

# Florida Freight Advisory Committee Meeting

August 17, 2020



# Call to Order



# Roll Call

Organization	First Name	Last Name
Broward County's Port Everglades Department	David	Anderton
Genesee Wyoming Railroad	Joe	Arbona
Space Florida	Mark	Bontrager
Florida Fruit and Vegetable Association	Tori	Bradley
Lakeland Linder International Airport	Gene	Conrad
Florida TransAtlantic Holdings	John	Dohm
JAXUSA	John	Freeman
Interport Logistics, LLC	Gary	Goldfarb
Enterprise Florida	Mason	Henson
Atlantic Logistics Inc.	Robert	Hooper
Franklin Street	Larry	Kahn
FEC	Bob	Ledoux
FAU - Freight Mobility	Dan	Liu
Winter Haven Economic Development Council	Bruce	Lyon
Walmart	Robert	Midgett
City of Pensacola/Port of Pensacola	Amy	Miller
Florida Trucking Association	Alix	Miller
University of South Florida	Seckin	Ozkul
Crowley Logistics	Stan	Parkes
Brevard County	Troy	Post
Florida Ports Council	Mike	Rubin
Broward Metropolitan Planning Organization	Gregory	Stuart
UNF	David	Swanson
US Sugar	Malcolm	Wade

# Approval of Meeting Minutes

# Upcoming Committee Re-Cycle

# Recap

- In March of 2019, we updated the FLFAC bylaws to address membership turnover. An online poll determined that the committee wanted:
  - a 3 year committee member cycle
  - application submissions for replacing current committee members
  - some sort of guidelines/benchmarks to remain on committee – attendance being primary guideline

# Summary of Bylaw Changes

- This year, in October/November:
  - We will be doing another cycle of staggered renewal.
  - Those FLFAC members who joined the committee for the first time last March/April will remain on for another half-cycle (1.5 years).
  - Those FLFAC members who elected to reapply last time will step down, and a group of new FLFAC members who are selected through application will join the committee for a 3 year cycle.
    - If you have already been on the committee for a full cycle, you may still reapply, and in the event that there is space available on the committee, you may be selected again.
  - A new chair/co-chair will be voted on.

# Truck Parking Availability System (TPAS)



- TPAS Deployment Locations
- Project Schedule
- TPAS Documents
- TPAS Architecture





# TPAS Supports

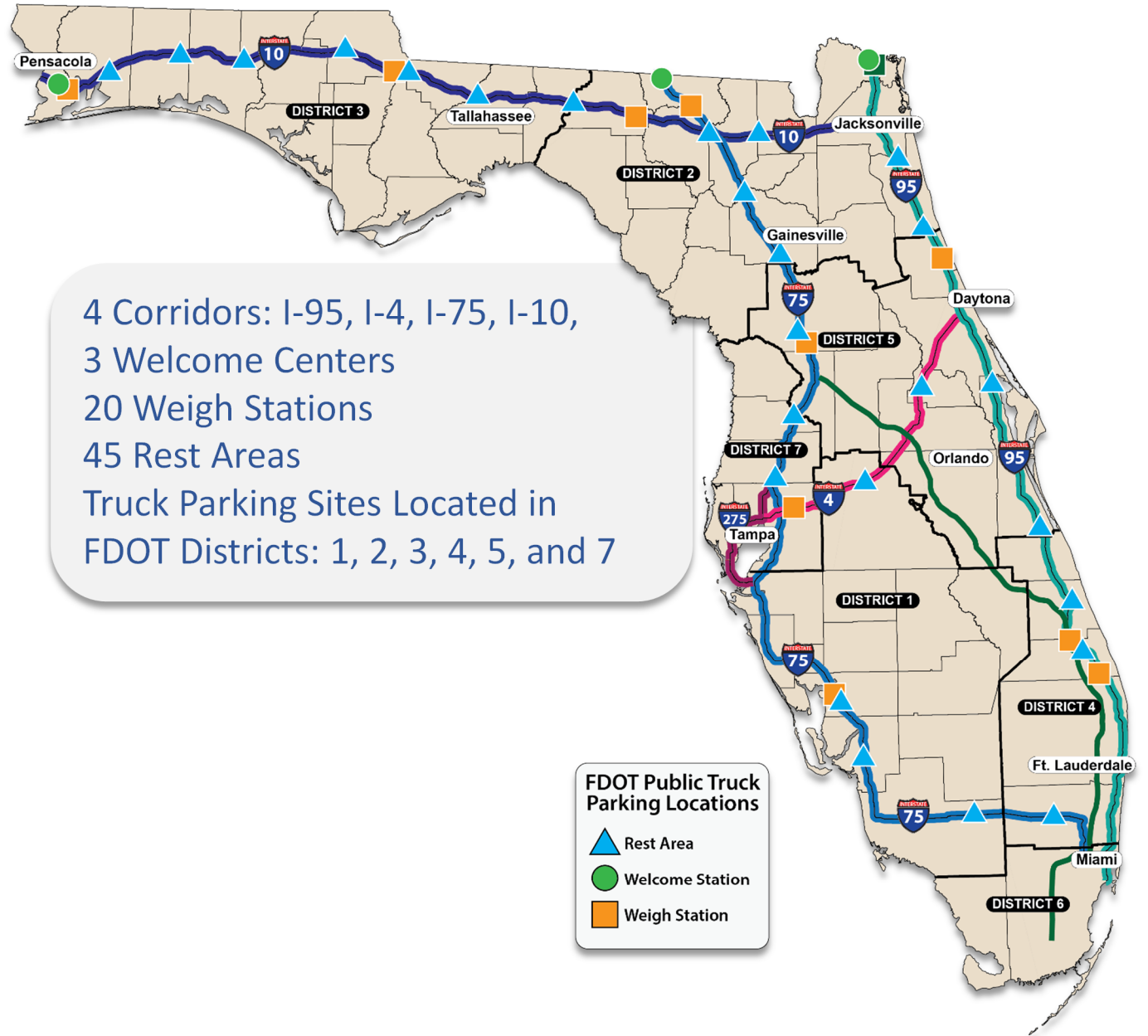
- Federal Motor Carrier Safety Administration (FMCSA) Hours-of-Service regulation
- Safe and convenient parking options
- Just-in-time delivery
- Advance planning for freight operation
- Reduced truck parking violations
- Electronic monitoring and dissemination of information



# TPAS Initial Locations

- 45 rest areas
- 20 weigh stations
- 3 welcome centers

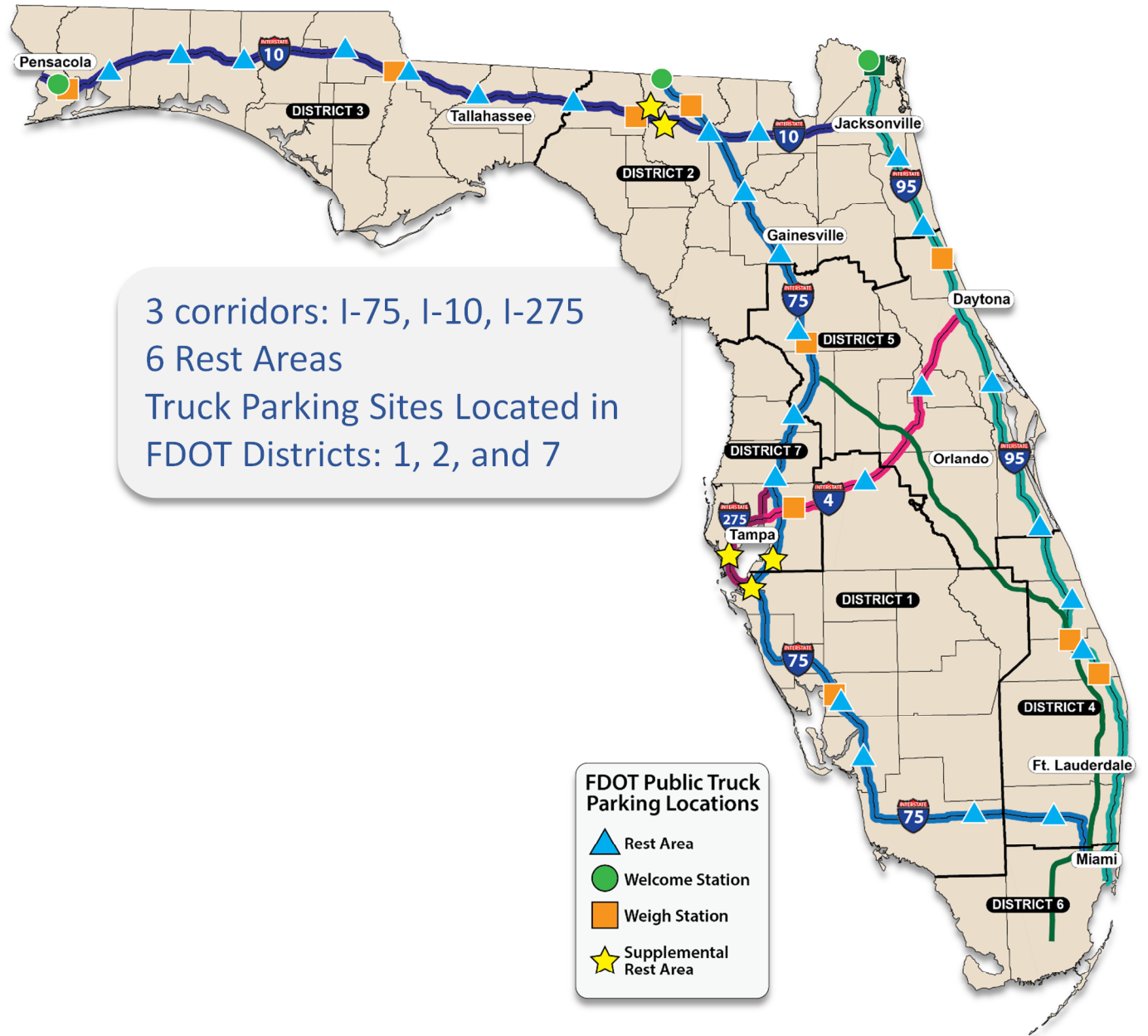
<b>Number of Truck Parking Spaces Monitored</b>	<b>2,352</b>
Wireless Detection System (WDS)	1,875
Microwave Vehicle Detection System (MVDS)	477



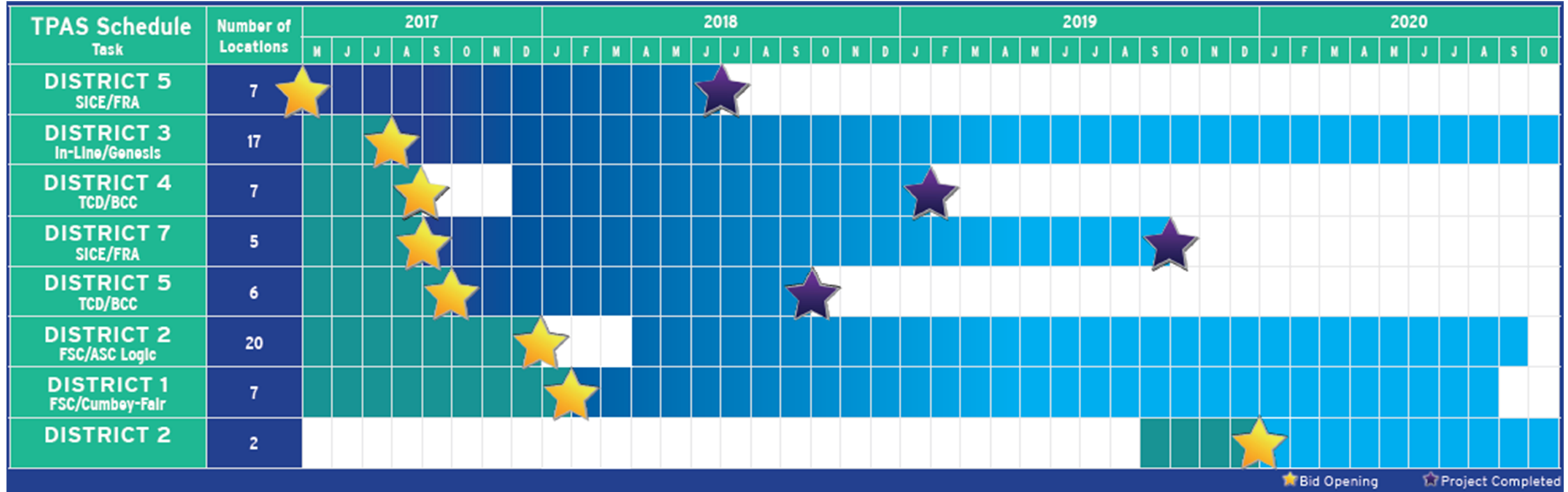


# TPAS Supplemental Locations

- 6 Additional Rest Areas
  - I-10 EB Suwannee County
  - I-10 WB Columbia County
  - I-75 SB Hillsborough County
  - I-75 NB Hillsborough County
  - I-275 SB Pinellas County
  - I-275 NB Manatee County



