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Model Task Force & Transportation
Data and Analytics Workshop

FTO FORECASTING & TRENDS OFFICE
FDOT TDA TRANSPORTATION DATA & ANALYTICS

2019 FMTP Update

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What is the FMTP?

- The Freight Mobility & Trade Plan is a comprehensive plan that focuses on the movement of goods in, out, and around Florida
- It provides an integrated analysis to examine needs and solutions in a cross-cutting, multi-functional approach

Brief History

2012

Florida's House Bill 599 directed the State to create a freight plan.

The Moving Ahead for Progress in the 21st Century Act (MAP-21) established national freight policy and goals and a formal national freight network.

2013/14

Florida created its first Statewide Freight Plan in two parts

2015

The Fixing America's Surface Transportation (FAST) Act created a National Multimodal Freight Network (NMFN) and dedicating freight funding through the National Highway Freight Program (NHFP).

2017

The Freight and Multimodal Operations (FMO) office was established.

FMO FREIGHT & MULTIMODAL OPERATIONS

2019

This 2019 FMTP uses tactical and strategic approaches to implement immediate opportunities while positioning Florida for future possibilities.

FDOT

Unique Plan

- What's different?
  - New prioritization methodology
  - Actionable - tactical recommendations
  - Scenario planning
  - Strategic longer term recommendations
  - Visual, modular plan - easily digestible
  - Living processes

https://www.fdot.gov/multimodal/fmtp

Tech Memos & Visual Plan

8 Technical Memorandums

- TM 1: Policies & Strategies
- TM 2: Systems & Assets
- TM 3: Conditions & Performance
- TM 4: Trends
  - Scenario Planning
- TM 5: Needs & Issues
  - SWOT Analysis
- TM 6: Prioritization & Selection
- TM 7: Investment & Improvement
  - Funding
- TM 8: Implementation

10 Chapter Visual Plan

- Chapter 1: Approach
- Chapter 2: Outreach
- Chapter 3: Assets & Conditions
- Chapter 4: Trends
- Chapter 5: Issues & Needs
- Chapter 6: Scenario Planning
- Chapter 7: Prioritization
- Chapter 8: Investment
- Chapter 9: Recommendations
- Chapter 10: Implementation

Goals & Objectives

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

Regional Freight Forums

Regional freight forums were held in each FDOT District to give the public and stakeholders a venue to share knowledge, and explore freight issues and potential solutions.

6 or 7 mentions	4 or 5 mentions	2 or 3 mentions
• Automation • Bottlenecks/Congestion • Collaboration/Coordination • Land Use • Regulations • Truck Only Lanes • Truck Parking • Labor Force • First Mile/Last Mile Connectivity • Public/Private Partnerships	• Education/Awareness • Data Sharing • Empty Backhaul • Inland Ports • Funding • Economic Competitiveness	• Alternative Fuel • Rural/Urban Context • E-Commerce • Law Enforcement • Limited Access/ Signalization • Grade Separation • Blockchain • Marketing/Outreach • Intermodal Connectivity

RICKEY
FMTP

PAC & FLFAC Meetings

The Project Advisory Committee (PAC), an internal body consisting of representatives from FDOT offices related to freight, provided guidance on the development of the plan and helped validate the results along the way.

The Florida Freight Advisory Committee (FLFAC), consisting of representatives from a cross-section of public and private sector freight stakeholders, advised on freight-related priorities, issues, projects, and funding needs. The FLFAC ensured that the objectives and issues identified in the plan would effectively address Florida's freight needs.

Analysis & Data Sets

Analysis	Data
Commodity Flow	FAF/ Modal Datasets
Performance Measures	TPM/ RCI/ HPMS/ Source Book
Bottleneck Analysis	NPMRDS
Travel Time Reliability	NPMRDS
Pavement Conditions	TPM datasets
Resiliency	FHWA Vulnerability Assessment and Adaptation Framework
Empty Back Haul	TTMS/ WIM Data
Freight Cluster Analysis	DOR and DEO Data
Truck Parking Analysis	ATRI and TPAS
Networks	NHFN, SIS, SHS,NHS
Hubs	Modal Hubs
Trend Analysis	Population, employment, visitors, economy, freight, modes
Safety Analysis	CARS and FARS
Energy/ Alternate Fuels	EV, LNG/ CNG, etc.
Panama Canal	FDOT Seaport Study
Trade Regulations	Foreign Trade, PIERS, BTS T-100
Scenario Analysis	Economy and technology
County Freight Profiles	IHS
Intermodal Connectors	ATRI, DEO, DOR, Truck traffic counts, HPMS and others
Rail Highway Grade Separation	FRA Safety + RHCI data
Humped Crossing	RHCI database

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 Measures

Top Challenges

CONGESTION/ BOTTLENECKS

There are growing numbers of vehicles on the road creating a mix of truck and passenger traffic and leading to bottlenecks/congestion and unpredictability in travel times. In 2017, there were 19,100 daily truck hours of delay in Florida.

TRUCK PARKING

In Florida, the limited availability of truck parking spaces has caused overcrowding and overflow at existing truck parking locations. Analysis found that during peak periods truck parking demand can exceed 150 percent in some areas of the state.

EMPTY BACKHAUL

More than half of the trucks coming into the state between the years of 2015 and 2017 were full trucks, in comparison to nearly 38% that left the state during the same time period. 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.

Prioritization Process

Recommendations

GOALS		OBJECTIVES
Safety and security for residents, visitors and businesses	1	Leverage multisource data and [illegible] freight system safety and security
Agile, resilient, and quality transportation infrastructure	2	Create a more resilient multimoda[illegible]
	3	Ensure the Florida freight system [illegible] repair
Connected, efficient, and reliable mobility for people and freight	4	Drive innovation to reduce conge[illegible] improve travel time reliability
Transportation choices that improve accessibility and equity	5	Remove institutional, policy and f[illegible] to improve operational efficiencie[illegible] 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

OBJECTIVE	RECOMMENDATIONS:	Technical Analysis Results	Stakeholder Input	Considering Emerging Market Trends and Opportunities
1	• Identify commercial vehicle high crash segments and intersections, analyze causal factors, and develop counter measure	●		●
	• 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		●	●

Each of the 10 objectives have 5 associated recommendations based on a combination of:

- Technical Analysis Results
- Stakeholder Input
- Considering Emerging Market Trends and Opportunities

Measuring Progress

-Living prioritization method

-Live dashboard

-Continuous planning matrices for funding & projects

Immediate Implementation Opportunities

Certain project types that are also high priority can be initiated immediately to facilitate freight mobility improvements:

- **Truck parking**: revamping existing rest areas to add truck parking capacity and reconfiguring the existing ROW to increase truck parking space
- **Bottlenecks:** Use technology, ITS, and innovative techniques to enhance fluidity, throughput, and efficiency
- **Safety:** Improve warning and protection at rail-highway at-grade rail crossings
- **Congestion:** Improve truck route signage, social media platforms for truck driver information on roadway conditions

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