SUNGUIDE®
DISSEMINATOR

FLORIDA DEPARTMENT OF TRANSPORTATION'S TRAFFIC ENGINEERING AND OPERATIONS NEWSLETTER

Editorial Corner: TSM&O Program Update

By Fred Heery, P.E., State TSM&O Program Engineer

November was a busy conference month for topics important to Transportation Systems Management and Operations (TSM&O), including the Toll and Express Lane Team meeting, Transpo2016, and the 4th Annual Florida Automated Vehicles Summit. The conference planners, organizers and hosts have done a great job!

The attendance and sessions at these conferences gives evidence that, even though Florida has made substantial progress in TSM&O over the past two decades, there is much that we still can and must do in collaboration with our stakeholders to address the safety and mobility issues on Florida's transportation networks. The Department's TSM&O program stands ready to address traffic congestion issues and safety of all road users including pedestrians and bicyclists. TSM&O, with the emerging tools of connected vehicle technologies, ramp metering, hard shoulder running, signal performance measures and advanced signal control technology, to name a few, will increasingly address these challenges.

The Central Office's TSM&O Program has prepared the first draft of the TSM&O Strategic Plan. The document is now being reviewed by the District and Central Offices. The intent of the plan is to move more strongly toward a data-driven and outcome-based TSM&O implementation program, with a focus on important elements such as management, operations, and maintenance. On a separate note, we are also studying the merits of a more performance-based intelligent transportation system contracting method and maintenance, asking ourselves, "what if we paid maintenance contractors based on the uptime of our devices and communications network rather than by the hour or for specific maintenance activities?"

Please stay tuned for future updates in the Disseminator.

Sincerely,

Fred Heery

Fred Heery, Sr., P.E.
Traffic Engineering and Operations Office
Florida Department of Transportation

INSIDE THIS ISSUE
NOVEMBER 2016

Floridians Turned to Florida 511 When the Storm Winds Blew

By Russell Allen, P.E., ITS Program Development Engineer; Mike Wacht, Global-5; Steve Novasad, HNTB

Source: FDOT

A 12-year run without hurricanes in Florida ended this year when Hurricane Hermine struck the Panhandle in early September, and Hurricane Matthew skirted the east coast a little more than a month later. While many feared that Floridians would not be prepared for the storms due to "hurricane amnesia," the Florida Department of Transportation's (FDOT) Transportation Systems Management and Operations (TSM&O) staff and Florida's 511 Traveler Information System were prepared. New features on the newly launched 511 website helped FL511.com keep Floridians informed of storm impacts, and led to record-setting system usage.

Throughout August, FDOT was preparing for September 1 – not because anyone knew a hurricane would approach the state that day, but because that was the day the new Florida 511 system was set to launch. The new system included a new website using the existing www.FL511.com URL, a new mobile app, new My Florida 511 personalized alerts and a new interactive voice response phone system. Preparations included new system testing, and a flurry of communications with Florida 511 users and alerts subscribers.

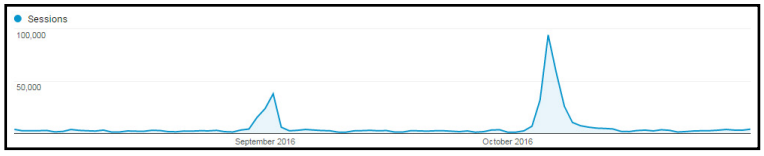
Then, the next day, Hurricane Hermine made landfall just east of St. Marks, Florida. FDOT TSM&O staff and its partners worked to keep the 511 system updated, and FDOT personnel working at the State's Emergency Operations Center directed the Florida 511 team to activate a new feature on the 511 website: Urgent Alerts. The homepage's "Urgent Alerts" tab is programmed to display its contents first when it contains information. As road closure information became available, it was posted to the site, complementing the posting of closures and floodgate alerts.

Florida Governor Rick Scott and the State Emergency Response Team (SERT) urged Floridians via media releases and social media to check www.FL511.com for closure information. During the period of August 30 – September 3, more than 58,000 Floridians did just that. The site was visited more than 87,000 times, 36,000 of those visits originated in the Tampa Bay area.

