

# TSM&O DISSEMINATOR

TRANSPORTATION SYSTEMS MANAGEMENT & OPERATIONS  
November-December 2020



**FL511 Enhancements**

**Florida TaxWatch Productivity Awards**

**FDOT Central Office Announces SunGuide® Software Version Release 8.0**



## INSIDE THIS ISSUE

### Contents

3	Communications System Upgrade Shows Great Promise for the Florida Keys
3	Welcome Aboard!
4	Turnpike TSM&O Pilots Showing Promise
6	Penetration Testing: What to Expect
7	Break Time
8	Congratulations to the FDOT Traffic Engineering and Operations Winners!
9	ITS Florida Update
10	District Four TSM&O Project Managers Win Top Prize in Technology/Innovation in 2020 TaxWatch Productivity Awards
12	New Year, New Name
14	FL511 Enhancements
15	FDOT Central Office Announces SunGuide® Software Version Release 8.0
16	Contacts

## 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.

### Looking to be a Contributor for the Next Issue of the TSM&O Disseminator?

Email Jennifer Langford  
(Jennifer.Langford@dot.state.fl.us)  
with your story subject and title.

We would love to have your contribution be a part of the next edition.

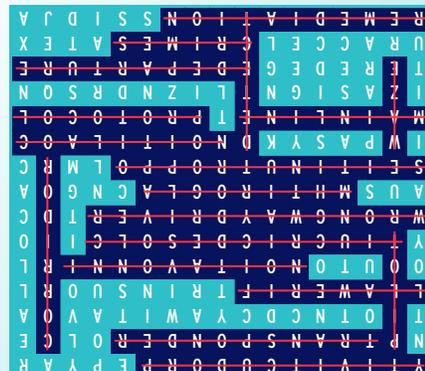
Photo credits: FDOT

#### PHYSICAL ADDRESS:

Barry Building  
3185 South Blainstone Rd.  
Tallahassee, FL 32301

#### MAILING ADDRESS:

Burns Building  
605 Suwannee Street, MS 90  
Tallahassee, FL 32399



# Communications System Upgrade Shows Great Promise for the Florida Keys

By Javier Rodriguez, District Six TSM&O Program Manager, FDOT

*The District Six TSM&O Office made some recent upgrades to the communication system in Monroe County that will provide major benefits in the future.*

The Office assumed the operations and maintenance of the traffic signal system in the Florida Keys after several local municipalities opted out of their compensation agreement in 2018. The District took over responsibilities, upgraded the system's infrastructure and equipment, and brought the signalized intersections to today's standards. The team has been operating the signals successfully for several years with plans for continued improvements. Among the plans was to switch the system's communication network from using cellular to wireless. The District currently uses a third-party cellular service provider to support all traffic signal communications. The service allows the signals to remain online and connect back to the SunGuide Transportation Management Center (TMC). Although the system is reliable, the connection is dependent on a third-party provider and represents a recurring cost to the Department.

The District was looking at the feasibility of switching the entire system to a wireless, lower-cost option but plans to do so were a few years away. The District recently identified an opportunity to fast-track testing efforts by completing the switch on a traffic signal located along US 1/Overseas Highway at Emerald Drive. They took advantage of Central Office's newly completed project that provides wireless microwave communications for the Intelligent Transportation System cameras and dynamic message signs in the area. The wireless project has a more robust connection and is directly managed by FDOT at no extra cost to the District. To test the feasibility, the District installed an antenna and receiver and connected the signal to the new wireless backbone to complete the switch. The switch worked and the traffic signal has been operating successfully for several months.

The effort represents a major achievement for the Department because the switch can potentially expand to all traffic signals in Monroe County. Expanding this effort would create major savings to the Department since it currently pays an annual service fee of \$1,200 per signal to the third-party cellular provider. It would also reduce potential outages and improve FDOT's quality of service in the area, especially during emergency situations such as hurricanes.

For more information, please contact Javier Rodriguez at (305) 640-7307 or by email at [Javier.Rodriguez2@dot.state.fl.us](mailto:Javier.Rodriguez2@dot.state.fl.us).

## Welcome Aboard!



### Please Welcome James Landini to TSM&O

Mr. James Landini has been appointed as TSM&O Program Development Engineer in the Traffic Engineering and Operations Office.

James comes to the FDOT from the Florida Department of Environmental Protection (DEP). Prior to that, he worked for local government units in Minnesota as a City Engineer and Water Resource Engineer. At the DEP, James served as State Stormwater Engineer, Mine Technical Lead, and interim State Dam Safety Officer.

James is originally from Michigan and has a bachelor's degree in engineering from Michigan Technological University. When he has free time he likes to ride motorcycles, hike and kayak. He has hiked to highest elevation in 44 states, including Florida's Britton Hill.

We look forward to having James join Traffic Operations and the FDOT Team.



# Turnpike TSM&O Pilots Showing Promise

By: Mary Lou Veroline, Florida's Turnpike Enterprise, TSM&O Technical Writer

*The year 2020 has seen numerous challenges to our business operations and the motorists we serve, but has not stopped forward progress or the initiation of pilot projects to improve safety.*

*Turnpike leadership recognized that while traffic volumes have been down this year, this has only allowed for speeds to increase, elevating the severity of crash impacts. In response, projects have been greenlighted to address safety needs and facilitate desirable travel outcomes.*

## Internally Illuminated Raised Pavement Markers (iIRPMs)

If you have travelled the rural stretches of Florida's Turnpike at night, you are familiar with just how dark and desolate it can feel. Add some blind curves and a drowsy, distracted, or impaired driver traveling at high speed and it can be an unfortunate mix.

Florida's Turnpike Enterprise (FTE) Traffic Engineers have launched a pilot program to test the efficacy of internally illuminated raised pavement markers (iIRPMs) at the Mile Post 166 curve of the Mainline in both north and southbound directions. A total of 912 solar-powered raised pavement markers (RPMs) were installed in the 1.2-mile project within a one-week period in September. Visible at 2,000 feet in any weather condition, white lights identify travel lanes and yellow lights are used on roadway edges. The LED units are embedded 1.5-inches into the pavement and protrude less than a quarter of an inch above the surface. The lights themselves are protected by a domed casing structure that can withstand 120,000 pounds of weight at high-speed.

