Office of Energy	Short-term
	10.3.2 Analyze and identify CNG/LNG ready ports and intermodal centers	Modal Offices, FDOT Districts	Modal and Industry Stakeholders	Short-term
	10.3.3 Identify and apply LNG/CNG transition grant funding to high priority logistics centers	Office of Grants Administration	Florida Department of Agriculture and Consumer Services; Office of Energy	Medium-term
10.4 Collaborate with the Florida Department of Agriculture and Consumer Services Office of Energy (FDACS OOE) on developing Electric Vehicle (EV) Roadmap for freight corridors	10.4.1 Identify areas of state with infrastructure prepared for EV	FDOT Districts		Short-term
	10.4.2 Identify areas of state legally prepared for EV	FDOT Districts	Florida Department of Agriculture and Consumer Services; Office of Energy	Short-term
	10.4.3 Develop an inter-agency infrastructure plan for automated and EV freight vehicles	Office of Traffic Engineering and Operations	DHSMV, FLE, Department of Economic Opportunity	Long-term



Recommendation	Action	Partner Offices	Partner Agencies/ Private Stakeholders	Schedule
10.5 Evaluate the impacts of alternative fueled vehicles on freight funding programs and develop innovative funding strategies	10.5.1 Analyze the effects of alternative fuel use on FDOT funding streams	Office of Transportation Data and Analytics, Office of Forecasting and Trends		Short-term
	10.5.2 Engage leadership in developing long-term funding plan for alternate fuel transitions	Office of Work Program and Budget, Office of Policy Planning	Florida Department of Agriculture; Office of Energy	Long-term
	10.5.3 Work with legislative teams to establish a freight funding source for FDOT to offset income loss due to alternative fuels	Office of Legislative Programs, Office of Work Program and Budget		Medium-term

Appendix A: FDOT Offices

Office of Administration	Office of Safety
Office of Aviation and Spaceports	Office of Seaport and Waterways
Office of Communications	Office of Strategic Development
Office of Construction	Office of Traffic Engineering and Operations
Office of Design	Office of Traffic Incident Management
Office of Roadway Design	Office of Traffic Services
Office of Structures Design	Office of Traffic Systems
Office of Emergency Management	Office of Transportation Systems Management and Operations
Office of Environmental Management	Office of Transit
Office of Finance and Administration	Office of Grants Administration
Office of Work Program and Budget	Office of Transit Operations/Safety
Office of Florida's Turnpike Enterprise	Office of Transit Planning
Office of Legislative Programs	Office of Transportation Technology
Office of Maintenance	Office of Information Security Management
Office of Motor Carrier Size and Weight	Office of Information Technology
Office of Performance Management	Office of Process and Quality Improvement
Office of Roadway Operations	Office of Survey and Mapping
Office of Structures Operations	Office of Transportation Data and Analytics
Office of Materials	
Office of Pavements	
Office of Structures	
Office of Planning	
Office of Forecasting & Trends	
Office of Policy Planning	
Office of Systems Implementation	
Office of Program Management	
Office of Rail and Motor Carrier Operations	
Office of Research Center	
Office of Right of Way	



Appendix B: Other Agencies

Florida Board of Governors

Florida Department of Agriculture and Consumer Services (FDAC)

Florida Department of Business and Professional Regulation (DBPR)

Florida Department of Citrus (FDOC)

Florida Department of Environmental Protection (DEP)

Florida Department of Military Affairs (DMA) (Florida National Guard)

Florida Department of State (Secretary of State of Florida)

Florida Department of Transportation (FDOT)

Executive Office of the Governor (EOG)

Florida Division of Emergency Management (FDEM)

Florida Department of Highway Safety and Motor Vehicles (DHSMV)

Florida Department of Law Enforcement (FDLE)

Florida Department of Revenue (DOR)

Florida Department of Veterans Affairs (DVA)

Enterprise Florida (EFI)

Florida Agency for Workforce Innovation (AWI)

Florida Department of Community Affairs (DCA)

Florida Space Authority (FSA)

Visit Florida (FL USA)

Volunteer Florida (VOL)



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Freight Mobility and Trade Plan