A little more than a month later, Hurricane Matthew, a Category 4 storm, moved up Florida's east coast without making landfall, but generating a significant storm surge and causing coastal damage. Once again, FDOT and the Florida 511 team were prepared. Road and bridge closures, floodgate alerts and homepage Urgent Alerts were kept updated around the clock. Once again, Gov. Scott, SERT and many county emergency managers and law enforcement agencies directed people to check www.FL511.com for the storm's impacts to roads and bridges.

Source: FDOT

Matthew's winds were felt in Florida from October 5 until October 9. During that time, more than 157,000 people visited the Florida 511 website, generating 221,000 sessions. October 6, the site had just over 94,000 sessions, and hosted approximately 10,000 simultaneous users.



Source: FDOT

"The new 511 website was designed to handle 25,000 simultaneous users," Russell Allen, FDOT's ITS Program Development Engineer, said. "I'm glad we had the foresight to set the bar that high, especially now that we've seen the kind of traffic a Category 4 hurricane can generate. Floridians know about 511, and they trust it to let them know what's happening on Florida's roads, whether on their daily commute or during an emergency."

Florida 511 continues to evolve by adding new features and improving on existing functions. By the end of the year, Florida 511 will include the use of a natural language recognition engine. The groundwork is being laid to enable the website to stream live Closed Circuit Television (CCTV) traffic camera video. The mobile app will soon feature voice recognition, allowing it to operate similar to the phone system.

For more information, please contact Russell Allen by email at Russell.Allen@dot.state.fl.us.

FDOT District Four RTMC Completes Major Renovation to Video Wall

By Natalie Cortes, Marketing/Public Outreach Coordinator, SMART SunGuide RTMC

After much anticipation, The Florida Department of Transportation (FDOT) District Four Regional Transportation Management Center (RTMC) completed its ten-month long renovation to the RTMC's control room informational wall.

Source: FDOT

Previously known as the RTMC's "video wall", the new wall has transitioned into an informational dashboard displaying performance measures, benchmarks and maintenance statuses. Now 33 percent larger, the informational wall showcases 44 rear projection 70 inch screens supporting all new 1080p High Definition (HD) cameras. This substantial upgrade enables the District Four ITS Unit to utilize HD cameras on major highways as well as actively manage a larger number of cameras simultaneously in order to better service motorists within the district.

With multiple construction projects complete, such as the Fort Lauderdale Airport Tunnel and Phase 2 of the I-95 Express Lanes, the improved informational wall provides the needed capacity to better manage traffic incidents in the future. As District Four transitions from strictly monitoring and managing videos to actively controlling and disseminating multiple information sources from freeways, these improvements provide greater control over the information occurring on freeway systems.

Advancements to the informational wall did not stop there. The new RTMC informational wall is becoming environmentally friendly, featuring new LED engines with a 100,000 working hour rating. Strictly air cooled, the new wall prevents formation of in-house toxic chemicals. In order to complete the full renovation within the control room, RTMC operator consoles were also upgraded with new larger monitors; the new monitors provide operators with wider viewing panels in order to enhance visibility.

This once-in-a-decade renovation creates a new chapter within the RTMC for future Intelligent Transportation System management capabilities.

For more information on District Four's newly renovated informational wall, please contact Mr. Dong Chen at Dong.Chen@dot.state.fl.us or by phone at (954) 847-2785.

FDOT District Six Initiates Hurricane Response Action Plan in Preparation for Hurricane Matthew

By Javier Rodriguez, P.E., District Six TSM&O Program Engineer

The Florida Department of Transportation (FDOT) District Six took steps to prepare state roadways and transportation infrastructure for Hurricane Matthew, a Category 4 hurricane that grazed Southeast Florida in early October.

FDOT District Six's Transportation Systems Management & Operations (TSM&O) group uses its Hurricane Response Action Plan (HRAP) as a checklist to ensure the District is ready for the landfall of a hurricane. The HRAP is updated annually and builds upon the experience of each successive year. The document describes the critical activities needed prior, during, and after a storm. The HRAP was developed as a response to 2004 and 2005's hurricane seasons, which required government agencies to initiate evacuation orders to segments of the population.

Preparations for Hurricane Matthew included ensuring the District's SunGuide Transportation Management Center (TMC) had adequate amounts of supplies, spare parts, staffing and fuel needed to run operations in the event the storm hit. Successfully implementing the procedures in the HRAP requires heavy coordination with relevant agencies like the FDOT District Six Emergency Operations Center and the Florida Highway Patrol, adjusting operator schedules to avoid staff having to drive during the storm, and ensuring the Department has the ability to restore service to the public in the storm's immediate aftermath.