*Prior to installation, speeds through the curve were recorded at 75 miles per hour and higher. Early returns indicate a reduction in vehicle speed approaching the curve of between 35 and 58 percent and are highly encouraging.*

*continued on page 5*

## HAAS Transponders Deployed to Road Ranger Vehicles

It is no secret that responder vehicle strikes continue to climb each year despite improvements in vehicle safety technology and heightened educational outreach. In 2019, there were a total of 14 Turnpike Road Ranger vehicles struck, the highest number in program history. At the time of this writing in 2020, there have been 22 Turnpike Road Ranger vehicles hit, a 57 percent increase over last year. In each situation, a review was conducted to ensure that warning lights were engaged, and arrow boards were up. So, what else can be done?

Enter the HAAS transponder technology as another tool in the incident response toolkit. In May of 2020, three Turnpike Road Ranger vehicles were outfitted with transponder units that are attached to, and activated by, the truck's strobe light bar. When the lights are activated to indicate the approach to, active response at, or departure from a motorist assist, an alert is generated to travelers in the area via the WAZE application.

The alert (sample shown at right) acts as a warning to approaching motorists allowing them a proactive response of either moving over or slowing down and reducing the necessity for "knee-jerk" maneuvers that often prove unsafe. Additionally, when the transponder is engaged, an alert is sent to the Turnpike's Traffic Management Center (TMC) allowing an Operator to locate the incident on camera and have eyes on the Road Ranger for enhanced safety.

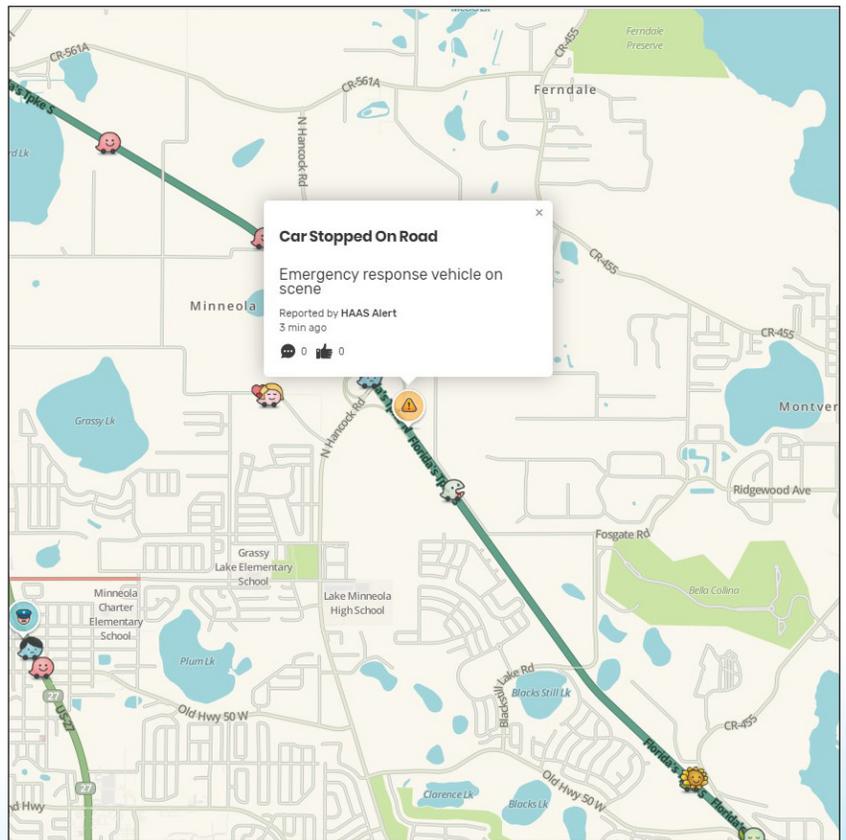
Following a recent ride-along with one of the Road Ranger units utilizing the HAAS system, Turnpike Incident Management Specialist Ralph Etienne noted that during the five observed assists, approximately 95 percent of large trucks and 45 percent of passenger vehicles moved over on approach to the scene. He also kept the WAZE application open on his phone and witnessed several "thumbs up" on the alerts generated.

Since the pilot commencement, a total of 55,616 alerts have been generated with zero strikes to the equipped vehicles. FTE anticipates a full rollout to Mainline Road Rangers in the coming year.

For more information, please contact John Easterling at (954) 934-1620 or by email [John.Easterling@dot.state.fl.us](mailto:John.Easterling@dot.state.fl.us).



On-scene photo of a Road Ranger vehicle strike that happened in the overnight hours of September 20 in Broward County.



Sample HAAS alert generated via the WAZE application.

# Penetration Testing: What to Expect

By Chrissie Collins, District One FMS/AMS Specialist IV, FDOT

## Operational Technology

Traffic operations has become complicated as it relies heavily on information technology. While different types of technology are added to assist operations, like speed detectors and disabled vehicle detection, other devices are being added to the infrastructure, such as cellular modems at intersections for managing traffic signals and cameras. From a hacker's perspective, this technology has the same issues as any other network: ports and network protocols.

Hackers look for chinks in the armor that can be found in vulnerable networks like the absence of multi-factor authentication for VPN, relaxed firewall rules, Remote Desktop Protocol, unpatched software, excessive privileges, unencrypted communication, etc. The question then becomes, "How easy is it for someone to hack our network?"

It is understandable if an organization has never performed a penetration test and therefore, does not know what to ask for or what to expect from such a service. It takes a certain skill set to perform a penetration test. Working with a third party helps to expose vulnerabilities and weak spots from an outsider's perspective.