# TPAS Schedule



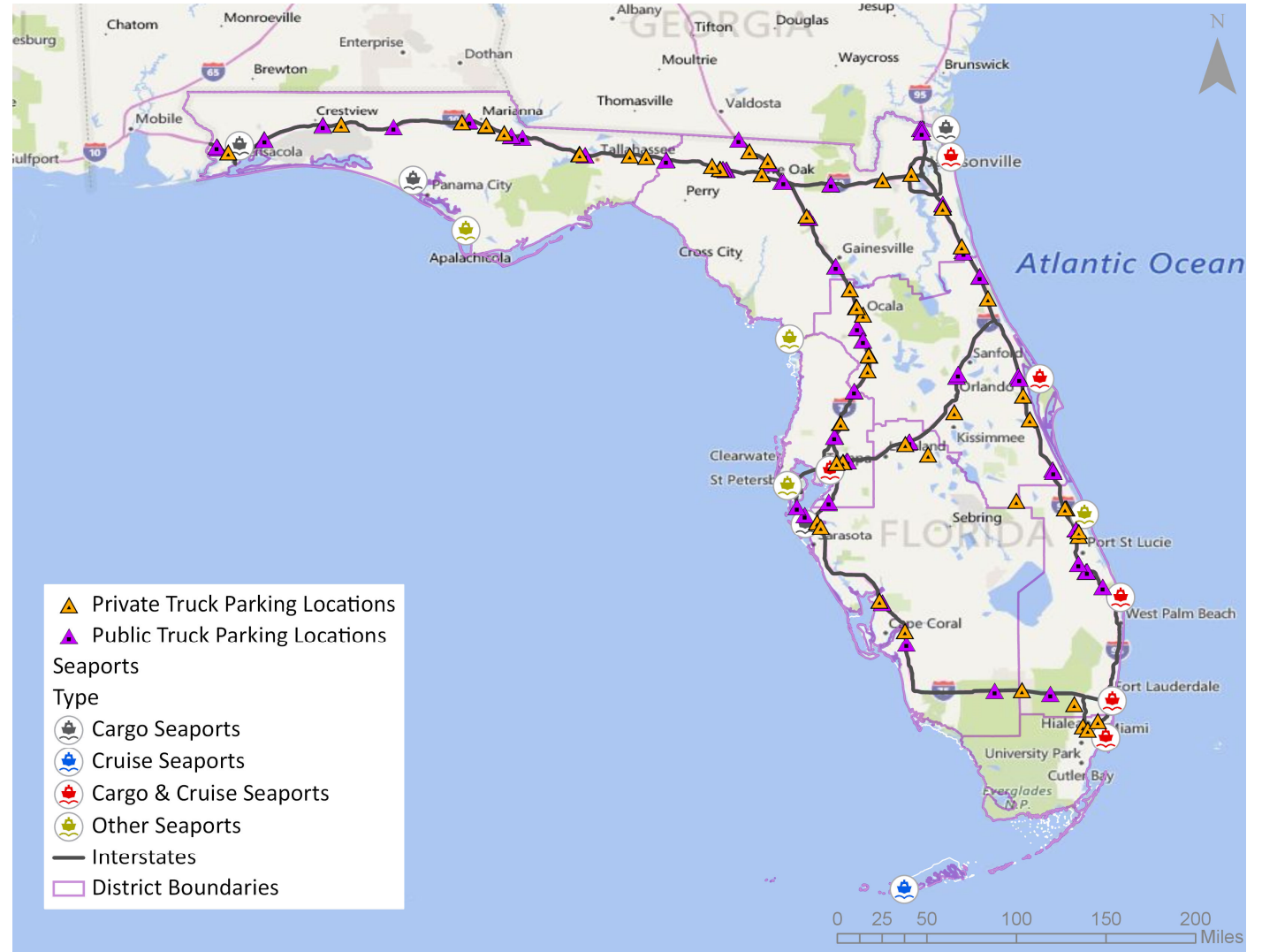
# TPAS Program Delivery



Three-stage approach to statewide comprehensive truck parking solution

# Private Parking Availability – Stage 3

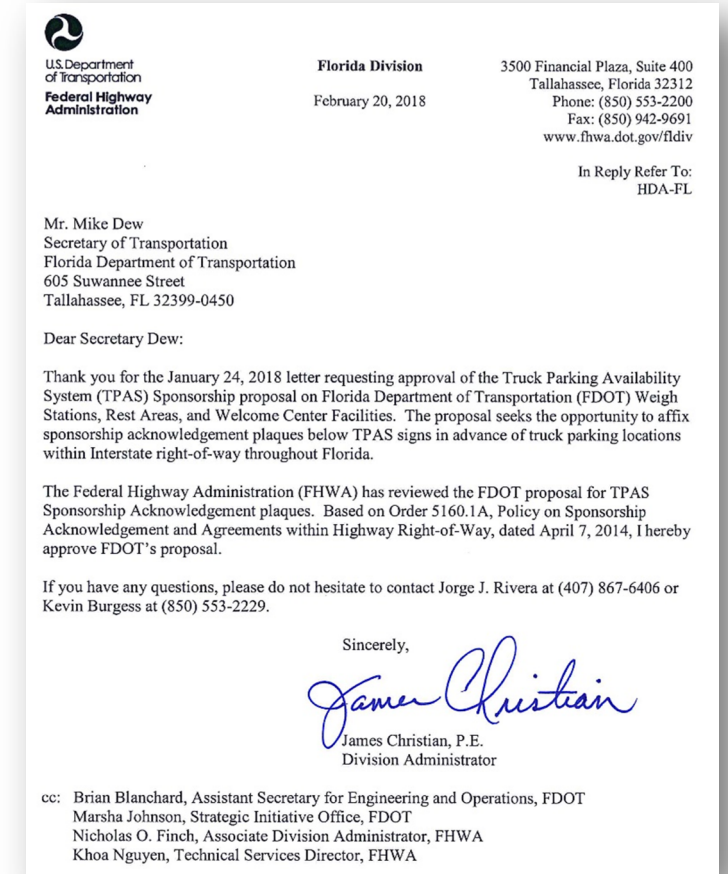
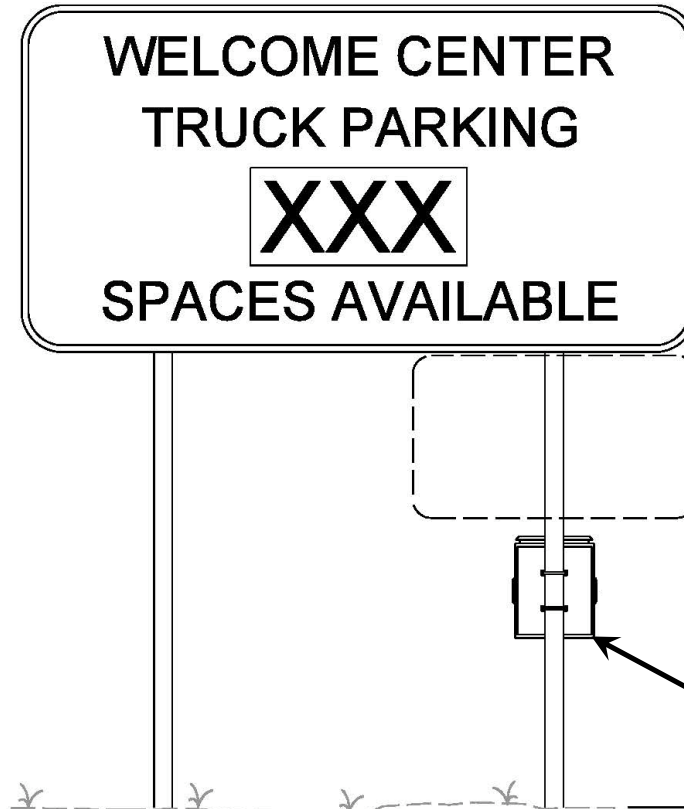
- Incorporation of private facilities
- Based on existing locations
- Can include new, strategic locations for staging near ports/freight generators



# TPAS Sponsorship Sign

## TPAS Supplemental Sponsorship Sign

- 6' X 4' Size of the Supplemental Sponsorship Sign
- Supplemental Sign located right justified below TPAS Sign
- FDOT received FHWA Approval



**Supplemental  
Sponsorship Sign**

**TPAS Sign Cabinet**



# Information Dissemination – FL511

## FL511 Mobile App Truck Parking Parking Facilities List View

**FL511 Website Truck Parking Facility Map View**

Facility Name	Region	County	Highway	Direction	Mile Marker	Available Spaces	Total Spaces	Last Updated
I-4 Eastbound Rest Area	Central	Seminole	I-4	East	96	4	24	May 25, 2018, 10:46 AM

FL511 Website Truck Parking Facility Map View

**FL511 Mobile App Truck Parking Facilities List View**

Facility Name	ETA	Current Spaces
Alachua County Rest Area	ETA 35 minutes (38 miles)	Current: 4/12 spaces
Marion County Rest Area	ETA 64 minutes (70 miles)	Current: 4/8 spaces
Sumter County Rest Area	ETA 101 minutes (111 miles)	Current: 6/15 spaces
Pasco County Rest Area	ETA 128 minutes (141 miles)	Current: 5/13 spaces



