Economic Infrastructure Subcommittee

Wednesday, December 3, 2025
3:30 PM - 5:30 PM
Reed Hall (102 HOB)

Daniel Perez
Speaker

Chip LaMarca
Chair

Committee Meeting Notice

HOUSE OF REPRESENTATIVES

Economic Infrastructure Subcommittee

Start Date and Time:	Wednesday, December 03, 2025 03:30 PM
End Date and Time:	Wednesday, December 03, 2025 05:30 PM
Location:	Reed Hall (102 HOB)
Duration:	2.00 hrs

Presentations on Innovation and Emerging Technologies in Transportation

NOTICE FINALIZED on 11/24/2025 2:43PM by Marks.Amie



EMERGING TECHNOLOGIES & TRANSPORTATION INNOVATIONS

Trey Tillander, P.E.
Executive Director of Transportation Technology

December 3, 2025

Florida House of Representatives
Economic Infrastructure Subcommittee

A LEADER IN TRANSPORTATION

We know what it means to have a world-class transportation system

- MOST SPACE LAUNCHES IN THE WORLD
- 12,273 TOTAL STATE-MAINTAINED LANE MILES ACROSS FLORIDA
- 3 LARGEST CRUISE PORTS IN THE WORLD
- ONLY STATE WITH 4 LARGE-HUB COMMERICAL AIRPORTS
- 2ND HIGHEST AVIATION PASSENGER BOARDINGS IN THE U.S.
- MOST MEGA PROJECTS IN FDOT'S HISTORY (MEGA PROJECT = $500M+)