Technical Memorandum 10
FHWA Division Review Checklist

April 2020

Certification of a FAST Act Compliant State Freight Plan

ITEM FOR REVIEW		ASSESSMENT		
		Yes	No	N/A
Section 70202 Requirements				
(a) IN GENERAL. — Each State that receives funding under section 167 of title 23 shall develop a freight plan that provides a comprehensive plan for the immediate and long-range planning activities and investments of the State with respect to freight.		✓		
Observations:	The Florida Freight Mobility and Trade Plan is a comprehensive document which is focused on both – short term, tactical improvements to improve freight in Florida today and to sustain and grow the economy over the long term.			
b) PLAN CONTENTS.—A freight plan described in subsection (a) shall include, at a minimum –		✓		
(1) an identification of significant freight system trends, needs, and issues with respect to the State;		✓		
Observations:	<ul style="list-style-type: none"> - Technical Memorandum 2: Systems and Assets <ul style="list-style-type: none"> o The systems and assets are identified and quantified in this Technical Memorandum. o The major freight system designations (state and national) are identified and quantified in this Technical Memorandum. - Technical Memorandum 3: Performance and Conditions <ul style="list-style-type: none"> o The performance measures identified in Technical Memorandum 1 were populated in this memorandum – establishing clear quantitative trends on overall freight system performance o Section: Identification of Issues and Trends – details several modal specific needs, issues, and looks at heavy haul roads. o Used state and federal performance measures to ID/evaluate trends/needs and issues as they relate to safety, congestion, reliability, bottlenecks, state of goods repair, empty backhauls, etc. - Technical Memorandum 4: Trends <ul style="list-style-type: none"> o Entire document is dedicated to identify internal and external trends that impact Florida – this includes a discussion on how freight supports the economy. o Section: Commodity Flow Analysis – details commodity flow for existing and horizon year for different modes. - Technical Memorandum 5: Needs, Issues and Scenario Planning <ul style="list-style-type: none"> o Deeper dive on several trends to capture specific needs and issues organized my mode and includes multimodal items. o Specific looks at funding constraints, land use, freight bottlenecks, state of good repair, and larger freight issues o Section: Scenario Planning: Scenario planning used to identify needs and specific recommendations for “futures” that embrace technology, resiliency and economic growth o Section: SWOT Analysis - The document concludes with a thorough SWOT analysis organize and focus the development of strategies, improvements and initiatives in the subsequent TMs. 			
(2) a description of the freight policies, strategies, and performance measures that will guide the freight-related transportation investment decisions of the State;		✓		
Observations:	<ul style="list-style-type: none"> - Technical Memorandum 1: Policies, Performance Measures and Outreach <ul style="list-style-type: none"> o Section: Building for the Future <ul style="list-style-type: none"> ▪ FMTP designed to integrate FDOT’s Modal Plans (goals/strategies) and serve as the “parent” freight plan with overarching freight objectives that directly support the Florida Transportation Plan and federal freight goals. ▪ FMTP objectives integrate the Florida Chamber’s Trade and Logistics work/Six Pillars o Section: Modal Plans <ul style="list-style-type: none"> ▪ Each modal plan captures specific freight policies and strategies the support freight movement ▪ Specific strategies and recommendations are captured in Appendix C. o Section: Performance Measures <ul style="list-style-type: none"> ▪ This section details adopted state and federal freight performance measures and identifies new potential measures/indicators for consideration. These additional measures were used to help prioritize freight projects in Technical Memorandum 7. o Appendix C list all the freight related studies, plans and initiatives in state of Florida. 			