# Freight Studies for Improved Mobility & Safety



FLFAC Meeting, August 17, 2020

# Partners



**FDOT TSM&O Consortium**  
(MPOs, Cities, Counties, Transit)



**FDOT DISTRICT 5**  
(TSM&O, Freight)  
PM: Noemi Rodriguez



**Consultant Team**  
PM: *Aung Thurain*



# Goals & Objectives

## Project Goal:

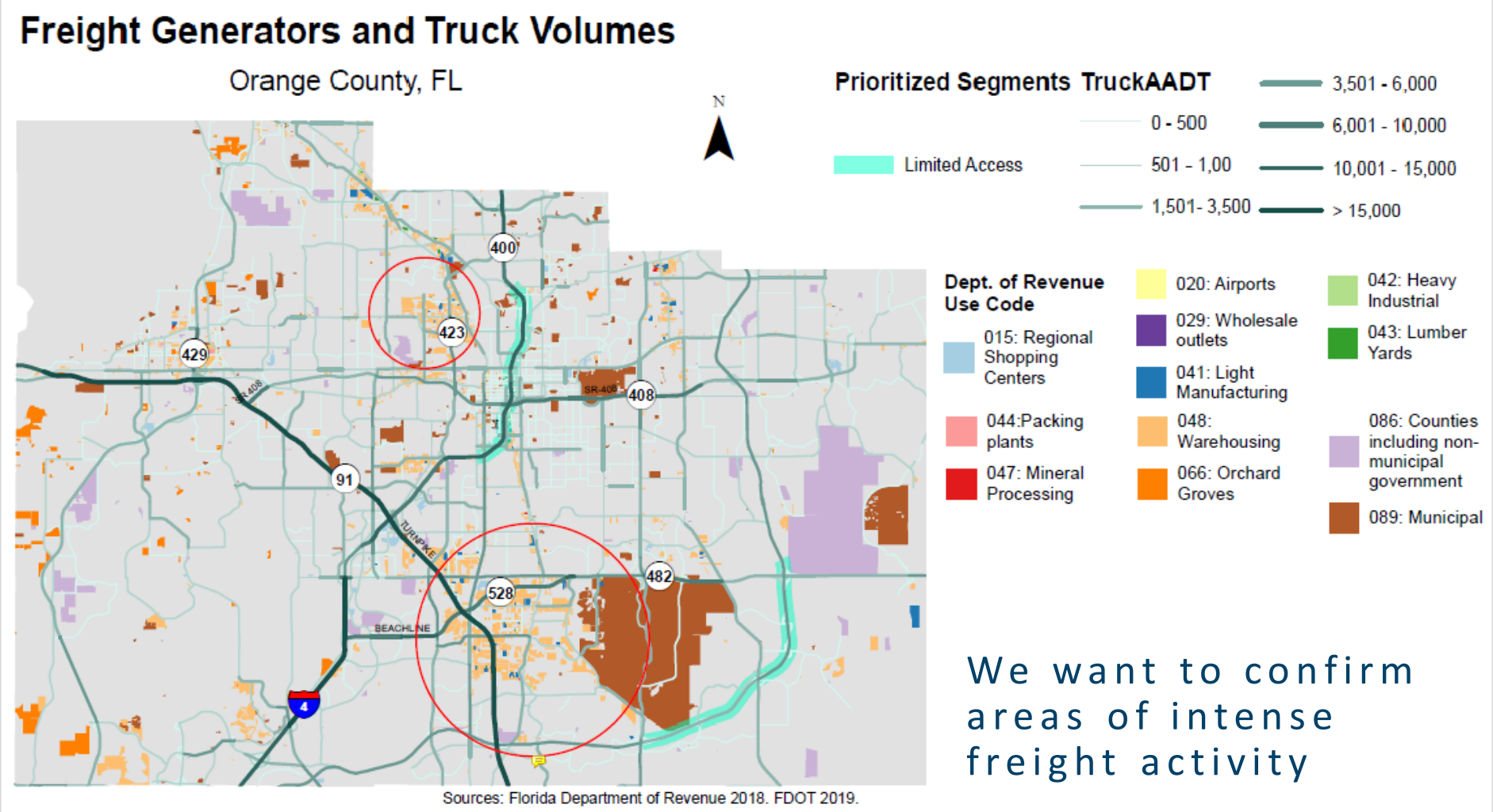
- Improve Safety & Efficiency of freight movement through the Identification of TSM&O strategies & technology

## Stakeholder Involvement Objectives:

- We are here to serve the transportation challenges and needs of the freight industry partners
- We want your input on operation and safety issues on the roadway network
- We want to confirm areas of needs
- We want to share information and review solutions founds through research and add additional solutions and hear your concerns
- We want to get your perspective on Connected Vehicles

# Identified Locations with Freight Movement & Safety Issues

## Arterial Roadways



# Potential TSM&O Strategies

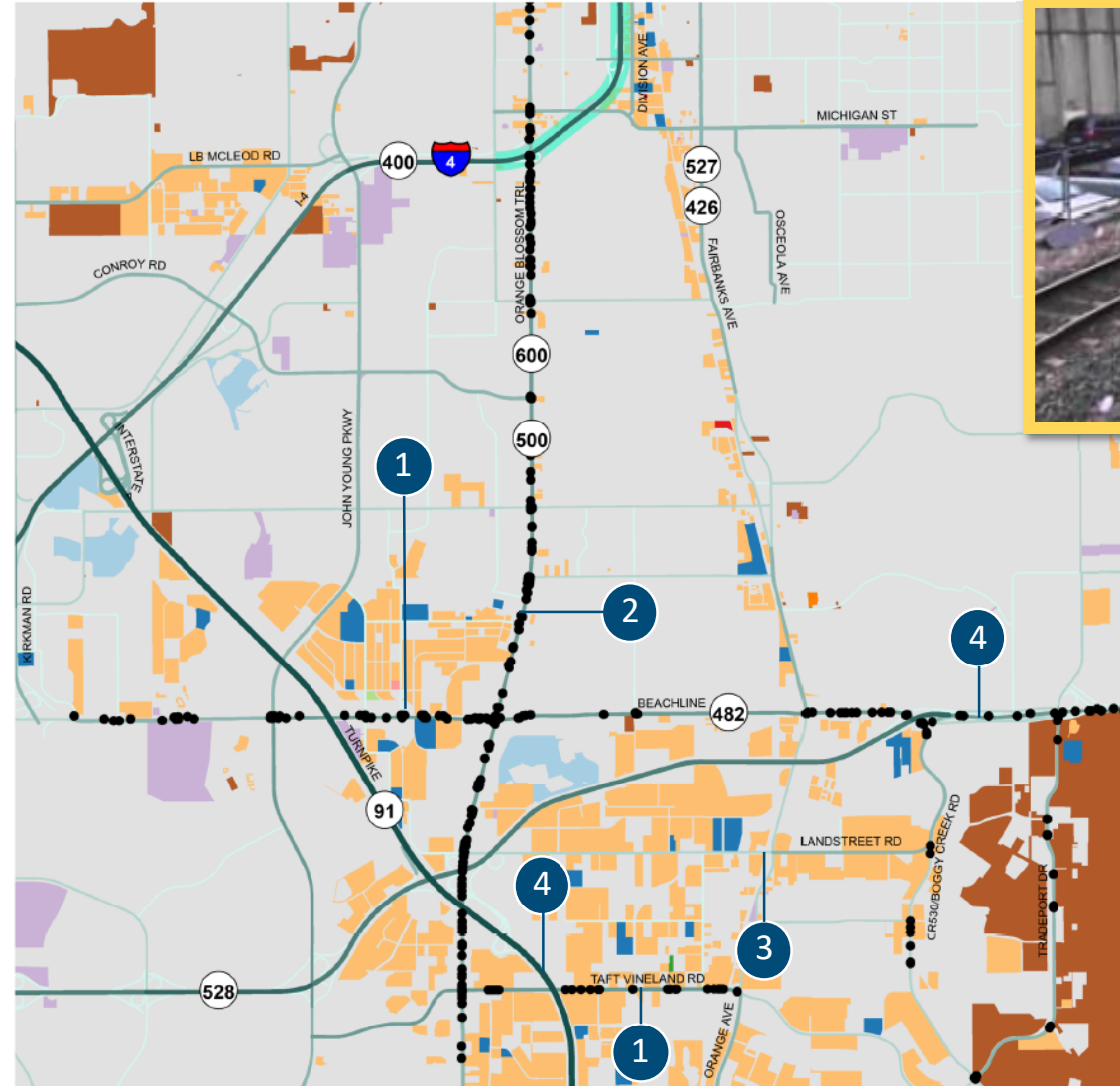
## 1 Freight Signal Priority



## 2 CV Safety Applications



## 3 Advanced Train Detection System



## 4 Truck Specific Dynamic Message





# Freight Signal Priority (FSP)

## Benefits

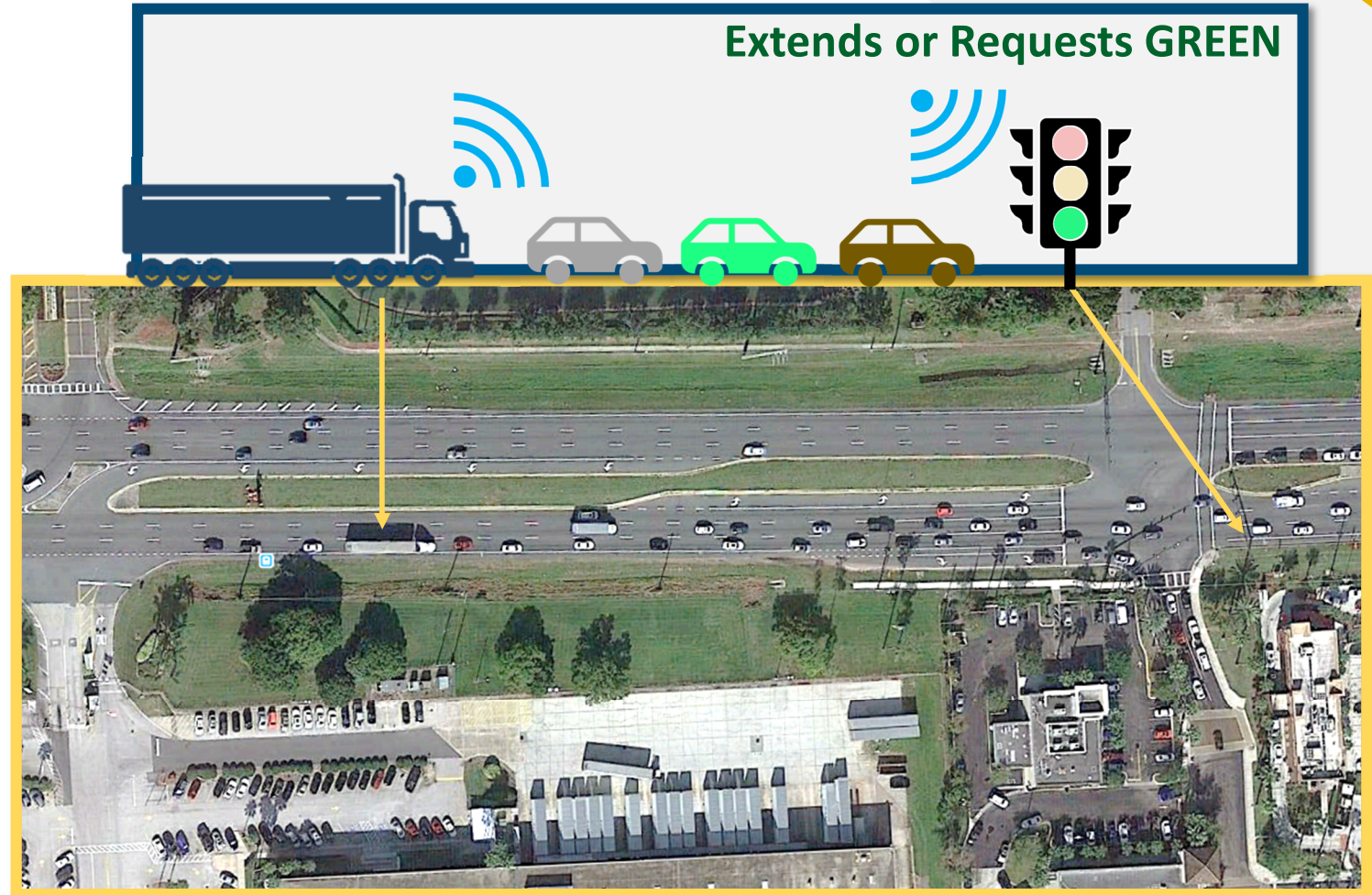
- ❑ Reduces delays and travel time
- ❑ Reduces truck-related rear end collisions
- ❑ Reduces fuel consumption and emissions

## Corridor Characteristics

- ❑ Freight & industrial land use
- ❑ High truck crash rate – rear ends
- ❑ Presence of signal delays (off-peaks)

## Seeking Input on:

- ❑ Additional locations/movements for FSP
- ❑ Influence schedule or route choice
- ❑ Device installation for freight vehicle recognition