## Where to Start

The first question one may ask is, "What kind of penetration test is needed?" There are different kinds of penetration tests where an ethical hacker has no knowledge of the network and therefore, has to spend a considerable amount of time trying to get inside the network, compared to an ethical hacker given knowledge and access to the network which is a less expensive method.



The second question one may ask is, "What kind of scope will be performed?". There is an internal test that simulates an attack on the inside of the network, an external test that simulates activity from the internet looking for weak firewall rules or VPN without multi-factor authentication, and then there's an application test to find out how easy it is to exfiltrate data or cause a denial of service of an application hosted on an internal or external server.

It is important to keep in mind that there are state and federal laws about computer-related crimes and that a Statement of Work (SoW) with an authorized signature will be required prior to the start of the engagement that attests the ownership of the network. The State of Florida has Chapter 815, F.S. in place which is also known as the Computer-Related Crimes Statute, so it is important to draw the line where there are connections to third parties so that a partner doesn't end up thinking they have an attempted intrusion with their device or network. It is also important to remember to define boundaries where partner agencies may connect to the Traffic Management Center to prevent accidental hacking of another agency's network.

*continued on page 7*

### Penetration Testing in District One

We were able to keep the budget at a minimum by providing a sampling of field devices rather than including everything, since all devices are kept at the same baseline of patched firmware. The parts of the network that contained the servers, workstations, and switches were also included in the scope.

Once the budget amount was decided and a vendor selected, the interview process began so the Scope of Services could be established between the vendor and us to determine what systems or parts of the network to exclude or timeframes to avoid. We excluded the SunGuide® servers and databases to prevent any impact to the critical system in production. We also excluded rush hour times to minimize any potential impact during the testing phase. The vendor provided virtual machines to add to the network that contained the tools used for the penetration test using the temporary credentials we provided to connect through the VPN. The vendor's project manager maintained communication with the IT staff throughout the entire engagement.

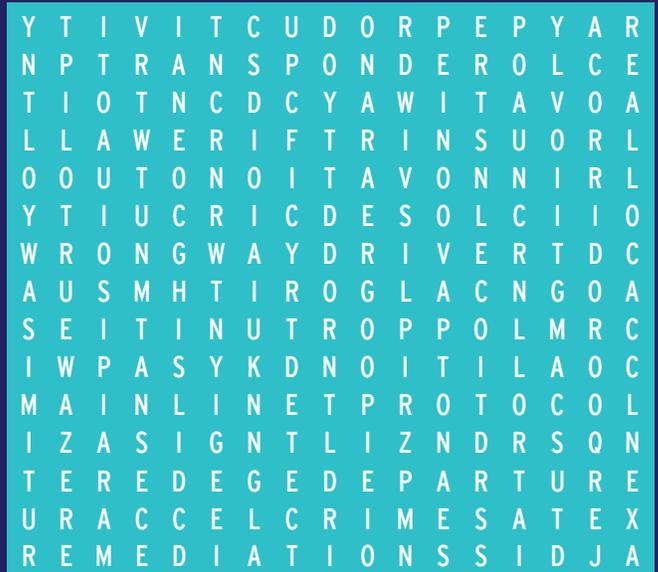
The vendor provided reports of their findings shortly after the engagement was completed. The deliverables included the following sections:

- Findings
- Storyboard
- Threat Likelihood
- Threat Impact
- Recommendations
- References

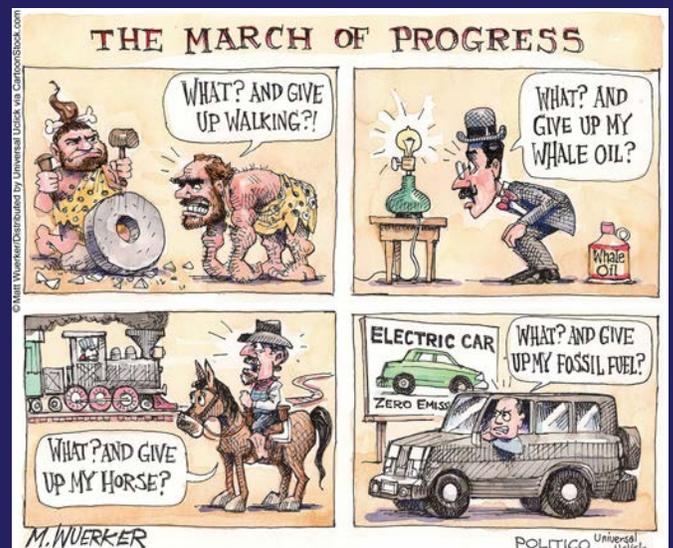
An exit interview was held with the vendor to consider follow-up questions. Next, the findings were imported into a spreadsheet to turn the remediation efforts into a project to determine if identified risk could be accepted, the length of time it would take to remediate, and if there was a cost involved. This information was shared with high-level management to demonstrate a return on investment for the services used to strengthen the network.

For more information, please contact Chrissie Collins at (863) 519-2262 or by email at [Chrissie.Collins@dot.state.fl.us](mailto:Chrissie.Collins@dot.state.fl.us).

# Break Time



- |               |                  |
|---------------|------------------|
| TRANSPONDER   | PROTOCOL         |
| PILOT         | INNOVATION       |
| DEPARTURE     | CLOSED CIRCUIT   |
| REMEDIAION    | COALITION        |
| OPPORTUNITIES | CORRIDOR         |
| WAZE          | PRODUCTIVITY     |
| MAINLINE      | ALGORITHM        |
| FIREWALL      | DETECT           |
| CRIMES        | WRONG WAY DRIVER |



Since 1989, the TaxWatch Productivity Awards program has publicly recognized and rewarded state employees and work units whose work significantly and measurably increases productivity and promotes innovation to improve the delivery of state services and save money for Florida taxpayers and businesses.

Over the 30-year program, more than 16,000 nominations have been received, and awards have been given to state employees for saving or maximizing state dollars to the tune of approximately \$10 billion.