Prior to this storm, the SunGuide TMC had switched over to a new Internet circuit located at the Network Access Point of the Americas in downtown Miami. This allowed the SunGuide TMC to operate the facility and monitor District Six roadways remotely over the Internet in the event the building was damaged.

Hurricane Matthew did not make landfall and spared South Florida the brunt of the storm. However, this near miss served as a test to ensure FDOT District Six was ready in the event a storm made landfall and was an opportunity to assess and improve the HRAP in preparation for the next storm.

For more information, contact Javier Rodriguez by email at Javier.Rodriguez2@dot.state.fl.us.

The Statewide TSM&O Excellence Program (STEP)

By Jennifer Rich, HNTB; Raj Ponnaluri, State Arterial Management Systems Engineer; Steve Bahler, HNTB

The advancement of Transportation Systems Management and Operations (TSM&O) in Florida has created the need for new tools to support workforce development, capacity building, and program excellence. The Statewide TSM&O Excellence Program (STEP) was conceptualized to meet these needs.

STEP Mission: The STEP mission is fourfold:

- Identify and prioritize TSM&O training, work force development needs and target audiences
- Resource, schedule, and deliver TSM&O training and guidance materials to meet priorities
- Work with partners for sustainable TSM&O training delivery and management
- Continually update training and guidance as state-of-the-practice and new, innovative TSM&O programs emerge

The chart to the right depicts some of the training needs that have been identified.

WEBINARS/COMPUTER BASED TRAININGS (CBTs)	INSTRUCTOR-LED
UNDER DEVELOPMENT ITS CEI MFES CCTV DMS **DELIVERED** ITS/TSM&O WORK PROGRAM	**UNDER DEVELOPMENT** TRAFFIC SIGNALS SYSTEMS ENGINEERING **AVAILABLE UPON REQUEST** ITSFM

UNDER DEVELOPMENT:

- **Intelligent Transportation System Construction Engineering Inspector (ITS CEI) Training:** The sections currently under development are Managed Field Ethernet Switch (MFES), Closed-Circuit Television Cameras (CCTV), and Dynamic Message Signs (DMS). In-house webinars are planned prior to the Computer-Based Training development. More sections are planned in the future to ensure a comprehensive ITS CEI training.
- **Traffic Signal Training:** The Traffic Signal Training content is developed and an in-house staff webinar is planned. **Systems Engineering Training:** This training is currently under development.

DELIVERED:

- **Intelligent Transportation System/Transportation System Management & Operations Work Program Training:** This course was developed in coordination with the FDOT Work Program and Budget Office and TSM&O. The webinar was delivered to in-house employees.
- **Intelligent Transportation System Facility Management Training:** The instructor-led course is available upon request.

Stay tuned for more updates and training dates for the STEP trainings. For more information about STEP, please contact Raj Ponnaluri by phone at 850-410-5600 or email at Raj.Ponnaluri@dot.state.fl.us.

Real-Time System Management Information Program (RTSMIP) Phase II - Routes of Significance

By Russell Allen, P.E., ITS Program Development Engineer; Rakesh Sharma, HNTB; Jennifer Rich, HNTB

Through collaboration between the Florida Department of Transportation (FDOT) State Traffic Engineering and Operations Office, FDOT Districts and local agencies, the Real-Time System Management Information Program (RTSMIP) Phase II - Routes of Significance (RoS) report was submitted to and approved by the Federal Highway Administration (FHWA). The compliance letter was received from FHWA on November 9, 2016.

The RTSMIP Phase II- RoS report for the FHWA addressed the requirements set forth in Title 23, Code of Federal Regulations (CFR), Part 511, hereinafter referred to as "the FHWA Rule." The FHWA Rule requires state Department of Transportations (DOTs) to establish a RTSMIP to make available construction, incident, weather, and other traveler information in real-time to both the motoring public and other entities that respond to these events. The FHWA Rule required that this information be made available for all interstate routes by November 8, 2014, and on other significant roadways as identified by all state DOTs and local transportation agencies by November 8, 2016. FHWA has determined that FDOT is in compliance with the intent of Section 1201, 23 CFR, Part 511 for interstates. This program review separated the RTSMIP program into the six areas required by the regulation and subsequent guidance: Construction, Incidents, Weather, Travel Times, Regional Intelligent Transportation Systems Architecture, and RoS. This Phase II report represents the continued effort and improvements for compliance with the metropolitan RoS.