# Advanced Train Detection

## Delay Reduction Benefits

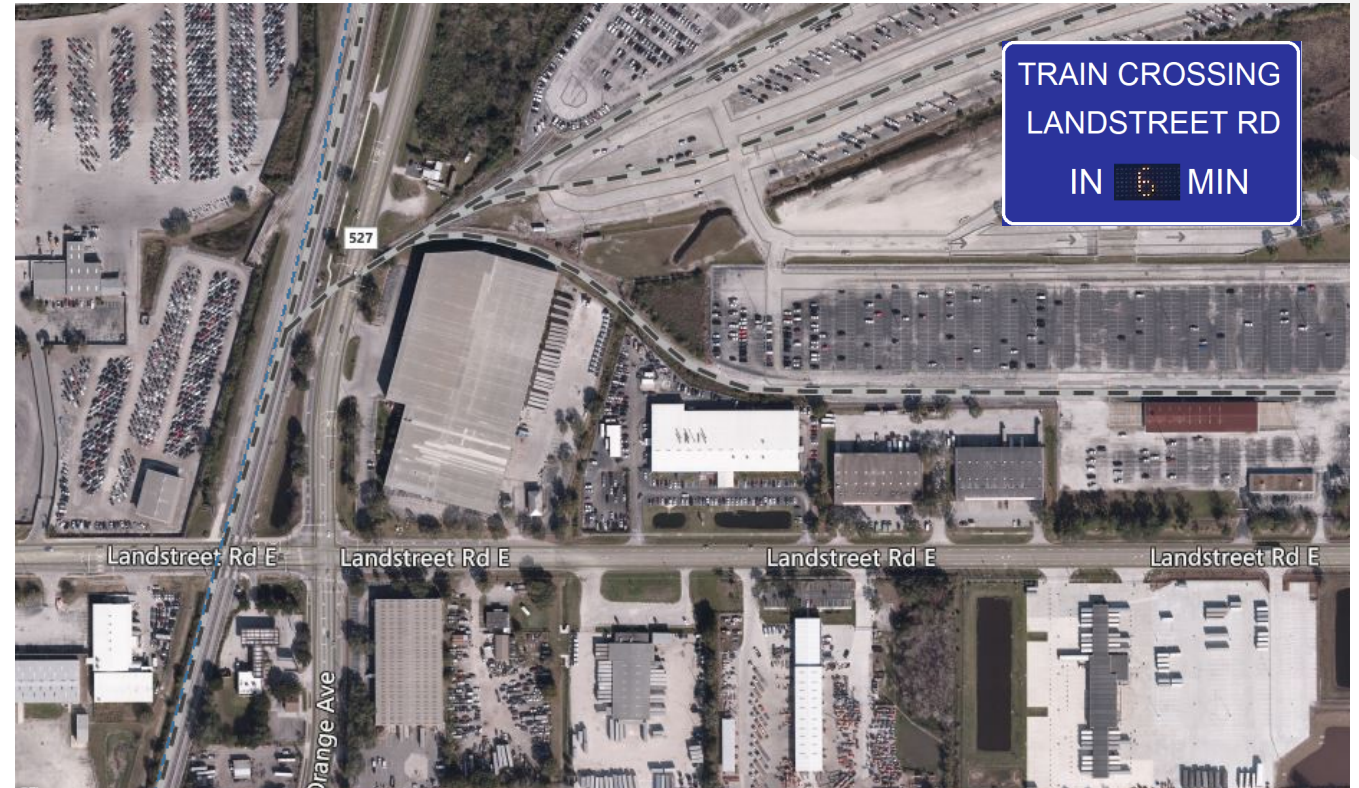
- ❑ Advanced signage – Alternate routing
- ❑ Pre-emption recovery phase – Extended GREEN after train crossing

## Corridor Characteristics

- ❑ At-grade crossings on freight corridors
- ❑ Train frequency, duration of crossings
- ❑ Traffic signals in vicinity

## Seeking Input on:

- ❑ Safety and delay concerns at crossings
- ❑ Route avoidance due to crossings
- ❑ Message content and location of advanced warnings

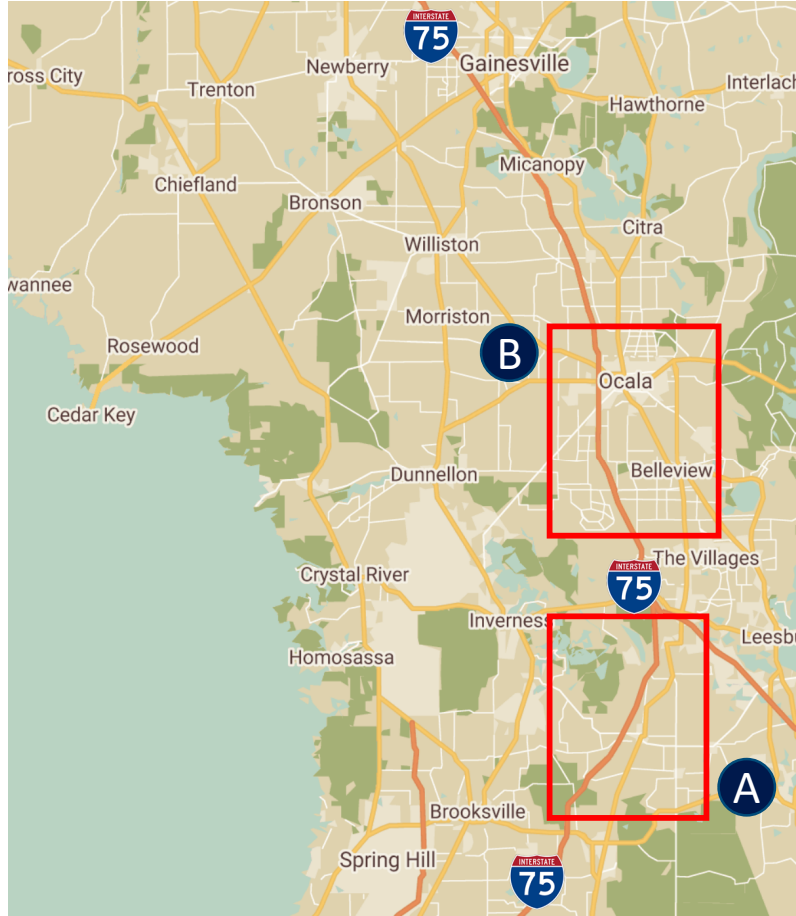




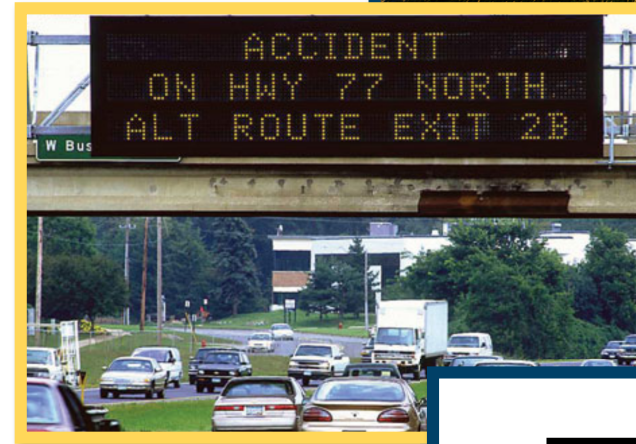
# Identified Locations with Freight Movement & Safety Issues

## Limited Access Roadways – I-75

- A** Sumter County:  
Begin MM 306  
End MM 329
- B** Marion County:  
Begin MM 337  
End MM 358

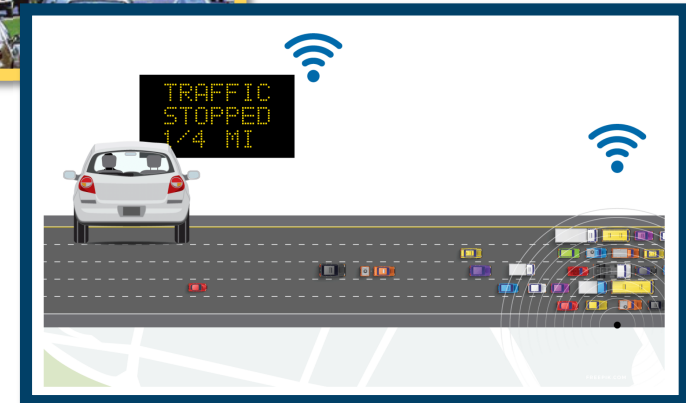


Parking Availability



Diversion Routing

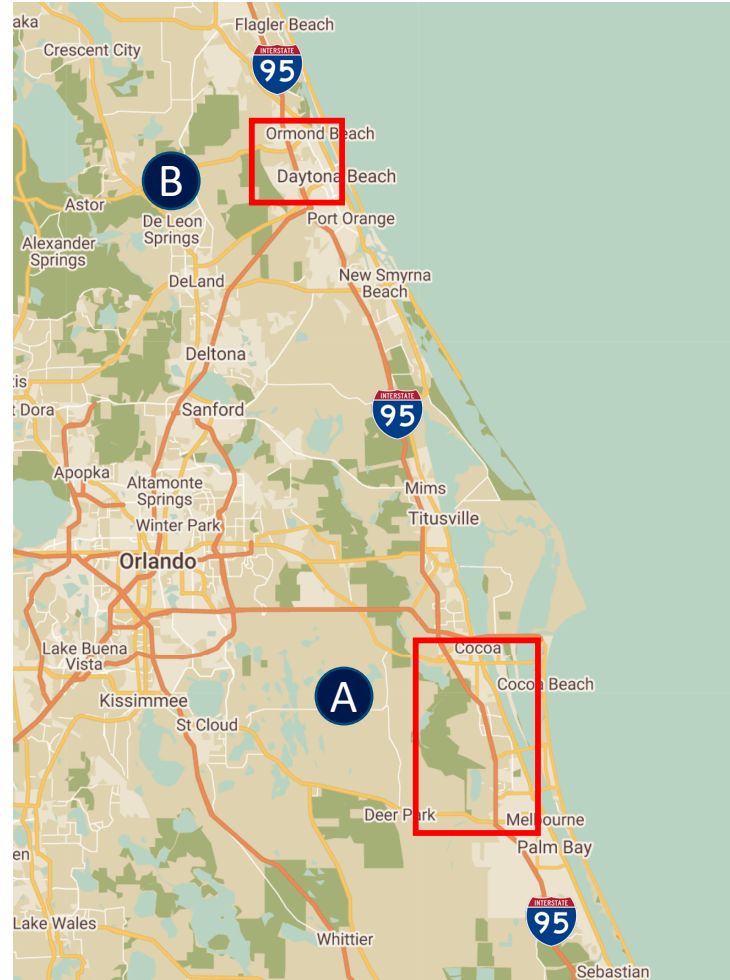
Queue Warning



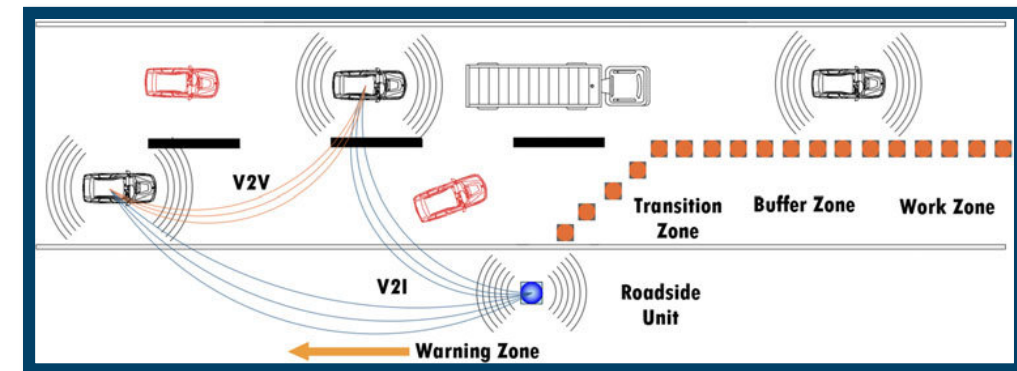
# Identified Locations with Freight Movement & Safety Issues

## Limited Access Roadways – I-95

- A** Brevard County:  
Begin MM 180  
End MM 202
- B** Volusia County:  
Begin MM 260  
End MM 268



## Comparative Travel Time Signs



Work Zone Warning

# Truck Parking Availability

## Benefits

- ❑ Provides downstream parking info
- ❑ Fulfills HOS requirements
- ❑ Reduces parking overflows

## Corridor Characteristics

- ❑ Limited access facility
- ❑ Sites at/approaching capacity
- ❑ Available downstream private parking availability

## Seeking Input on:

- ❑ Current source of parking information
- ❑ Content of message
- ❑ Needs and issues on arterials (delivery/pick-up locations)