## Congratulations to the FDOT Traffic Engineering and Operations Winners!

**Central Office: Marie Tucker, Derek Vollmer, Darryll Dockstader, Jeff Frost, Paul Clark**

*AWARD TYPE: QUALITY*

Truck Parking shortages are a national safety concern and the FDOT Truck Parking Availability System (TPAS) program provides advanced notification to commercial vehicle operators of parking availability in public facilities (rest areas, weigh stations, and welcome centers) along Florida's interstate system, allowing them to find safe parking and reducing the potential for fatigue-associated crashes. This system directly benefits Florida's residents and visitors by increasing safety of the roadways, improving mobility by leveraging technology and innovation.

**District One: Mark Mathes, Luis Ruiz, Robbie Brown, Justin Merritt, Anna Dunn**

*AWARD TYPE: TECHNOLOGY*

The team determined the two District One traffic management centers were operationally vulnerable due to heavy reliance on a single fiber optic connection along I-75. After detailed investigation, private internet service providers (ISP) were selected to deliver redundant communication capability between the centers to provide more-reliable and resilient communications. Additionally, the upgraded connections allowed operating the traffic management center remotely/virtually. This was successfully implemented during the COVID pandemic. All of this was achieved at a cost savings of \$41,000 annually to the taxpayer.

**District Two: Pete Vega, Alex Varela, Matt Harbert, Dee Dee Crews**

*AWARD TYPE: TECHNOLOGY*

This project provided a technology upgrade by retrofitting 35 existing dynamic message signs (DMS) that were nearing end of life and no longer had manufacturer support. By retrofitting these DMS units, District Two can more easily maintain these devices and extend their lifecycle by 10 years. Normally, in an instance such as this, the entire 4,000-pound DMS housing and its structure would have been replaced, and would have required a structural analysis/design for each new sign. Additionally, the removal and disposal of the existing DMS and the installation of a new DMS would have been required.

**District Four: Alexandra Lopez, Daniel Smith, Hossam Abdel All**

*AWARD TYPE: TECHNOLOGY*

Dan Smith and Hossam Abdel All proposed an innovative system intended to detect and communicate Wrong Way Driving (WWD) incidents with first responders. To find out more about this project, please see the District Four award article on page 10.

*continued on page 9*

### District Six: Javier Rodriguez and Yamilet Diaz

AWARD TYPE: AGENCY

Southwest 8th Street (SW 8) is a heavily traveled, east-west corridor in Miami-Dade County. Additional developments in the area were set to increase congestion and further reduce its reliability. With no space for additional widening, the FDOT implemented a pilot project that used innovative and cost-effective technology to improve traffic flow. It upgraded 30 signalized intersections that previously used traditional time-of-day signaling plans with a traffic optimization algorithm that is allowing traffic signals to adapt to real-time traffic conditions. The project has improved traffic flow, reduced crash frequency and increased vehicle throughput. The result is an adaptive corridor that can meet current and future demands.

### District Six: Javier Rodriguez, Carlos Dardes, Alejandro Motta

AWARD TYPE: QUALITY

The Florida Department of Transportation (FDOT) District Six implemented its successful Rapid Incident Scene Clearance (RISC) Program in Monroe County to expedite the clearance of large-scale crashes on US 1, which is a critical roadway that connects the Florida Keys to the mainland.

### District Six: Javier Rodriguez, Alejandro Motta, Sergio Bravo

AWARD TYPE: SERVICE

The FDOT uses thousands of devices to monitor and manage daily traffic in southeast Florida. To maximize the life of these devices, the project team created a document called the Infrastructure Replacement Matrix to track their maintenance and life cycle status for potential replacement or repair. It allows the team to better manage their resources and complete critical replacement projects based on infrastructure needs. The timely replacement of aging infrastructure ensures the FDOT is operating at peak efficiency, correctly prioritizes devices by need, and commits funding in an efficient and sensible way. This document helps the FDOT better allocate their resources and save taxpayer money.

## ITS Florida Update

ITS Florida, along with the rest of the world, has experienced a year like no other. In spite of the pandemic, we provided professional development hour opportunities through lunch and learn training, FDOT updates, and the ITS Florida ITS Technical Committee.

ITS Florida looks forward to the future and has published the ITS Florida 2021 Calendar and is preparing for its distribution. Be on the lookout! The calendars will be distributed to the FDOT districts and members in the same manner as in past years.

Please make sure to mark your calendars for Transpo2021. It is anticipated that we will meet in Bonita Springs, September 26-29, 2021. The event will be held at the Hyatt Regency Bonita Springs. Planning for this event will resume in January 2021.

Volunteers will be recruited to make Transpo2021 a success. This event is a great opportunity to exhibit, network, train, and earn professional development hours. Transpo2021 will be hosted by ITS Florida and the Florida Puerto Rico District ITE organizations.

*If you have any questions, please contact Sandy Beck at [ITSFlorida@ITSFlorida.org](mailto:ITSFlorida@ITSFlorida.org) or [SandyBeck@tampabay.rr.com](mailto:SandyBeck@tampabay.rr.com).*