The FDOT State Traffic Engineering and Operations Office, working with the FDOT Districts, has compiled a list of RoS that meet the criteria set forth in the FHWA Rule. Part of the RoS requirement is to coordinate with Metropolitan Planning Organizations (MPO) and Transportation Planning Organizations (TPO) to develop a list of corridors that are regionally significant using a set of criteria. FDOT worked with the FHWA Division Representative to demonstrate that the RoS meet the required criteria as set forth in the FHWA Rule to ensure that the required processes are followed and information are developed.

The result of the local agency and District coordination is a well-defined functioning list of RoS. The list of RoS contains 53 metropolitan area routes and four rural non-metropolitan routes. The real-time information data undergoes a strict quality assurance check before being disseminated to the public. The Florida 511, Dynamic Message Signs (DMS), Arterial Dynamic Message Signs (ADMS), and social media disseminates all data well within the time limits stated in the regulation for the metropolitan and non-metropolitan regions.

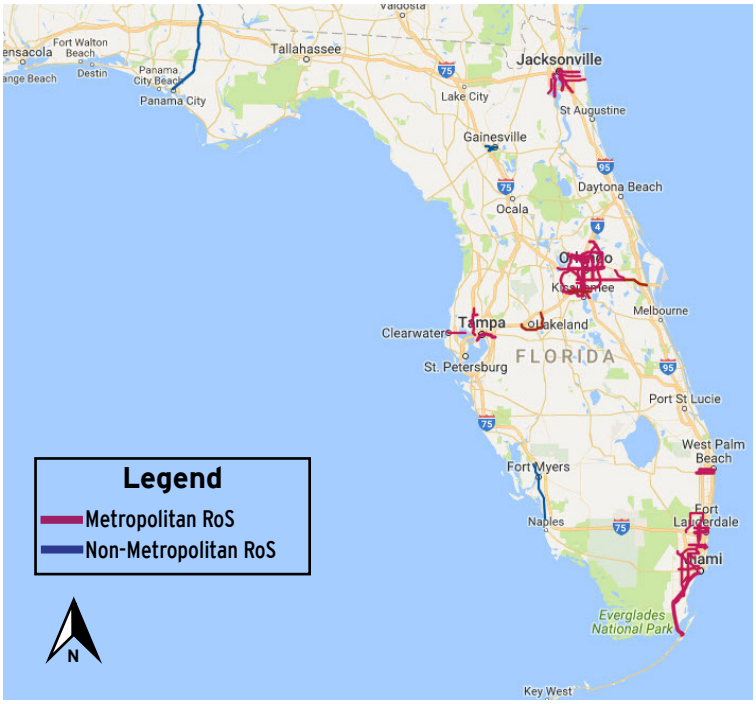
The FHWA Rule has brought value to FDOT's RTSMIP by expanding the roles and responsibilities of the Regional Transportation Management

Source: sunguidesoftware.com

Center (RTMC), which is key for making this information available to the public. Through expanding their areas of coverage beyond the Interstate System to include these collaboratively designated RoS (that were not previously covered), FDOT has been able to provide travel information for construction activities, roadway or lane blocking incidents, road weather conditions, and travel time to the public on these RoS.

Florida's RoS Map

Through the District and local agency coordination, 53 metropolitan area RoS and four rural non-metropolitan area RoS have been determined. The Florida's RoS are shown in the map below.



Source: FDOT

For more information about RTSMIP, please contact Russell Allen by phone at 850-410-5600 or email at Russell.Allen@dot.state.fl.us.

ITS Florida 2017 Board of Directors

By Sandy Beck, Chapter Administrator, ITS-FL

Source: itsflorida.org

MEET THE 2017 BOARD OF DIRECTORS

The Intelligent Transportation Society of Florida (ITS Florida) held its annual elections with results as follows:

Ms. Sara Calhoun, VIBE, will complete her role as the 2016 President and move into the lead of the Management Committee for 2017 as the Immediate Past President.

Ms. Connie Braithwaite, Econolite, has served on the Board of Directors for many years moving from a Director-at-Large through the officer positions to lead ITS Florida as President for 2017.