# Queue Warning

## Benefits

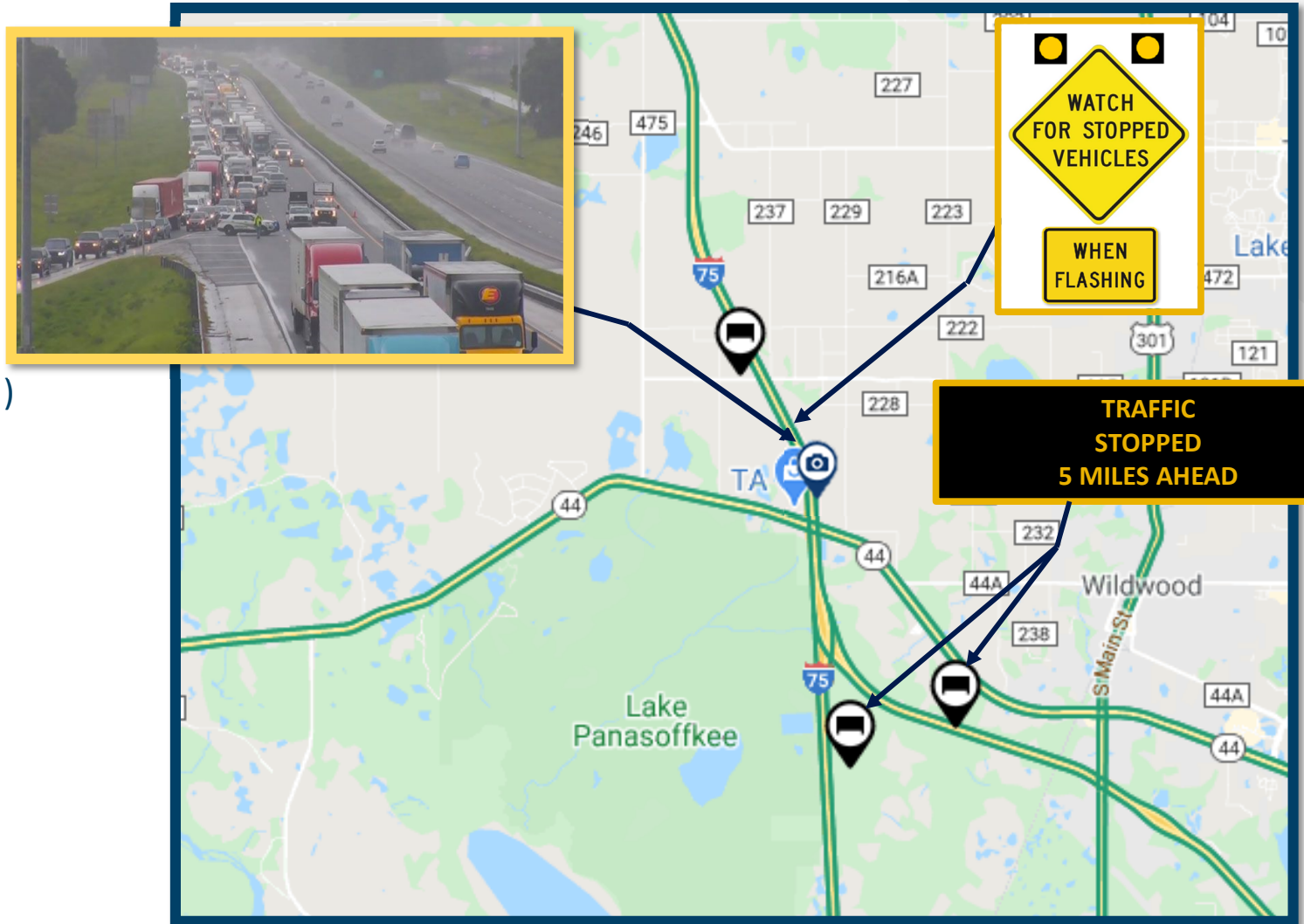
- ❑ Real time queue information
- ❑ Prevent secondary crashes
- ❑ Improve mobility

## Corridor Characteristics

- ❑ Limited access (e.g. I-75 & I-95)
- ❑ High occurrence of incidents causing lane closures
- ❑ CCTV and DMS availability

## Seeking Input on:

- ❑ Current medium for receiving traffic condition information
- ❑ Other types road condition information desired
- ❑ Identification of locations within FDOT District-5



# Input on Potential Improvements

## Mobility

- Alternate Routing or Comparative Travel Times
- Congestion/Delay Prediction
- Work Zone Information & Warning (e.g. ramp, lane closures)
- Traffic Signal Priority (GREEN extension, Reduced RED time)
- Increased Coverage of Truck Parking Availability

## Safety

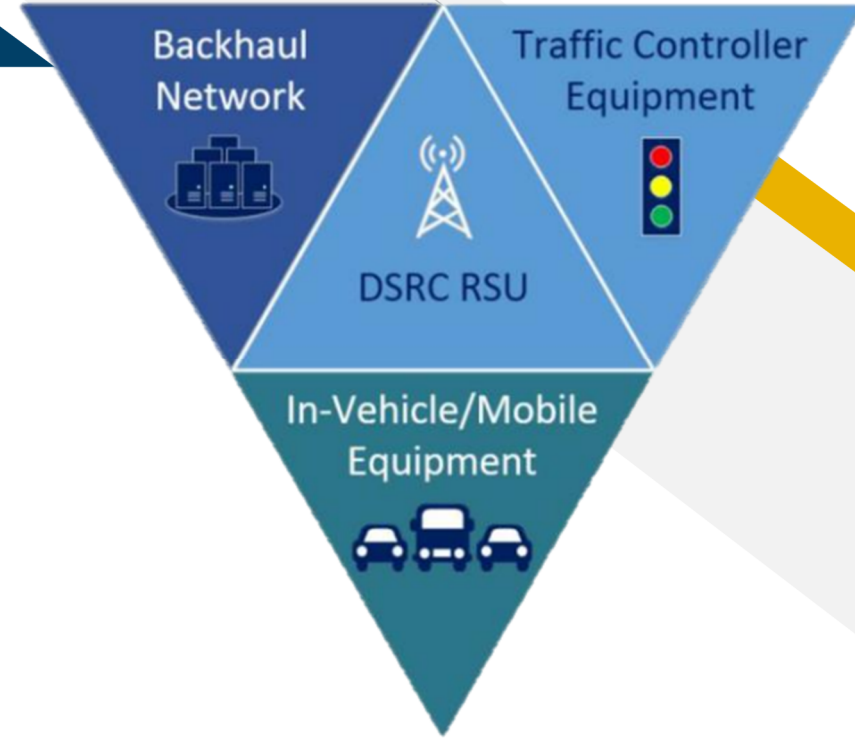
- Advance Queue Warning
- Enhanced Road Hazard Warning
- Enhanced Road Geometry Warning
- Enhanced Conflict (Crash Mitigation) Warning

## Additional Solutions

- Are there other technologies that you have encountered that have benefited you? Location specific or in general?

# Road Side Units (RSU)

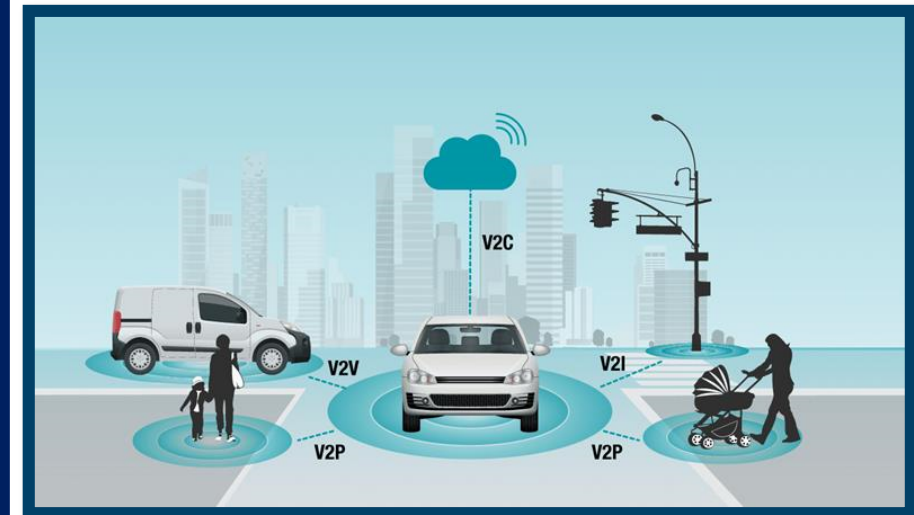
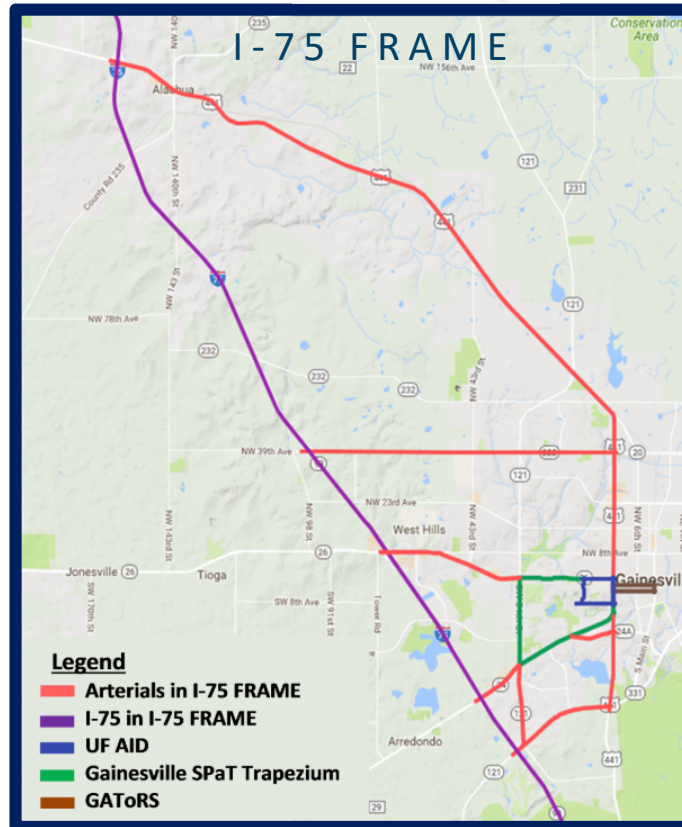
- Broadcast BSM, SPaT and MAP messages
- Connect to comm. Networks (WiFi, LTE)
- Facilitate V2I communication



SPaT Display

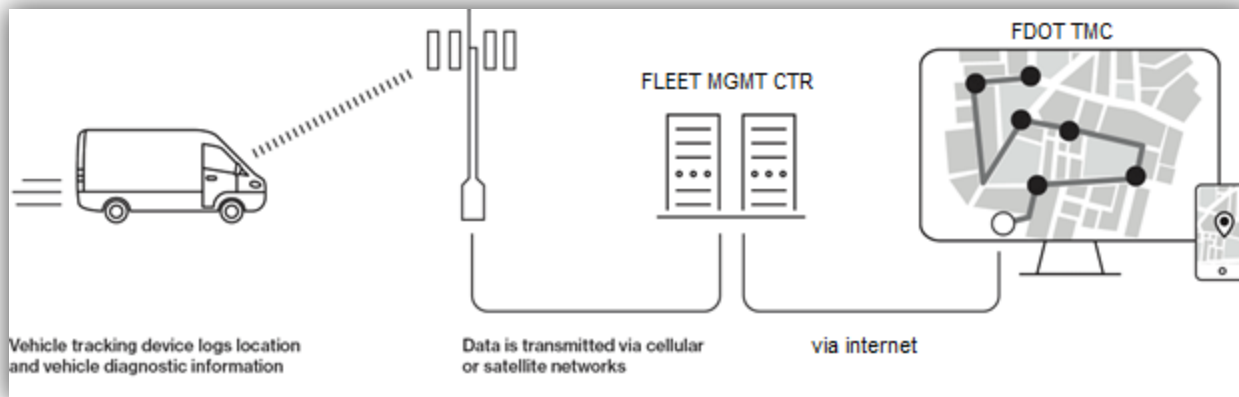


PED Crossing



# On-Board Units (OBU)

- ❑ D5 Testing RSU/OBU Compatibility
  - [http://www.cflsmartroads.com/projects/CVAV\\_D5\\_Testing.html](http://www.cflsmartroads.com/projects/CVAV_D5_Testing.html)
- ❑ Data security
  - ❑ Data encryption/anonymous
  - ❑ Anonymous – multiple ID changes
  - ❑ No Tracking – provides info when in range of RSU
- ❑ Device installations on emergency vehicles
- ❑ Dispatch software & OBU Emulators