ITEM FOR REVIEW		ASSESSMENT		
		Yes	No	N/A
Section 70202 Requirements				
	<ul style="list-style-type: none"> - Technical Memorandum 3: Performance and Conditions <ul style="list-style-type: none"> o Each formally adopted performance measure identified in Technical Memorandum 1 were populated in this document o Section: Identification of Issues and Trends – details several modal specific needs and issues, and looks at heavy haul roads. - Technical Memorandum 6: Project Prioritization and Selection <ul style="list-style-type: none"> o Using the performance measures formally enacted by FDOT and new measures identified in Technical Memorandum 1 – the project selection process was driven by these measures to achieve the FMTP Objectives and ultimately the FTP and federal freight goals. o Appendix D explains the quantitative process. - Technical Memorandum 8: Recommendations, Funding and Implementation <ul style="list-style-type: none"> o Section: Recommendations <ul style="list-style-type: none"> ▪ Includes a series of recommendations and strategies to achieve the FMTP objectives ▪ Specific recommendations to work with other states to solve multi-state corridor o Section: Funding <ul style="list-style-type: none"> ▪ Details current funding availability, constraints and opportunities for the future – including P3s and across organizations. o Section: Implementation <ul style="list-style-type: none"> ▪ Details an implementation strategy to solve the key issues identified in the FMTP – including short term initiative and long term, larger projects. ▪ Also – focuses on a multi-agency, multi-partner approach to solving freight solutions, last miles solutions and a comprehensive focus on improving livability for Florida's residents. 			
(A) multimodal critical rural freight facilities and corridors designated within the State under section 70103 of this title; and		✓		
(B) critical rural and urban freight corridors designated within the State under section 167 of title 23		✓		
Observations:	<ul style="list-style-type: none"> - Technical Memorandum 2: Systems and Assets <ul style="list-style-type: none"> o Section: National Freight and Freight Related System Designations <ul style="list-style-type: none"> ▪ Details critical rural and urban freight corridors o Section: National Freight and Freight Related System Designations <ul style="list-style-type: none"> ▪ The multimodal critical rural freight corridors and facilities are identified in multiple national and statewide designation identified in earlier sections. The major designations which include critical rural freight corridors and facilities are highlighted in the designations listed below: <ul style="list-style-type: none"> • National Multimodal Freight System • Strategic Intermodal System (SIS) • Multi-use Corridors of Regional Economic Significance corridors (M-CORES) 			
(4) a description of how the plan will improve the ability of the State to meet the national multimodal freight policy goals described in section 70101(b) of this title and the national highway freight program goals described in section 167 of title 23;		✓		
Observations:	<ul style="list-style-type: none"> - Technical Memorandum 1: Policies, Performance Measures and Outreach <ul style="list-style-type: none"> o This technical memorandum discusses this extensively. Each FMTP objective was deliberately designed to support the Florida Transportation and the national freight goals. This relationship (including a line-by-line cross-reference document) can be found in the TM and its associated appendix. o The FMTP is a performance driven document. Performance measures were established in this TM that were used throughout the document – but in particular to prioritize projects and the implementation plan. Effectively - because the FMTP's objectives were built to support the federal freight goals- the goals drove decision making throughout the process/document. - Technical Memorandum 8: Recommendations, Funding and Implementation <ul style="list-style-type: none"> o Recommendation sections is laid out by different FMTP objectives. 			
(5) a description of how innovative technologies and operational strategies, including intelligent transportation systems, that improve the safety and efficiency of freight movement, were considered;		✓		
Observations:	<ul style="list-style-type: none"> - The concept that technology and operational efficiencies can improve safety and freight efficiency was a main driver for the development of this chapter. As such, technology is interwoven in each Technical Memorandum. The following list details areas where technological and operational strategies were specifically identified: 			