Mr. Corey Quinn, P.E., Central Florida Expressway Authority, will serve as our 2017 Vice President. He has served as the Treasurer and Secretary as well as Director-at-Large on the ITS Florida Board for the last several years.

Mr. Jonathan Tursky, TransCore, has served on the Board as a Director-at-Large and most recently as the ITS Florida Treasurer. He will be the ITS Florida Secretary for 2017.

Mr. Jim Clark, P.E., Rhythm Engineering, is our 2017 Treasurer. He has previously served as a Director-at-Large.

DIRECTORS-AT-LARGE

Elected:

Mr. Pete Costello, Iteris, will be starting his first term as Director-at-Large in 2017.

Mr. Pete Ganci, Control Technologies, will be starting his first term as Director-at-Large in 2017.

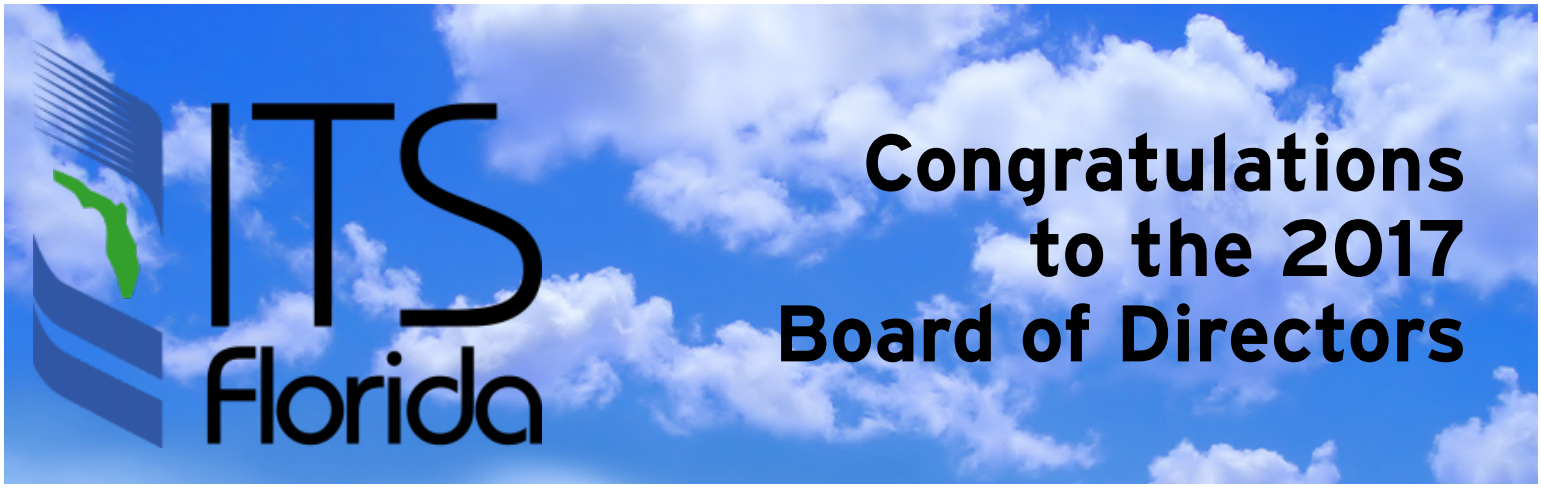
Dr. Mohammed Hadi, FIU, will be returning for another two year term as Director-at-Large in 2017.

Mr. Mukunda Gopalakrishna, P.E., PTOE, Manatee County, will be starting his second year of his first two year term.

Mr. William 'Greg' Reynolds, FDOT, will be starting his second year of his first two year term.

Mr. Russell Allen, FDOT, will be continuing his work with the ITS Florida Board as an ExOfficio, non-voting member of the board representing FDOT.

For more information on ITS Florida, please check the ITS Florida website at www.ITSFlorida.org or contact Ms. Sandy Beck, Chapter Administrator, at ITSFlorida@ITSFlorida.org.



The SunTrax Test and Toll Facility

By Paul Satchfield, Florida's Turnpike Enterprise

The SunTrax test and toll facility project includes the construction of a 2.25 mile oval tolls testing track on a 400-acre site in Polk County near Florida Polytechnic University. The oval track is designed to support high speed testing of toll technologies with multiple lanes and parallel tolled express lanes similar to other systems being implemented across the State of Florida.