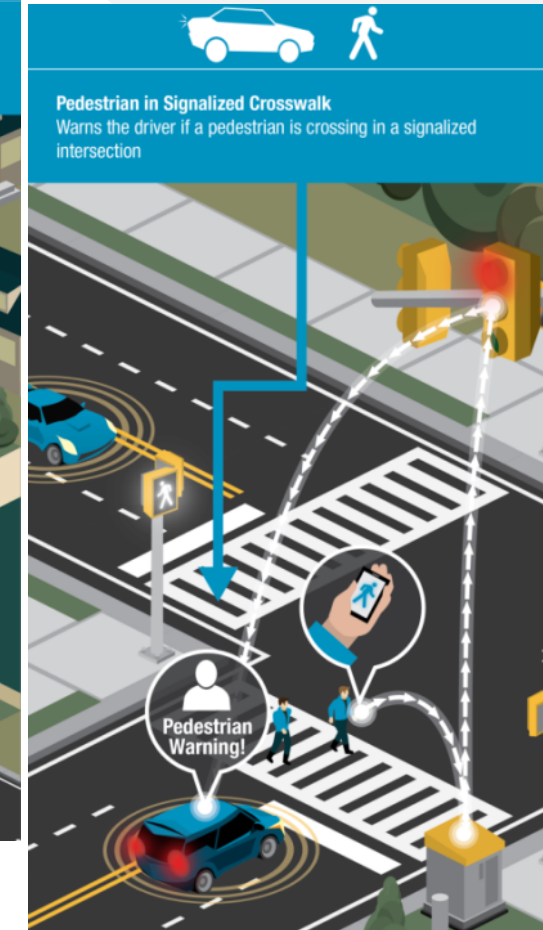
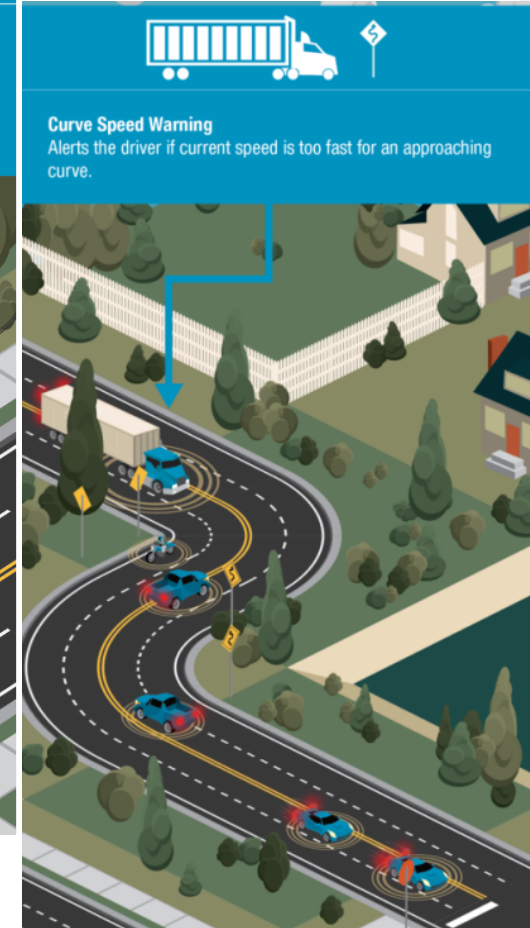
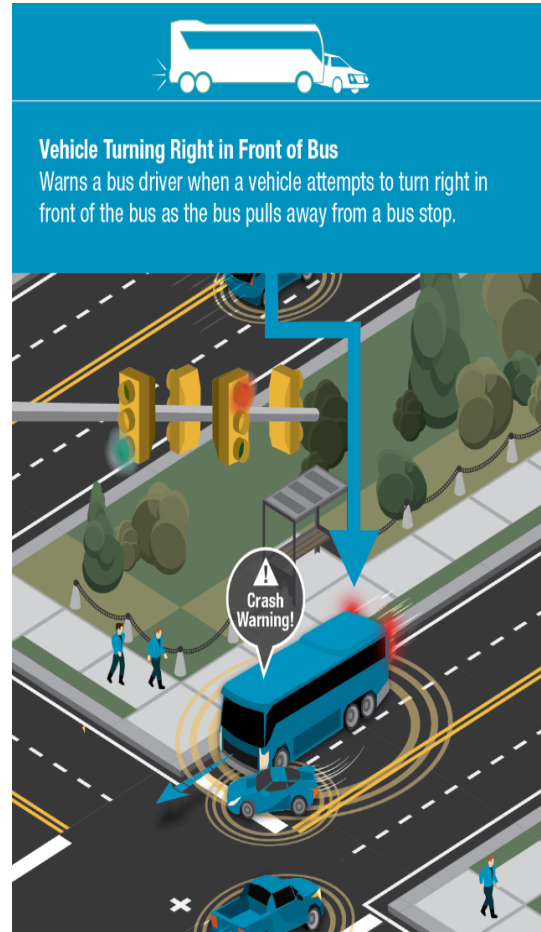
# Connected Vehicle Applications

## ❑ Safety applications beyond what the vehicle can “see”

- ❑ Curve speed ⚠
- ❑ Pedestrian crossing ⚠
- ❑ Crash avoidance ⚠
- ❑ Work zone warning ⚠‡
- ❑ Queue warning ⚠‡
- ❑ Weather warning ⚠‡
- ❑ Incident Alerts ⚠‡

## ❑ Signal Priority Request ⚠‡

⚠ OBU ‡ Dispatch Software



# OBU Installation Discussion

How do you feel about the future of CV for your business?  
Are you willing to install On-Board Units on your vehicle?

- Let's do it
- This make some sense, but I need more information and assurances
- No
- Other



**What are your feelings about CV?**

# Dispatch Software Discussion

## Potential connectivity of dispatch software to FDOT:

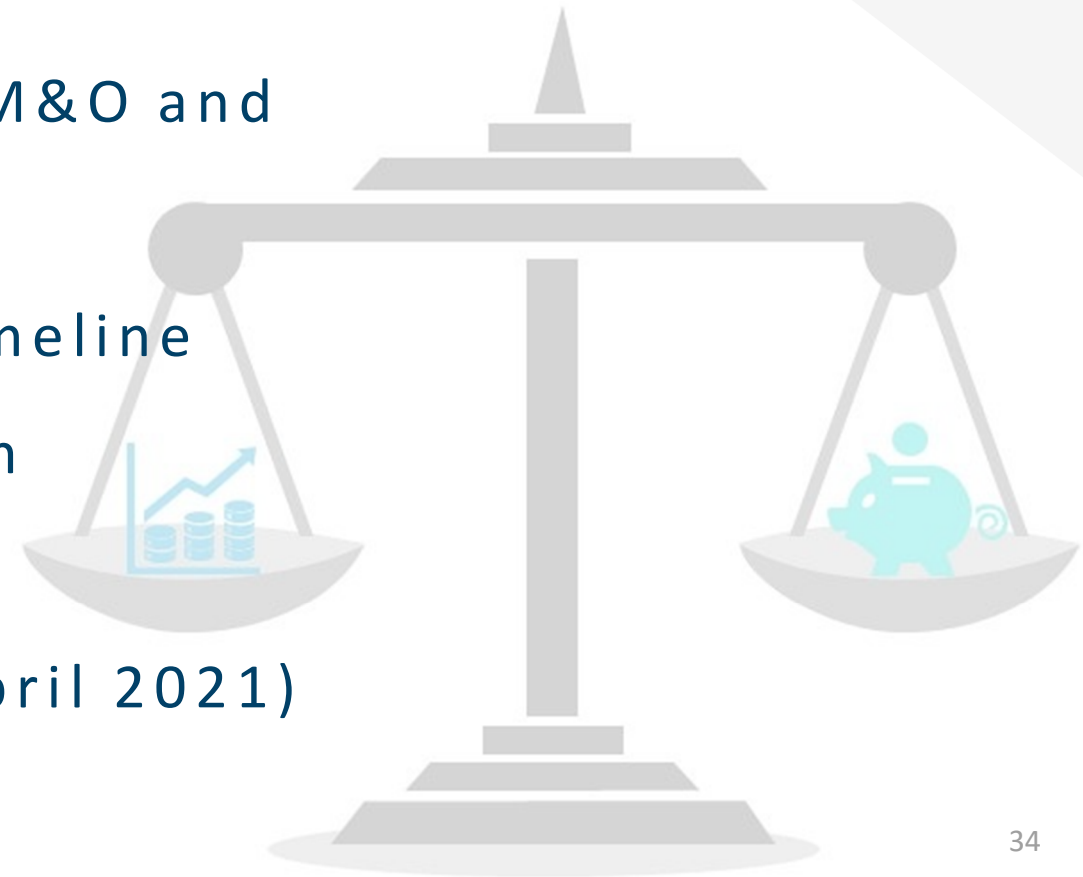
- What dispatch software/on board equipment are you using?
- Is there a central platform or industry standard?

## Are you willing to let us tie into your dispatch software?

- Let's do it
- This make some sense, but I want some assurance before you put something on my dispatch software
- This make some sense, but I need more information and assurances
- No
- Other

# Next Steps

- ❑ Evaluate needs from stakeholder input and data collection
- ❑ Work with you to address concerns and provide additional information
- ❑ Identify opportunities to deploy TSM&O and CV strategies
- ❑ Develop deployment priority and timeline
- ❑ Develop concept plans for near-term deployments
- ❑ Present findings to Stakeholders (April 2021)







# Questions?

**Please take our survey:**



<https://arcg.is/00Pj11>





**Thank You!**



# Florida Regional Supply Chain Optimization Model Overview of the Approach and Outcomes

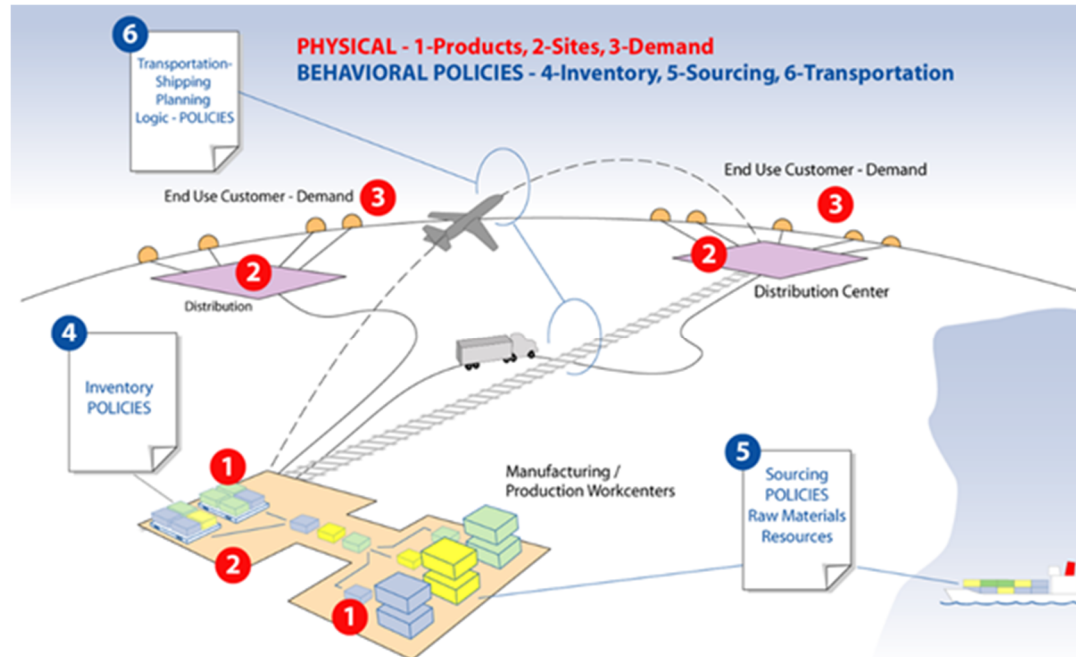
Presented to Florida Freight Advisory Committee (FLFAC)  
August 17, 2020



# Optimization Objectives

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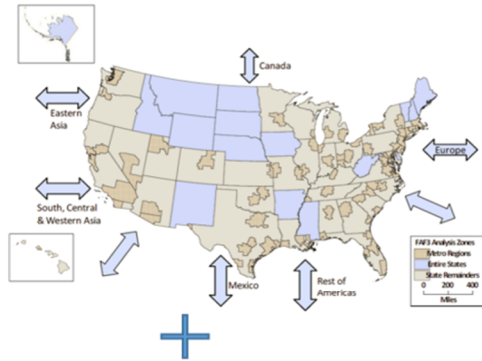
- Reduce business transportation costs
  - Up to 80% of a products' total **landed cost** is built-in to the supply chain network design
  - Optimization can also address other goals:
    - Speed to market
    - Reliability
    - Resiliency
- Truck congestion



# Integrating Public and Private Data



**Freight Analysis Framework (FAF-4)**  
Reports commodity origin/ destination (O/Ds) by tonnage and value for 123 domestic regions on 43 commodities & 8 modal categories.