# District Four TSM&O Project Managers Win Top Prize in Technology/Innovation in 2020 TaxWatch Productivity Awards

By Alexandra Lopez, TSM&O Program Engineer, FDOT District Four

## Mainline WWD System - Algorithm Description

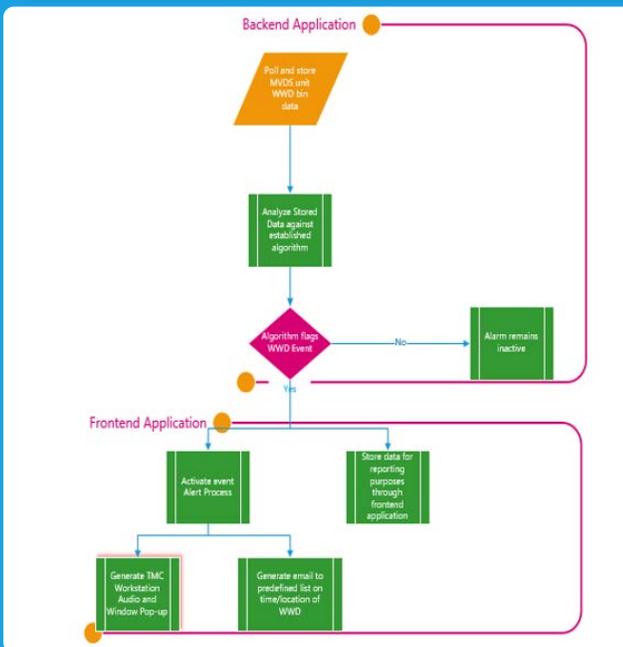


```

Let:
F= MVDS F has flagged a WWD event in the WWD Bin
Y= Time Elapsed between two consecutive MVDS WWD Bin flags (initial trial value=60 seconds)
Z= Activate Alert and Log event

If:
F=TRUE, AND, E=TRUE, AND, Y=TRUE
OR:
E=TRUE, AND, D=TRUE, AND, Y=TRUE
.
.
.
THEN: Z
    
```

## High-Level WWD Detection System



*Congratulations are in order for District Four Transportation Systems Management and Operations (TSM&O) program managers Daniel Smith and Hossam Abdel All. The two won top prize in the technology/innovation category at the 2020 TaxWatch Productivity Awards, on November 20, 2020.*

Their innovation began as a simple theory three years ago, when presented with the task of developing a solution for managing and preventing wrong-way driving (WWD) incidents. Originally, after countless discussions, Smith and Abdel All, hoped to implement a state-of-the-art WWD system along the District Four freeway mainline, with all new devices and software. However, after further brainstorming, Smith and Abdel All identified a more cost-efficient and innovative solution for WWD by using existing microwave vehicle detection system (MVDS) equipment and resources, to create an innovative software system. Their solution would easily determine the WWD point and time of entry with the goal of being able to analyze which areas are possible WWD hot spots. Thus, the District Four TSM&O program could determine appropriate safety countermeasures.

Previously, District Four's MVDS units were primarily used for operational purposes to collect traffic flow characteristics (speed, volume, occupancy, etc.) but did not store WWD event data. When handling WWD incidents, operators located at the District Four Regional Transportation Management Center (RTMC), would either receive initial notification from the Florida Highway Patrol or come across it while monitoring closed circuit television cameras.

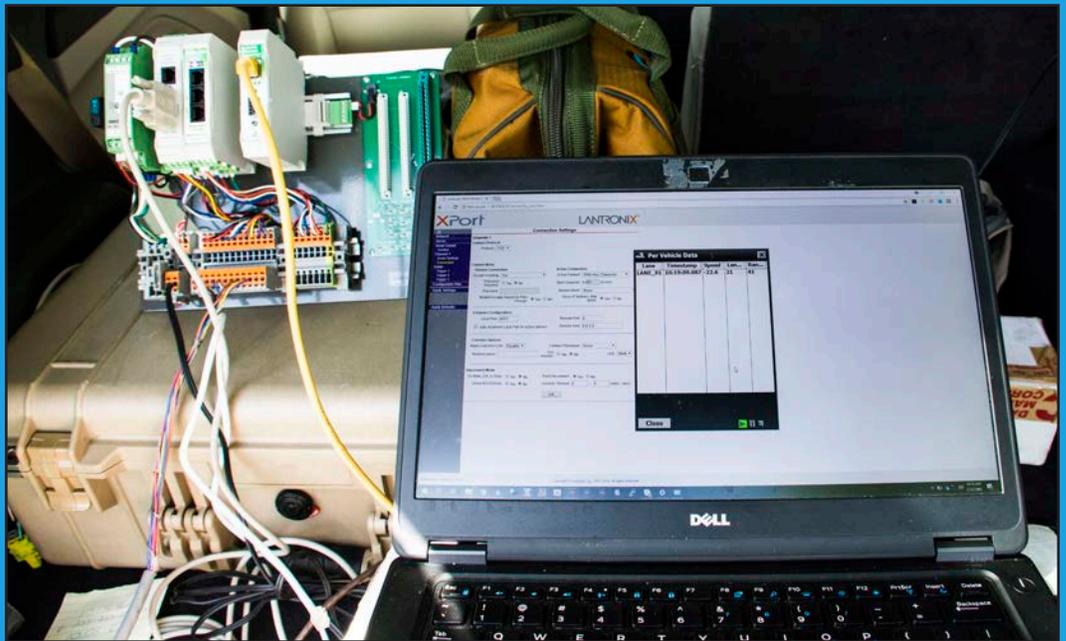
*continued on page 11*

## District Four TSM&O Project Managers Win Top Prize in Technology/Innovation in 2020 TaxWatch Productivity Awards, *continued from page 10*

In 2018, the initial concept of using MVDS data to detect WWD events was tested by the manufacturer and the TSM&O software consultant. Using normal traffic on a nearby road, one direction of traffic was considered “right way driving” while traffic from opposite direction was considered

“wrong-way driving.” Preliminary results showed the system detected both correctly.

Results were later confirmed by the State Traffic Engineering Research Laboratory in Tallahassee, by performing a rigorous expanded real-world test. Their results showed that WWD detections were at 100 percent accuracy.



To increase how quickly a WWD event is detected and reduce the number of potential false positives, Smith and Abdel All, theorized that WWD bin data could be augmented and verified using an algorithm. The proposed algorithm would store the WWD bin record of a single device to compare with another MVDS WWD bin record to verify a potential WWD event, further reducing chances of a false alarm. Once the WWD event was identified, a notification integrated into the RTMC's newly developed software would then alert the operator via audio queues and a pop-up, thus improving the response time of incident responders to a potentially lethal situation.

Because the innovation used existing equipment and contract resources, no cost was incurred to complete the development of the innovative software system. Instead of purchasing a full WWD system with hundreds of additional devices, Smith and Abdel All's innovative solution saved the department \$4.2 million.