FDOT

WHAT IT TAKES TO MAKE THAT HAPPEN: BY THE NUMBERS









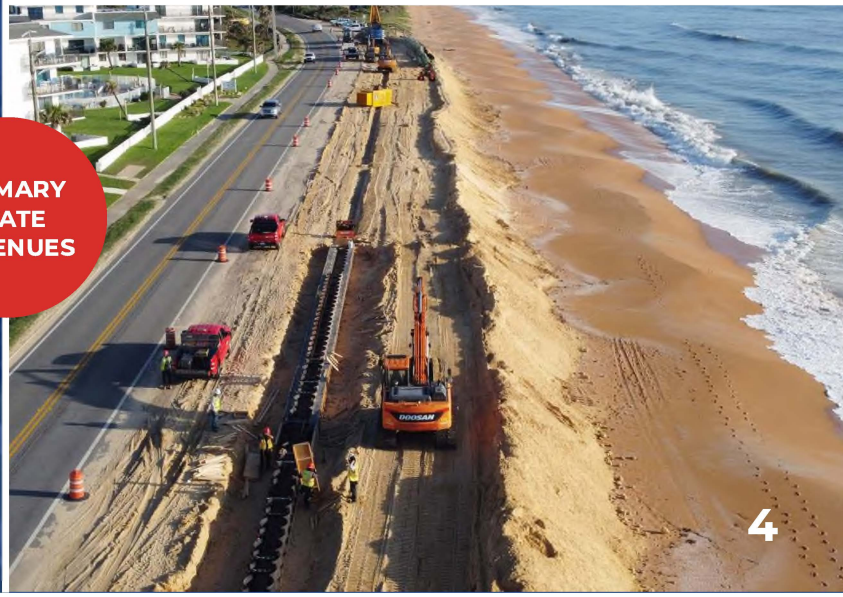


USING EVERY DOLLAR RESPONSIBLY

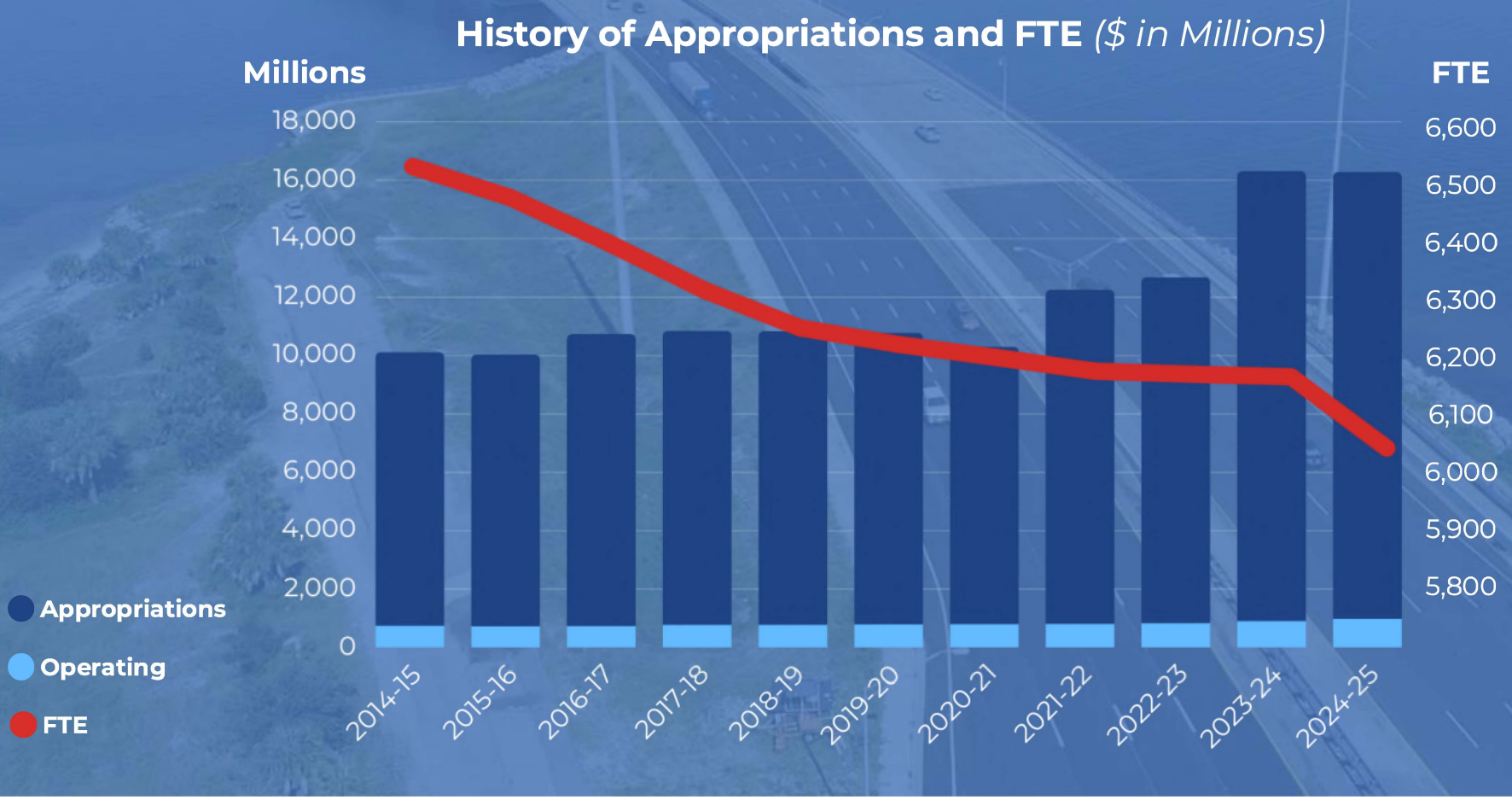
FDOT Revenue Forecast of Receipts







DRIVING EFFICIENCIES





INNOVATING TRANSPORTATION

HOW A NIMBLE TEAM IS KEEPING UP WITH FLORIDA'S GROWING TRANSPORTATION NEEDS

FDOT

INNOVATION IN PROJECT DELIVERY

FDOT

- Congestion Relief Lanes
- Modified Phased Design-Build
- Voluntary Acceleration
- Structured Acceleration
- Risk Management in Construction
- Partner Roundtables

WORKFORCE DEVELOPMENT



- Florida Transportation Academy
- On-Site Hiring Events
- Construction Career Days
- Student STEM Classes
- Moving I-4 Forward Academy
- Learning Labs
- Walk-In Recruitment Center

RESEARCH AND INNOVATION

- Aggregate Grant Program
- State Materials Office
- Traffic Engineering Research Lab
- State Structures Research Lab
- Transportation Research Institute
- SWIFTT Challenge
- Partner Coalitions & Working Groups

RESEARCH & INNOVATION:
AGGREGATE GRANT PROGRAM

Increases storage capacity and ensures the efficient movement of aggregate among Florida's seaport and rail network

Storage capacity increased by 5.5 million tons since program launch

Keeps construction projects on time

Over $116 million in economic impact since 2024



RESEARCH & INNOVATION:
FDOT Facilities

TRAFFIC ENGINEERING RESEARCH LAB

A world-class test facility for signalized traffic interchanges and safety improvement techniques ranging from digital messaging, crash notification systems, and wrong-way driving notification

STATE STRUCTURES RESEARCH LAB

Provides research, testing, and evaluation of structural components, bridge systems, and existing inventory to ensure safe, reliable, and cost-efficient structures across the State Highway System.