**Trade data:** import/ export data that provides better accuracy on true origin and destination of international shipments

## quèt•ica

Quetica provides unparalleled knowledge of freight data; using both public and private sources

### Customized Freight Data Solutions

County / TAZ  
Commodity Flows

Equipment type from  
regional data sample

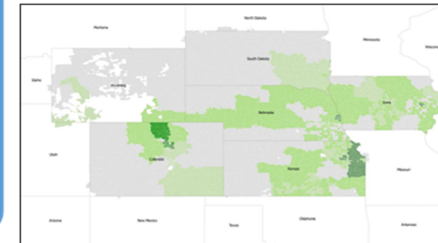
Meaningful cost  
metrics



**Powerful freight transportation and supply chain analytics**

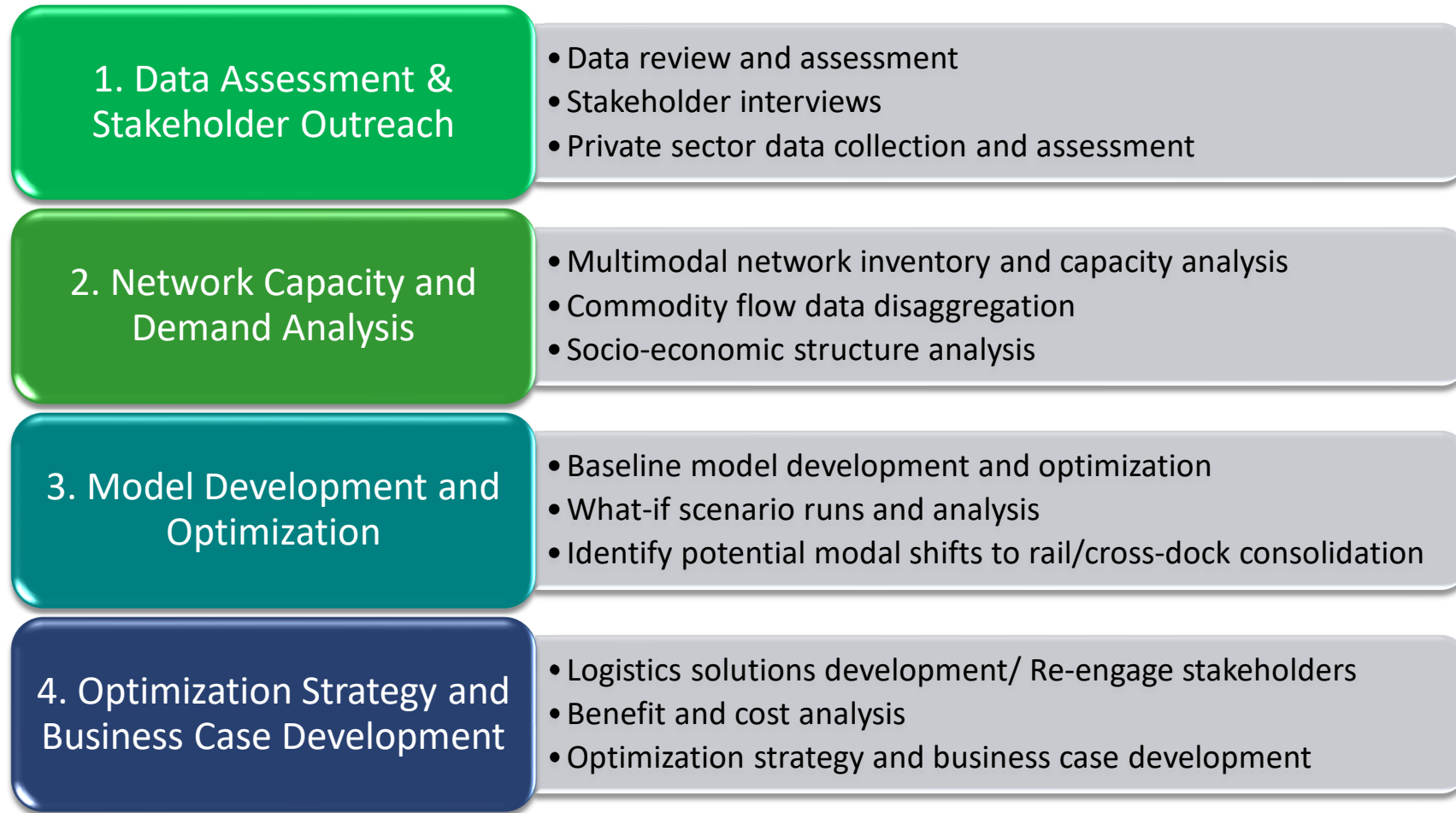
### Quetica's Shipment Data Warehouse:

Data from freight shipment documents. E.g. Midwest/Nebraska



**Regional Business Data and Analytics:** Using our history and experience Quetica works with companies to assemble freight document samples from the region.

# Network Optimization Approach





# Potential Scenario Analysis

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## *Scenario*

## *Justification*

1. Intermodal  
Service Options

- Increase access to rail for containerized
- Improve utilization / reduce costs

2. Transload

- Increase access to rail car-load
- Improve utilization / reduce cost

3. Consolidation/  
Deconsolidation

- Improve equipment utilization
- Reduce costs and truck miles

4. Intracoastal  
Barge

- Options for water access and connectivity
- Reduces truck congestion

# “What-If” Scenario Analysis

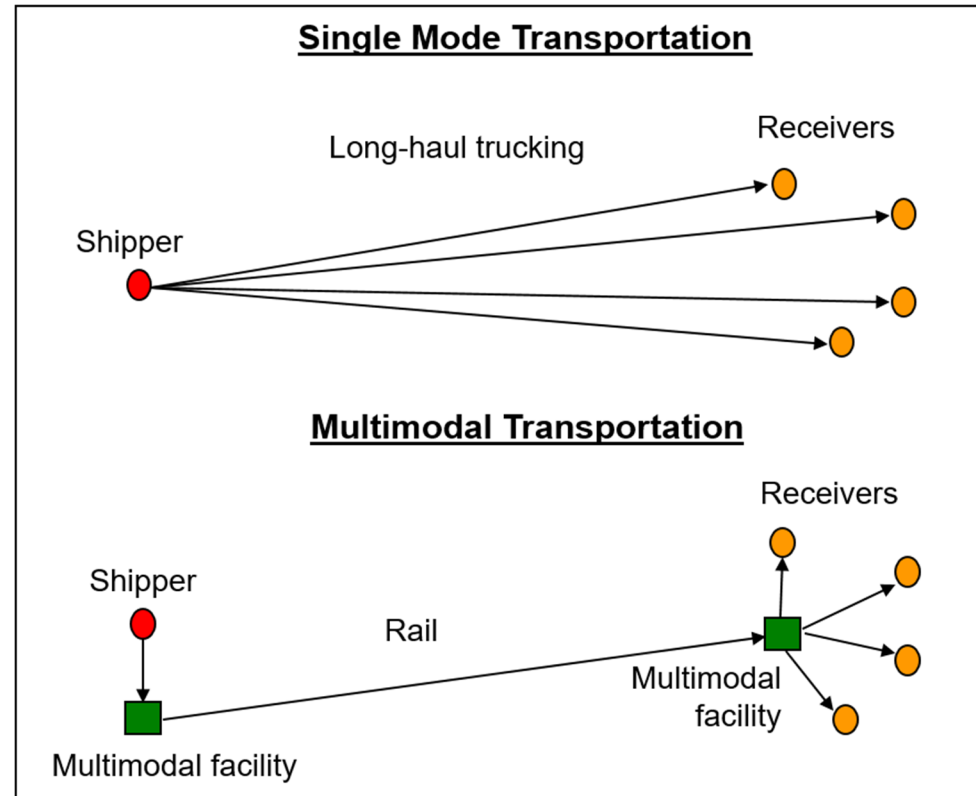
42

- Objective: Optimize networks to reduce transportation costs
  - ▣ Test network changes/investments
- Geography:
  - ▣ all counties in Districts 2 and 3
- Includes:
  - ▣ Locations (county level)
  - ▣ Market sizing
  - ▣ Cost savings for total network improvements
  - ▣ Cost/Benefit and ROI analysis

# Transloads Analysis: Basic Concept

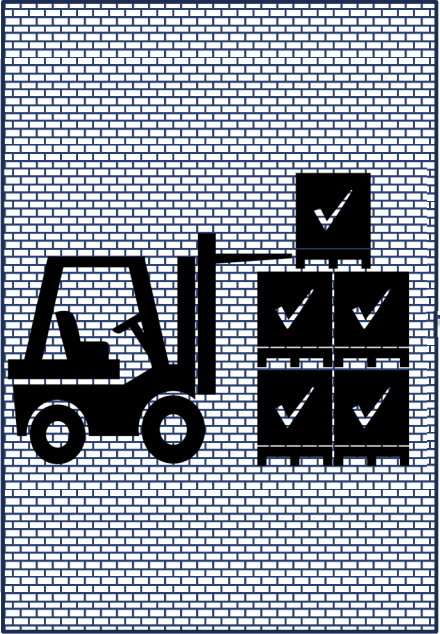
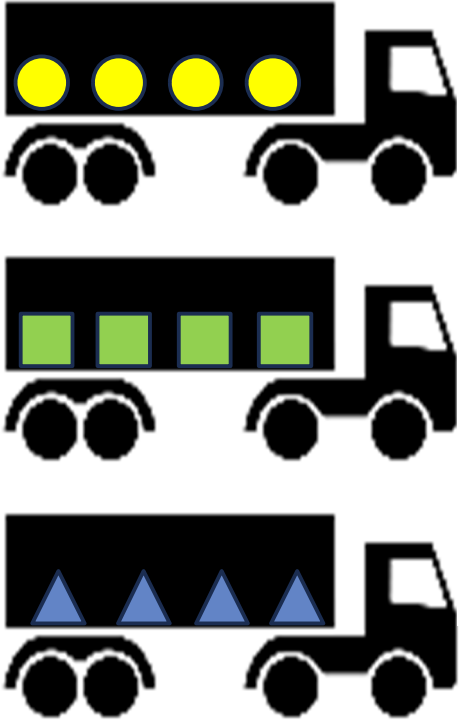
43

- Saves shippers money
  - ▣ 1 rail car = 4 semi-trailers
  - ▣ Average full truckload rate: \$0.10 to \$0.15 per ton-mile
  - ▣ Average rail rate: \$0.06 per ton mile
- Promotes economic development via clustering
- Helps addresses national long-haul truck driver shortage facing trucking industry