*For more information on the District Four's Wrong Way Driver Detection System, please contact Daniel Smith, TSM&O Arterial Program Manager at [Daniel.Smith@dot.state.fl.us](mailto:Daniel.Smith@dot.state.fl.us) or Hossam Abdel All, Freeway Management System Engineer at [Hossam.AbdelAll@dot.state.fl.us](mailto:Hossam.AbdelAll@dot.state.fl.us).*



# NEW YEAR, NEW NAME

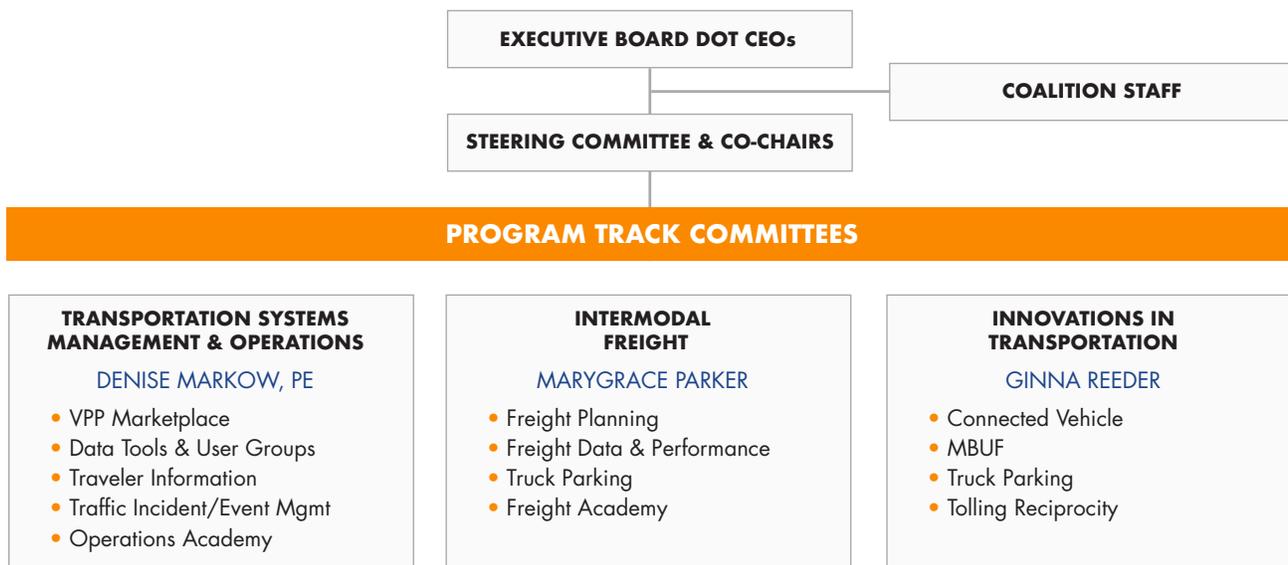
The I-95 Corridor Coalition has had the pleasure of serving our members for the last 25 years. This year, to better reflect our expanding mission and focus, we are excited to announce that we have changed our name to **The Eastern Transportation Coalition**.

A partnership of state Departments of Transportation and over 100 related authorities and organizations, we work together to accelerate improvements in freight and passenger movement along the eastern seaboard. Two new members have joined this year, Alabama and Tennessee, bringing our total membership to 17 states, plus the District of Columbia. The State of Florida has been a long standing member since 2003.

## THE FOCUS AND PRIORITIES OF THE COALITION CAN BE SUMMARIZED AS FOLLOWS:

- **Strengthen relationships** across jurisdictions to address common challenges related to Transportation Systems Management and Operations (TSM&O), Freight, and Innovation.
- **Deliver high-quality workshops and products** to address unmet and changing industry needs
- **Advance research and development activities** to keep the Coalition members at the forefront of transportation innovation.
- **Focus on implementable solutions** that leverage Coalition membership and expertise.

## THE COALITION IS ORGANIZED INTO THREE PROGRAM TRACKS





The TSM&O Program focuses on operational strategies such as Traveler Information or Incident Management. Highway Operations Groups (HOGS) conduct in person peer exchanges to provide a forum for cross border communication.

Scholarships are provided through the Coalition for members to attend the nationally recognized Operations Academy. The Coalition's Data Marketplace provides members with access to probe data sets and additional vendor products at discounted pricing.

The Freight Program provides a forum to help members with transportation issues related to goods movement within and across states throughout the Corridor. The Truck Parking working group meets bi-monthly to address the challenges of truck parking. By sharing information and showcasing truck parking initiatives, members gain first-hand knowledge and are able to leverage the experiences of members advancing truck parking solutions such as Florida DOT's Truck Parking Availability System "TPAS".

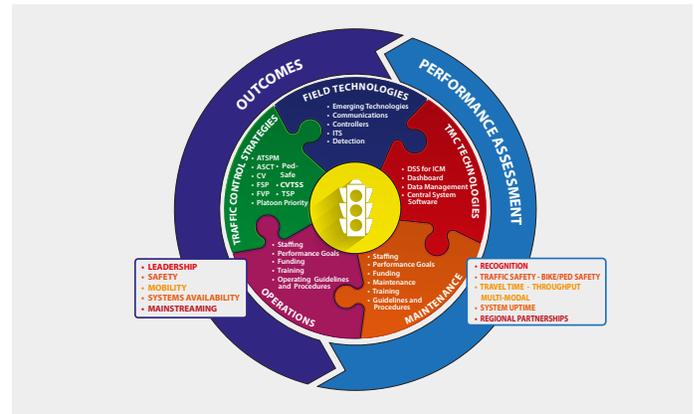
The Innovation Program addresses new and emerging transportation challenges. Organized around three geographic regions, our Connected and Automated Vehicle (CAV) Working Group provides opportunities for collaboration and peer exchange, to monitor and report on member state activities, and to help identify opportunities for federal and nonprofit grants.

The Coalition is a member-based, member-driven organization. A summary of activities was recently published in their 2020 FY Year in Review.