STATE MATERIALS OFFICE

Ensures that Florida isn't just building infrastructure, but that we're building ***quality*** infrastructure by testing and researching every material used on our facilities for safety, efficiency, and longevity.

National and international leader in materials testing and research for over **70 years**

RESEARCH & INNOVATION:
Florida Transportation Research Institute

A consortium of universities who work directly with FDOT to develop, research, & implement projects that will transform the transportation industry

Pools together resources to conduct research as a state

Keeps Florida on the forefront of new technology and engineering systems

Partner Universities & Colleges:

- University of Central Florida
- University of Florida
- University of South Florida
- Florida International University
- Indian River State College



EMERGING TECHNOLOGY

FDOT

- Autonomous Vehicle Technology
- Advanced Air Mobility & SunTrax
- Drone Technology
- Wrong Way Driving Technology
- Lane Closure Notification System
- Smart Work Zones

EMERGING TECHNOLOGY:
Advanced Air Mobility + SunTrax

Florida continues to lead the nation on Advanced Air Mobility implementation, with FDOT's Business Plan unveiled in November

1st

R&D facility for both surface & air technology in the U.S.

1st

Advanced air mobility **aerial test track** in the U.S.

1st

To establish an aerial highway network for advanced air mobility





EMERGING TECHNOLOGY:
Surface Technologies

WRONG WAY DRIVING VEHICLE DETECTION SYSTEMS

Utilizes flashing signs and video/radar detectors that notify motorists to self correct while also notifying Regional Traffic Management Center Staff and Florida Highway Patrol

LANE CLOSURE NOTIFICATION SYSTEM

Provides drivers with alerts of upcoming work zones or lane closures through GPS navigation apps to ensure they pass through the work zone safely

Over 50,000 lane closure alerts sent to motorists since 2022

EMERGING TECHNOLOGY:
Drones

Drone technology is heavily utilized throughout our transportation system:

- Emergency Response
- Bridge Inspections
- Surveying & Mapping
- Traffic Incident Management
- Inspections for High Mast Lights, Mast Arms, & Overhead Signs

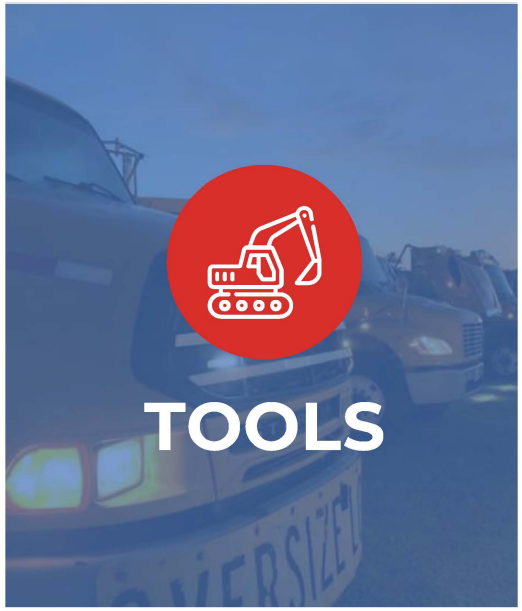
FDOT recently enabled the use of **live-feed drone systems** which provide on-demand video anywhere, allowing for more efficient operations & real-time decision making during emergency response efforts





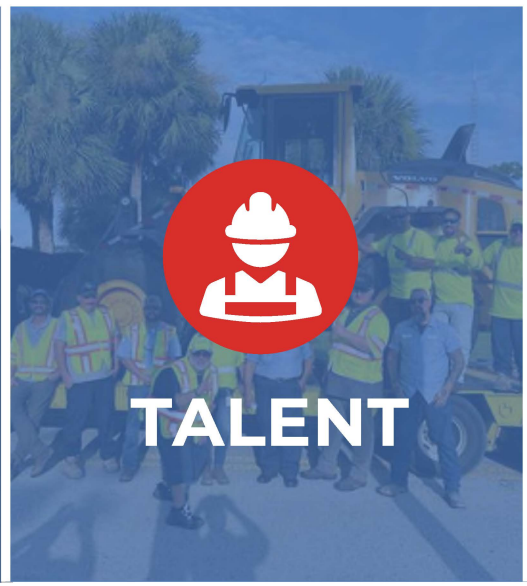
ENSURING SUCCESS

FDOT's continued focus to successfully meet the needs of our communities













THANK YOU

Jack Rogers
FDOT Legislative Affairs Director
Jack.Rogers@dot.state.fl.us
(850) 414-4147