ITEM FOR REVIEW		ASSESSMENT		
		Yes	No	N/A
Section 70202 Requirements				
	<ul style="list-style-type: none"> - Technical Memorandum 5: Needs, Issues and Scenario Planning <ul style="list-style-type: none"> o Scenario planning to identify needs and specific recommendations for “futures” that embrace technology, resiliency and economic growth. All three scenarios lead to technological and operational strategies. o SWOT analysis specifically calls out “Opportunities” presented by technology. - Technical Memorandum: Project Prioritization and Selection <ul style="list-style-type: none"> o The process evaluated projects for their ability to integrate TSM&O and alternative energy initiatives - Technical Memorandum: Investment Element <ul style="list-style-type: none"> o This fiscally constrained Freight Investment Plan identifies several funded ITS projects directed at freight - Technical Memorandum 8: Recommendations, Funding and Implementation <ul style="list-style-type: none"> o Section: Recommendations <ul style="list-style-type: none"> ▪ Includes a series of recommendations and strategies to achieve the FMTP objectives o Section: Funding <ul style="list-style-type: none"> ▪ Details current funding availability, constraints and opportunities for the future – including P3s and across organizations. o Section: Implementation <ul style="list-style-type: none"> ▪ Details an implementation strategy to solve the key issues identified in the FMTP – including short term initiative and long term, larger projects. ▪ Specifically calls out using ITS and operational strategies to solve congestion and safety issues 			
	(6) in the case of routes on which travel by heavy vehicles (including mining, agricultural, energy cargo or equipment, and timber vehicles) is projected to substantially deteriorate the condition of roadways, a description of improvements that may be required to reduce or impede the deterioration;	✓		
Observations:	<ul style="list-style-type: none"> - Technical Memorandum 3: Performance and Conditions <ul style="list-style-type: none"> o Section: Highway Performance <ul style="list-style-type: none"> ▪ Heavy volume roads were identified. o Section: Identification of Issues and Trends – details several modal specific needs and issues, and looks at heavy haul roads. <ul style="list-style-type: none"> ▪ Specific attention paid to facilities with heavy truck tonnage – in relation to the high overall state of goods repair on the SHS. o Florida Department of Transportation – Transportation Asset Management Plan lists the Financial Plan and Investment Strategies for maintaining condition of roadways. - Technical Memorandum 4: Trends <ul style="list-style-type: none"> o Section on Highways – discusses trends that will likely impact roadways with heavy vehicles. - Technical Memorandum 6: Project Prioritization and Selection <ul style="list-style-type: none"> o This performance driven process identified projects that focus on heavily used trucking facilities <ul style="list-style-type: none"> ▪ Specific criteria used in this process include (but are not limited to): Truck bottlenecks, Truck AADT, roadways in freight intensive areas, roadway functionality, etc. - Technical Memorandum 7: Investment Element <ul style="list-style-type: none"> o This fiscally constrained Freight Investment Plan identifies several projects directed at the long-term maintenance of heavy vehicles corridors. This includes traditional improvements but also technological/operational improvements as well. - Technical Memorandum 8: Recommendations, Funding and Implementation <ul style="list-style-type: none"> o Section: Recommendations <ul style="list-style-type: none"> ▪ Includes a series of recommendations and strategies to achieve the FMTP objectives. o Section: Funding <ul style="list-style-type: none"> ▪ Details current funding availability, constraints and opportunities for the future – including P3s and across organizations. o Section: Implementation <ul style="list-style-type: none"> ▪ Details an implementation strategy to solve the key issues identified in the FMTP – including short term initiative and long term, larger projects. - Technical Memorandum 9: Action Plan <ul style="list-style-type: none"> o One of the objective recommendations is to maintain a state of good repair, the strategies to do so are laid out in the Action Plan tech memo. 			

ITEM FOR REVIEW		ASSESSMENT		
		Yes	No	N/A
Section 70202 Requirements				
(7) an inventory of facilities with freight mobility issues, such as truck bottlenecks, within the State, and for those facilities that are State owned or operated, a description of the strategies the State is employing to address those freight mobility issues;		✓		
Observations:	<ul style="list-style-type: none"> - Technical Memorandum 1: Policies, Performance Measures and Outreach <ul style="list-style-type: none"> o Section: Modal Plans <ul style="list-style-type: none"> ▪ Each modal plan captures specific freight policies and strategies the support freight movement ▪ Specific strategies and recommendations are captured in Appendix C. - Technical Memorandum 6: Project Prioritization and Selection <ul style="list-style-type: none"> o This performance driven process prioritized projects. <ul style="list-style-type: none"> ▪ Specific criteria used in this process include (but are not limited to): Truck bottlenecks, Truck AADT, roadways in freight intensive areas, roadway functionality, etc. - Technical Memorandum 7: Investment Element <ul style="list-style-type: none"> ▪ This fiscally constrained Freight Investment Plan identifies several projects directed reducing freight bottlenecks through traditional capacity projects, ITS and other freight initiatives (truck parking, etc.) - Technical Memorandum 8: Recommendations, Funding and Implementation <ul style="list-style-type: none"> o Section: Recommendations <ul style="list-style-type: none"> ▪ Includes a series of recommendations and strategies to achieve the FMTP objectives o Section: Funding <ul style="list-style-type: none"> ▪ Details current funding availability, constraints and opportunities for the future – including P3s and across organizations. o Section: Implementation <ul style="list-style-type: none"> ▪ Details an implementation strategy to solve the key issues identified in the FMTP – including short term initiative and long term, larger projects. 			
(8) consideration of any significant congestion or delay caused by freight movements and any strategies to mitigate that congestion and delay;		✓		
Observations:	<ul style="list-style-type: none"> - Technical Memorandum 1: Policies, Performance Measures and Outreach <ul style="list-style-type: none"> o Section: Modal Plans <ul style="list-style-type: none"> ▪ Each modal plan captures specific freight policies and strategies the support freight movement ▪ Specific strategies and recommendations are captured in Appendix D. - Technical Memorandum 2: Performance Measures and Conditions <ul style="list-style-type: none"> o Quantifies the major truck bottlenecks across the state using FHWA’S NPMRDS data. This list of bottlenecks is used as part of project prioritization and selection process. - Technical Memorandum 5: Needs, Issues and Scenario Planning <ul style="list-style-type: none"> o Scenario Planning: Technology as a solution for congestion caused by rapid fulfillment o SWOT Analysis: Identifies roadway congestion as a weakness - Technical Memorandum: Project Prioritization and Selection <ul style="list-style-type: none"> o This performance driven process identified traditional projects to reduce congestion and delay. o Specific criteria used in this process include (but are not limited to): Truck bottlenecks, Truck AADT, roadways in freight intensive areas, roadway functionality, etc. o The process also evaluated projects for their ability to integrate TSM&O and alternative energy initiatives - Technical Memorandum: Investment Element <ul style="list-style-type: none"> o This fiscally constrained Freight Investment Plan identifies several projects directed reducing congestion and delay through traditional capacity projects, ITS and other freight initiatives (truck parking, etc.) - Technical Memorandum 8: Recommendations, Funding and Implementation <ul style="list-style-type: none"> o Section: Recommendations <ul style="list-style-type: none"> ▪ Includes a series of recommendations and strategies to achieve the FMTP objectives o Section: Funding <ul style="list-style-type: none"> ▪ Details current funding availability, constraints and opportunities for the future – including P3s and across organizations. 			