The Coalition is fortunate to have Raj Ponnaluri, PhD, P.E., PTOE, PMP the State Connected Vehicles and Arterial Management Engineer as an active representative from the Florida DOT. Raj leads our CAV Working Group in the Southeast, has presented to his peers through many of our webinars and other events, and is actively engaged in our weather-related evacuation program.

The Coalition provides technical and programmatic information to our members through webinars throughout the year. Agency presentations that showcase diverse, cross-cutting topics are a key focus of these webinars. As part of this effort, Raj presented information on the Florida Statewide Arterial Management Program (STAMP) as part of a webinar that showcased differing types of Arterial Management.



A core mission of the TSMO program has been cross-border/multi-jurisdictional response coordination for major transportation system impacts, including those caused by severe weather. The Coalition is currently working on a pilot project using real time connected vehicle data and a visualization package to determine real time volume estimate capabilities in part focused on hurricane evacuations.

Florida, Alabama, Georgia, North Carolina, Tennessee and Virginia hold licenses to evaluate the data and the analytics platform. On December 8, 2020, a round table discussion is scheduled to bring the license holders from the six states together to discuss best practices and lessons learned from this pilot. Raj will be representing Florida at this meeting as a Florida beta tester.

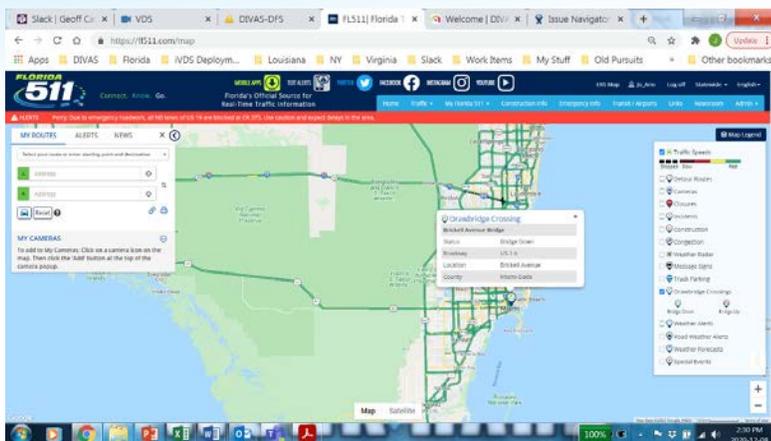


For more information, please contact Denise Markow, PE at (301) 789-9088 or by email at [dmarkow@tetcoalition.org](mailto:dmarkow@tetcoalition.org).

# FL511 Enhancements

By James Landini, TSM&O Program Development Engineer, FDOT and Jo Ann Oerter, IBI Group

Over the past several months, FL511 has implemented several enhancements to improve the system features and user experience. The FL511 system is the public-facing product that provides real-time travel information via the interactive voice recognition (IVR) system, the website, mobile apps, email and text message notifications, and social media platforms. The FL511 system has implemented two new features. The first new feature is the display of the status of Drawbridge alerts on the various FL511 platforms. Drawbridge alert icons are displayed on the FL511 website map. As the status of the drawbridge changes, the icons on the map view of the FL511 website will change colors from green to red and vice-versa. The Drawbridge information is conveyed on a separate tab on the FL511 website in a list form. Lastly, the Drawbridge alerts automatically translate the drawbridge data into real-time FL511 traffic events (based on the status of individual drawbridge devices), such that FL511 subscribers continue to receive corresponding email and text notifications. The FL511 mobile apps will also be updated to convey to FL511 end users the status of FDOT drawbridges by displaying green or red icons, depending on the data coming into the system.



*FL511 has a substantial presence on social media. Check out the messages and information on Instagram (@florida\_511), Twitter (@fl511\_state), Facebook, and YouTube. A new video for FL511 called Smart Moves is now available at YouTube. Check it out at <https://www.youtube.com/watch?v=hvJyzDV9TEY>.*



A second new feature was made to the mobile applications. The FL511 Visual IVR/mobile app was modified to allow users to disable the location services permission to use the app. In these cases, the app will assume the users are at a default central Florida location because the apps require a location (latitude and longitude) to function. The mobile apps were also updated to allow users to choose between the app using low or high precision location services via the settings menu. High precision uses GPS, while low precision does not (relying instead on mobile network and available IP information). The mobile apps were also modified to add closed-circuit television cameras and dynamic message sign (DMS) communications to the map view, if activated.

As part of the FL511 enhancements, the message for Rest Area information on the FL511 IVR was modified to direct users to the FL511 website to obtain additional information on the status of Rest Areas and Weigh Station closures. Additional enhancements for the FL511 system are in development. These include the addition of Graphical DMS enhancements to the FL511 website/mobile apps and modifications to the weather radar layer on the FL511 website/mobile apps. Stay tuned for further updates on these changes!

Due to data indicating usage of how FL511 users access Florida travel information, the FL511 IVR is scheduled for sunset by early Spring 2021. Fewer FL511 users access the voice line, instead opting for FL511 website/mobile apps along with subscriptions to the email and text message alerts. The FDOT and the FL511 contractor have already begun to make minor changes to various aspects of the FL511 components to further promote their use in lieu of the FL511 IVR. The FL511 IVR opening menu message is periodically being modified to also direct users to the FL511 website/mobile app.

The FDOT has launched a new training module in the internal Learning Curve and at the external site <http://wbt.dot.state.fl.us/ois/Florida511/index.htm> to teach new FL511 mobile app users how to use the software. The session is a computer-based module for self-directed learning. The convenient and user-friendly approach lets users learn the features and use of the FL511 app. The FL511 app can be found at the Apple App Store and Google Play Store.

For more information, please contact James Landini at (850) 410-5626 or by email at [James.Landini@dot.state.fl.us](mailto:James.Landini@dot.state.fl.us).