This testing facility includes four toll structures and toll facilities to support testing and development, including hardware and software as well as facilitating national and local certification for tolling technologies. The facility will centralize testing operations within 45 minutes of the Turnpike headquarters in Ocoee and significantly reduce the travel times to other testing locations. It is anticipated that the interior of the track will be used in partnership with Florida Polytechnic University to create a high-tech hub for the research, development and testing of emerging transportation technologies related to tolling, intelligent transportation systems (ITS) and connected and automated vehicles.

Source: Florida's Turnpike Enterprise

The project is scheduled to be let in February of 2017 and construction to be completed in late 2018. For more information contact Paul Satchfield at Paul.Satchfield@dot.state.fl.us or you may visit the SunTrax website at http://www.suntraxfl.com.

ANNOUNCEMENTS:

Chief Engineer Announcement by Secretary Boxold

With Phillip Gainer's appointment as District Three Secretary, Courtney Drummond was appointed as Chief Engineer effective October 31.

Courtney has served as the Director of Transportation Operations in District Four. He has extensive transportation operations and production experience in the private sector and public sector. We are confident Courtney will succeed in providing the direction and guidance necessary in his role as the Chief Technical Officer for the Department.
Courtney brings strong leadership skills and engineering expertise to his new position. He will play a critical role in helping FDOT deliver the work program and be aggressive to implement changes as we initiate innovative ideas and efficiencies.

Courtney received his Bachelor's Degree in Civil Engineering from the University of the West Indies and is a registered Professional Engineer in Florida.

District 1 Secretary Announcement by Secretary Boxold

After many years of service, FDOT's Billy Hattaway left the department to be the Director of Transportation for the City of Orlando. We are deeply appreciative of Billy's commitment to FDOT and his passion for improving safety.

FDOT is very pleased to announce the appointment of L.K. Nandam as the new District 1 Secretary.

L.K. previously served as the Director of Operations for District 1. Prior to that, he served as the District 1 Traffic Operations Engineer for a number of years. He has previously served in other positions, including at the local government level and within the private sector.

L.K.'s commitment to excellence, passion for our work and focus on our employees has always been very impressive. He is well suited to this challenge and we look forward to his leadership in this new and very important role.

His appointment became effective in early November to allow time for overlap before Billy left.

District 3 Secretary Announcement by Secretary Boxold

With Tommy Barfield's recent decision to retire from FDOT after thirty years of dedicated service to the agency, Phillip Gainer was appointed District 3 Secretary.

With Tommy's departure, there really was no question who to select as the new District Secretary. Phillip Gainer served as the Department's Chief Engineer and has become invaluable in that role in a very short period of time.

"While I am sad to lose Phillip as our Chief Engineer, He will serve the agency exceptionally well as the new District Secretary," wrote FDOT Secretary Jim Boxold.

Phillip has extensive experience in both FDOT and the private sector, having served as the District 3 Director of Transportation Operations prior to being Chief Engineer. Phillip brings strong leadership skills, engineering expertise and a knack for solving complex problems to his new position.

Phillip received his Bachelor's Degree in Civil Engineering from the University of Florida and is a registered Professional Engineer in Florida. He became District Secretary in October after Tommy Barfield retired.

District Traffic Operations Engineer Announcement by District 1 Secretary, L.K. Nandam

David Gwynn, P.E. was appointed to be our new District Traffic Operations Engineer in August 2016. David received his Bachelor of Science in Civil Engineering from the Military Academy at West Point in 1983, and his Masters of Science in Transportation Engineering from the University of Florida in 1988.

David is an accomplished professional in the Transportation industry and has experience in both the private and public sectors; thirteen years with his own Traffic Engineering firm, over thirteen years in the consultant industry part of which was in the construction industry and eight months with the Florida Department of Transportation as the Access Management Engineer for District Seven.

David is a native of New Jersey but has lived in Florida since 1987, and is a US Army veteran. David and his wife, Cara, have four daughters and a son ranging in age from 12 to 30 years old. He spends most of his free time with his wife and children and their 5-year-old granddaughter. They like to travel and go to the beach a lot, as well as tube and water ski with their boat.

FDOT Traffic Engineering and Operations Mission and Vision Statements

Mission

Provide leadership and serve as a catalyst in becoming the national leader in mobility.

Vision

Provide support and expertise in the application of Traffic Engineering principles and practices to improve safety and mobility.

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Note: DTOE = District Traffic Operations Engineer