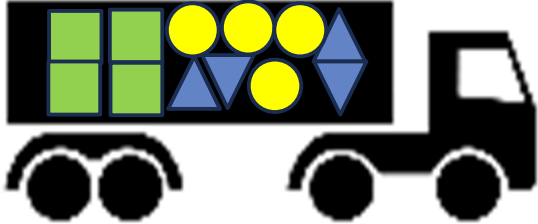


# Truck Consolidation Analysis: Concept

**Inbound partial or less than truckload**



**Outbound full truckload**



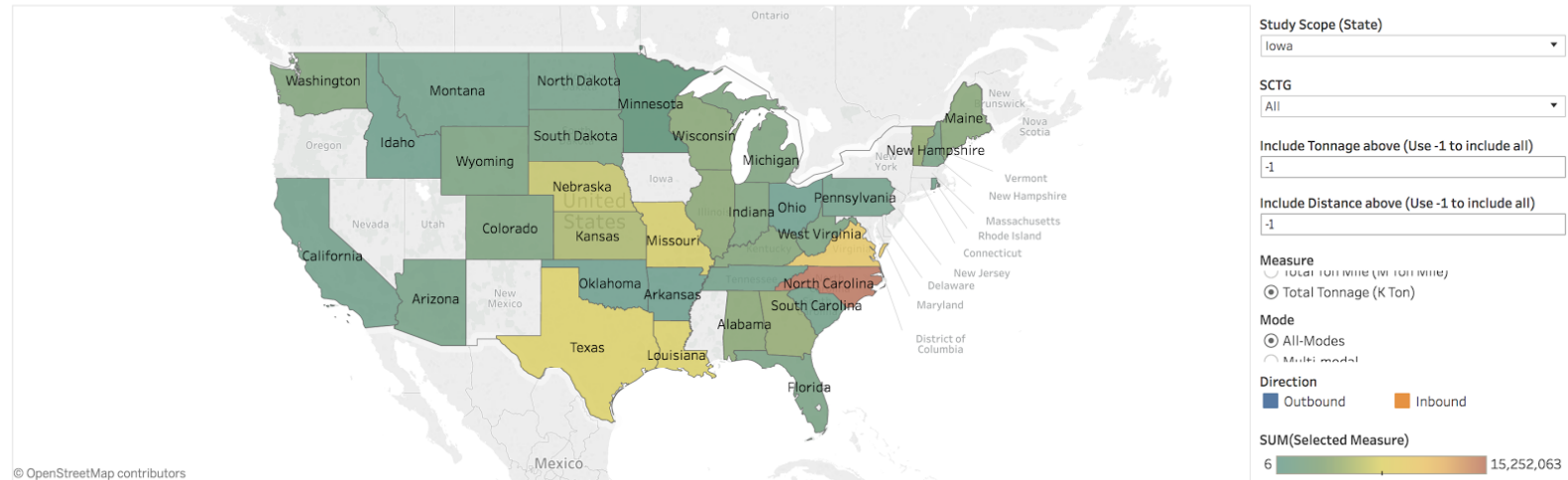
**Cross-dock/Warehouse to  
unload, sort, and reload**

# Visualization Example: State Level Analysis

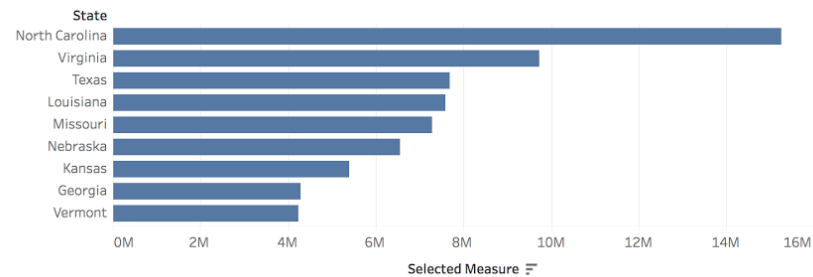
45

## Dashboard

### Total Tonnage (K Ton) by State



### Total Tonnage (K Ton) by State (Chart)



### Total Tonnage (K Ton) by Direction(%)

State	Direction		Grand Total
	Inbound	Outbound	
North Carolina		13.236%	13.236%
Virginia		8.454%	8.454%
Texas		6.681%	6.681%
Louisiana		6.591%	6.591%
Vermont		3.683%	3.683%
Maine		2.960%	2.960%
Washington		2.425%	2.425%
Nebraska		5.683%	5.683%
Georgia		3.726%	3.726%
Kansas		4.674%	4.674%
Alabama		3.261%	3.261%

Confidential

# Key Roles and Responsibilities

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- FDOT - *Freight & Multimodal Operations (FMO)*
  - ▣ Identify key planning partners at the District level
  - ▣ Identify data resources and contacts
  - ▣ Review high-value opportunities with the private sector
- Enterprise Florida & Other Partner Agencies/Entities
  - ▣ Identify regional representatives
  - ▣ Bring stakeholders to the table for outreach
  - ▣ Review high-value opportunities with the private sector
  - ▣ Connect economic opportunities, education and infrastructure



## About M-CORES

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 nonmotorized 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 Florida Department of Transportation (FDOT) is assigned with assembling task forces to study [three specific corridors](#):

- 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

## Contacts

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[rob.palmer@rsandh.com](mailto:rob.palmer@rsandh.com)

Richard Langer, President  
Quetica, LLC  
651-964-4646 x800  
[richard.langer@quetica.com](mailto:richard.langer@quetica.com)

Dr. Weiwen Xie, Technology Chief  
Quetica, LLC  
651-964-4646 x803  
[wei.xie@quetica.com](mailto:wei.xie@quetica.com)

For more information visit:

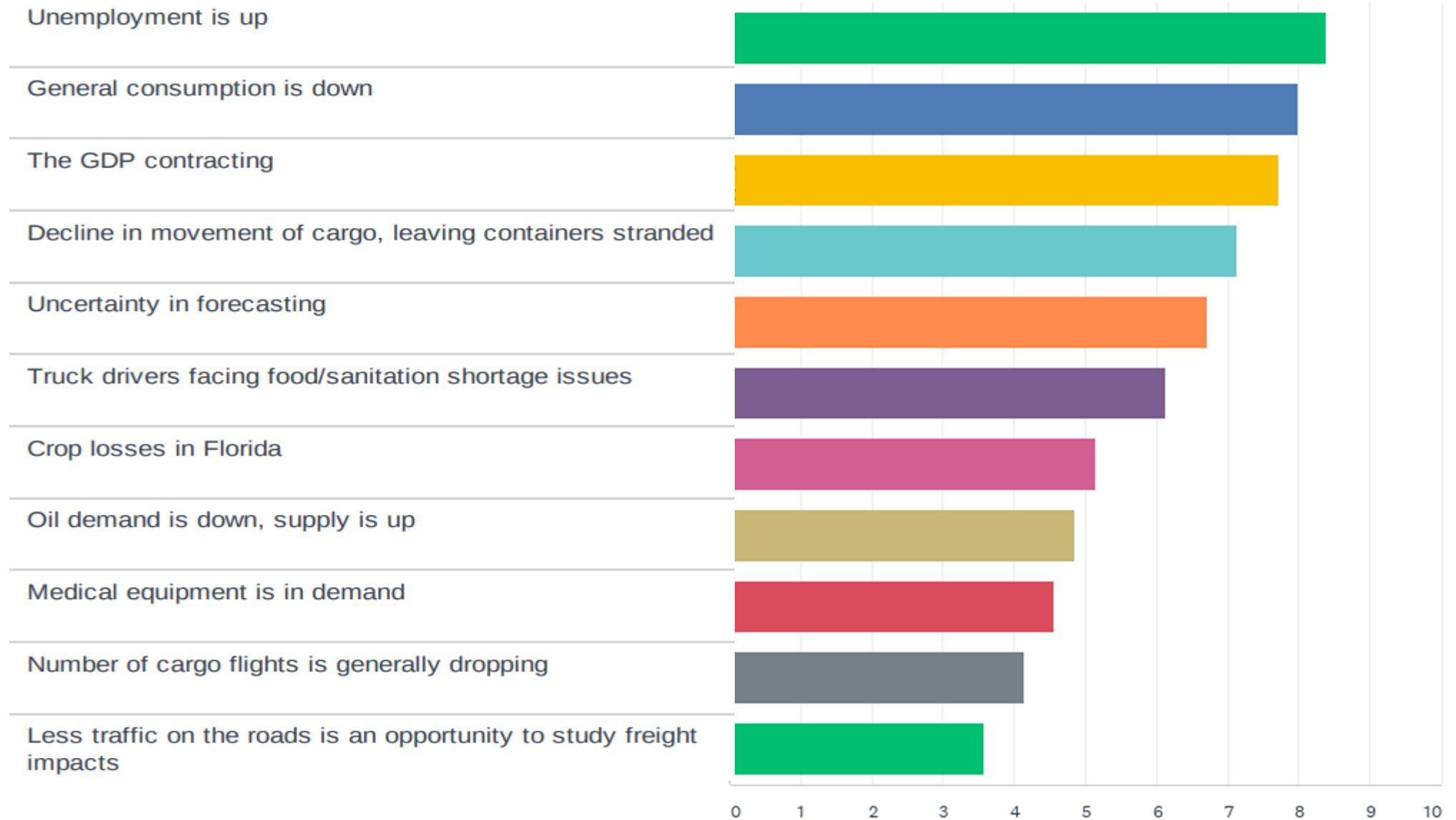
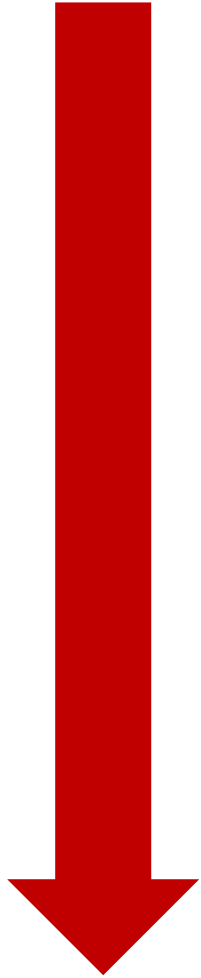
[www.quetica.com](http://www.quetica.com)

# Roundtable

# COVID-19 Issue Survey Rankings

Most Urgent Issues

Least Urgent Issues



# Additional Issues Mentioned in Survey

- Increased freight delivery into neighborhoods is creating different safety/conflict issues
- PPE equipment and CARES Act money for essential transportation freight workers
- Lack of Uniform Protocols and differences from town to town on how to operate
- Ocean exports has seen a decline in the number of containers and vessel services to the Caribbean and Central America

# COVID-19 Issue Survey Rankings

Most Urgent Issues

Least Urgent Issues





# Best Practices Mentioned in Survey

- Communication early and often is key
- Ports are working with their tenants, truckers and communities to ensure that operations can continue as normal -- with port leadership even handing out PPE equipment and food to truckers at gates
- We take everyone's temperature upon entering our buildings, all employees wear face masks and we maintain social distancing
- Some of the best practices during this time most companies are doing is evaluating their processes of work on a more cost-effective basis. Much focus is being placed on reducing steps to job completion and an overall review of the accounting processes
- IT is critical in these times

# Best Practices

- What has COVID-19 changed about your operating practices?
- Any ideas on how we can use data to support goods movement in Florida and beyond?

# Public Comments

# Member Comments



# Comments

Organization	First Name	Last Name
Broward County's Port Everglades Department	David	Anderton
Genesee Wyoming Railroad	Joe	Arbona
Space Florida	Mark	Bontrager
Florida Fruit and Vegetable Association	Tori	Bradley
Lakeland Linder International Airport	Gene	Conrad
Florida TransAtlantic Holdings	John	Dohm
JAXUSA	John	Freeman
Interport Logistics, LLC	Gary	Goldfarb
Enterprise Florida	Mason	Henson
Atlantic Logistics Inc.	Robert	Hooper
Franklin Street	Larry	Kahn
FEC	Bob	Ledoux
FAU - Freight Mobility	Dan	Liu
Winter Haven Economic Development Council	Bruce	Lyon
Walmart	Robert	Midgett
City of Pensacola/Port of Pensacola	Amy	Miller
Florida Trucking Association	Alix	Miller
University of South Florida	Seckin	Ozkul
Crowley Logistics	Stan	Parkes
Brevard County	Troy	Post
Florida Ports Council	Mike	Rubin
Broward Metropolitan Planning Organization	Gregory	Stuart
UNF	David	Swanson
US Sugar	Malcolm	Wade

# Adjourn

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