# FDOT Central Office Announces SunGuide® Software Version Release 8.0

By Christine Shafik, State TSM&O Software Engineer, FDOT and Gregory N. Dudley, HNTB



*The Florida Department of Transportation (FDOT) Central Office has launched a new version of SunGuide software release 8.0 to enhance intelligent transportation systems (ITS) operations. This version is part of our continuing commitment to ensure the transportation management center (TMC) is using the most up-to-date software and helps position it to manage future traffic demand.*

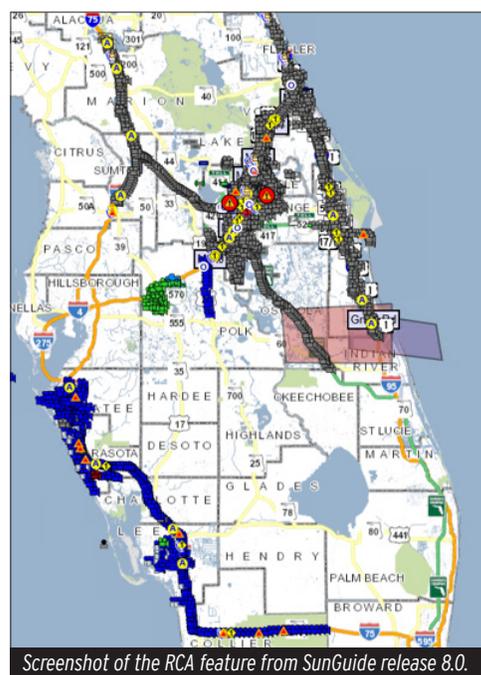
There are multiple new features included in this latest release:

- Rapid Incident Scene Clearance (RISC) is introduced in this release and provides the TMC staff the ability to manage RISC activations and tracking directly from SunGuide. RISC management within SunGuide will eliminate data entry workload and reporting on RISC activities will be simpler and streamlined.
- Remote Command Application (RCA) is another key feature launched in this release. RCA will allow users to view information, control devices, and update events from other SunGuide installations in the same manner as local devices and events. RCA provides a seamless interface between installations so operations from multiple installations are able to work together.
  - Districts can use the RCA module to bring in data from different installations
  - Device data now integrated into the existing dialogs
  - A Center ID column is available to filter to a specific district's data
  - Local and Remote devices are included in the same log
  - Local and remote events are available to the user
- Event Attributes are now a full section in the Event Details Dialog. There are many attributes to choose from. New Attribute types can be added to the system, however, Central Office requests that these be coordinated at a state level. Event reports have been updated to include filtering based on the attributes for the event.
- Traffic Sensor Subsystem (TSS) Thresholds are now configured by group not by individual links. TSS Thresholds for speed and recovery are set on the group. TSS Links are assigned to the group.
- The Data Transmission Network (DTN) Weather Driver was replaced with a driver for the National Weather Service.
- All timestamps in the system will now contain time zone information. Maps can run from different time zones and all data will report to that map in the local time zone. Data in the database will also include time zone information. Reports have also been updated to account for time zone information.

Additional new features in Release 8.0 include: camera blocking that is now available to all cameras and travel times that users can create with links from the Center-to-Center feed. Also, the Truck Parking Subsystem (TPS) sensor status and related details are now available from TPS facilities.

There are many more new features provided in the new release. For a complete list of these features please click the "SunGuide 8.0 What's New Slides" link here: <http://sunguidesoftware.com/document-library/training>.

For information, please contact Christine Shafik by e-mail at [Christine.Shafik@dot.state.fl.us](mailto:Christine.Shafik@dot.state.fl.us).



Screenshot of the RCA feature from SunGuide release 8.0.

# CONTACTS

## DISTRICT 1

Mark Mathes, DTOE  
Randall James (Interim)  
FDOT District 1 Traffic Operations  
801 N. Broadway Avenue  
Bartow, FL 33830  
(863) 519-2490

## DISTRICT 2

Jim Hannigan, DTOE  
Peter Vega  
FDOT District 2 Traffic Operations  
2198 Edison Avenue  
Jacksonville, FL 32204  
(904) 360-5630

## DISTRICT 3

Kerrie Harrell, DTOE  
Amy DiRusso  
FDOT District 3 Traffic Operations  
1074 Highway 90 East  
Chipley, FL 32428-0607  
(850) 638-0250

## DISTRICT 4

Mark Plass, DTOE  
Alexandra Lopez  
FDOT District 4 Traffic Operations  
2300 W. Commercial Blvd.  
Ft. Lauderdale, FL 33309  
(954) 777-4350

## DISTRICT 5

Jim Stroz, DTOE  
Jeremy Dilmore  
FDOT District 5 Traffic Operations  
719 S. Woodland Blvd., MS 3-562  
DeLand, FL 32720-6834  
(386) 943-5310

## DISTRICT 6

Omar Meitin, DTOE  
Javier Rodriguez  
FDOT District 6 Traffic Operations  
1000 NW 111th Avenue, MS 6203  
Miami, FL 33172  
(305) 470-5312

## DISTRICT 7

Ron Chin, DTOE  
Megan Arasteh  
FDOT District 7 Traffic Operations  
11201 N. McKinley Dr.  
Tampa, FL 33612  
(813) 615-8600

## FLORIDA'S TURNPIKE ENTERPRISE

John Easterling, DTOE  
Eric Gordin  
Florida's Turnpike Enterprise  
PO Box 9828  
Ft. Lauderdale, FL 33310-9828  
(954) 975-4855

## CENTRAL OFFICE

Trey Tillander, Director  
Traffic Engineering and Operations Office  
(850) 410-5419

Fred Heery  
State TSM&O Program Engineer  
(850) 410-5606

Raj Ponnaluri  
Connected Vehicles, Arterial Management,  
Managed Lanes  
(850) 410-5616

Jeff Frost  
State TIM/CVO Program Manager  
(850) 410-5607

Derek Vollmer  
Traffic Engineering Research Lab Manager  
(850) 921-7361

Alan El-Urfali  
State Traffic Services Program Engineer  
(850) 410-5416