ITEM FOR REVIEW		ASSESSMENT		
		Yes	No	N/A
Section 70202 Requirements				
	<ul style="list-style-type: none"> Section: Implementation Details an implementation strategy to solve the key issues identified in the FMTP – including short term initiative and long term, larger projects. 			
	(9) a freight investment plan that, subject to subsection (c)(2), includes a list of priority projects and describes how funds made available to carry out section 167 of title 23 would be invested and matched; and	✓		
Observations:	<ul style="list-style-type: none"> Technical Memorandum 7: Investment Element <ul style="list-style-type: none"> It serves as the fiscally-constrained Freight Investment plan. Appendix A and B call out projects (and phases – where applicable) specifically using NHFP dollars and assigned non-federal match. 			
	(10) Consultation with the State freight advisory committee, if applicable.	✓		
Observations:	<ul style="list-style-type: none"> Technical Memorandum 1: Policy, Performance Measures and Outreach Section: FMTP Stakeholder Engagement and Outreach <ul style="list-style-type: none"> Details three Florida Freight Advisory Committee (FLFAC) in March, July and September 2019 that focused on identifying and developing the FMTP's objectives, trends/issues and ultimate project weighting for the prioritization process. Additionally, seven regional freight forums were held to capture wider public and private stakeholder input. The results of this forum were directly tied to the trends and issues/needs identified in the Trends, and Needs and Issues Technical Memorandums. 			
	(c) RELATIONSHIP TO LONG-RANGE PLAN.—	✓		
	(1) INCORPORATION. ---A freight plan described in subsection (a) may be developed separate from or incorporated into the statewide strategic long-range transportation plan required by section 135 of title 23.	✓		
	(2) FISCAL CONSTRAINT. ----The freight investment plan component of a freight plan shall include a project, or an identified phase of a project, only if funding for completion of the project can reasonably be anticipated to be available for the project within the time period identified in the freight investment plan.	✓		
Observations:	<ul style="list-style-type: none"> Technical Memorandum 1: Policies, Performance Measures and Outreach <ul style="list-style-type: none"> Section: Building for the Future <ul style="list-style-type: none"> FMTP designed to integrate FDOT's Modal Plans (goals/strategies) and serve as the "parent" freight plan with overarching freight objectives that directly support the Florida Transportation Plan and federal freight goals Technical Memorandum 7: Investment Element <ul style="list-style-type: none"> TM 7 serves as the FMTP's fiscally constrained Freight Investment Plan 			



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