SUNGUIDE® DISSEMINATOR

STATE OF FLORIDA • DEPARTMENT OF TRANSPORTATION

Inside This Issue
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New Power Distribution System

Hurricane season is only a few months away. With that comes an increased chance of a power loss due to a storm. Because District Four's eyes on the road—closed-circuit television (CCTV) cameras as well as other devices—are dependent on power, the District took preventive measures to eliminate downtime due to power outages.

Previously, each device location required a power drop from Florida Power & Light (FPL). Recently, the District installed a power distribution system along the I-95 corridor in Broward County, which includes distribution locations approximately every six miles. Each location has a large generator to provide power when FPL cannot. The District can run the generator while waiting for FPL to address the power outage in the area, keeping the intelligent transportation systems (ITS) operations running as usual.

With this capability, the regional transportation management center can share information with motorists as they return to the area after a hurricane evacuation. Even under a regional power outage, motorists would see signs displaying information about what roads may be closed; Road Rangers would be available for incident management and assistance as well. None of this would be possible without the use of the CCTV cameras, dynamic message signs, and other devices.

The power distribution system's main benefit is maximized/continued device uptime during a power loss. However, reduced power drops also save time and effort for FPL and the state by coordinating installation and maintenance. The I-95 corridor in Broward County was recently completed and this concept has been built into deployments in Palm Beach County and the Treasure Coast.

This article was provided by Jason Trujillo, District Four. For information, please contact Mr. Trujillo at (954) 847-2683 or email to Jason.Trujillo@dot.state.fl.us.

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ITS Solidified as Integral in FDOT District Six Future

The Florida Department of Transportation (FDOT) District Six Intelligent Transportation Systems (ITS) Office has established a precedential incident management plan in support of Phase 1A and 1B of the 95 Express Project. The plan standardized a set of multi-agency plans and procedures that, with the District's Transportation Management Center (TMC) at the forefront of the coordination efforts, enhanced the overall communications between all participating agencies and FDOT. Through this experience, the TMC achieved a greater level of program efficiency in terms of supporting construction-related projects through the use of its ITS resources, services, and technologies.

During the implementation of the 95 Express Project, District Six engaged in continuous coordination efforts with the 95 Express construction contractor. The contractor provided daily, weekly, and monthly updates on lane closures and the progression of construction events to the TMC; TMC operators received notifications an hour before closures began, right before the closures began, and just as the closures were completed. This, coupled with the use of the closed-circuit television (CCTV) cameras along the Interstate 95 (I-95) corridor, allowed the TMC to provide more accurate, up-to-the-minute traffic information to the public via dynamic message signs (DMS) and the 511 traveler information service.

During the hours in which no construction events were taking place, the TMC posted pre-event messages on its DMSs to alert motorists of upcoming lane closures and traffic events. The District enhanced its communications efforts even further by coordinating with other regional TMCs and enlisting their assistance with signage efforts as well; the District Four SMART SunGuide® TMC and Florida's Turnpike Enterprise's TMC helped with signage to provide District Six with a regional approach to traffic management.

District Six also expanded its incident management program as a result of the 95 Express Project; it now provides additional coverage with two Road Ranger service patrols roaming the I-95 corridor along the project limits. A flatbed tow truck and an incident response vehicle are also staged near the corridor ready to assist in any travel lane-blocking event affecting regular highway operations. Additionally, the Florida Highway Patrol assists FDOT with enforcement and support throughout the corridor to help maintain traffic flow and improve safety.

These coordination efforts as well as the added incident management resources have improved mobility and reduced congestion on I-95 and the 95 Express lanes.

The District Six ITS Office is applying some of the procedures set in the 95 Express Incident Management Plan and using it as a model for assisting with two major upcoming construction projects—State Road 826 / State Road (SR) 836 Interchange Reconstruction and The Port of Miami Tunnel.

The SR 826 / SR 836 Interchange Reconstruction project, which began in November 2009, will reconstruct and widen SR 826 and SR 836 along the area where the highways intersect. It will create a four-level interchange and add more ITS devices along the project limits. The TMC will utilize these additional devices to gather more traffic data from the area to disseminate better, more accurate real-time traffic information to the public.

To help with incident management, two additional Road Ranger service patrols were added to the construction contract for the SR 826 / SR 836 Interchange Reconstruction Project as well—a flatbed and a tow truck. Like the 95 Express flatbed, the SR 826 / SR 836 flatbed will remain staged until assistance is needed. The flatbed will be available 24-hours a day, seven-days a week. The tow truck will operate on Monday through Friday, 6 a.m. to 10 p.m., and roam within the SR 826 / SR 836 project limits. TMC operators will handle all communications and coordination with

these additional Road Ranger vehicles. These additional incident management resources, combined with CCTV monitoring, DMS signage and continuous, real-time traffic updates on 511, will enhance the operations of this important interchange during reconstruction.

Additionally, the Port of Miami Tunnel project, scheduled to begin construction later this year, is designed to alleviate congestion in Downtown Miami by providing access between the Miami seaport, Interstate 395 (I-395) and I-95 by 2014. The TMC already operates a DMS located on Port Boulevard and Biscayne Boulevard that provides motorists exiting the seaport with traveler information, such as closures and traffic events. Since the sign began operating in November 2009, it has signed for 244 lane-blockage events. Once construction for this project begins later this year, the TMC will continue its coordination efforts to provide the same level of quality information on its DMS and 511 as it did during 95 Express construction process. Similar incident management strategies will also be applied to this project to keep traffic flowing once construction begins.

Monroe County is currently widening / reconstructing lanes on U.S. 1 and also benefits from the TMC's support. The TMC helps to increase driver awareness of the U.S. 1 construction efforts in Monroe County by posting pre-event messages on the DMS in the county.

The District Six ITS Office's increasing role in supporting construction-related activities, such as 95 Express, SR 826 / SR 836, the Port of Miami Tunnel, and the U.S. 1 widening / reconstruction projects, continues to prove that ITS is not only an integral component to FDOT's current and future projects, but an important part of a sound transportation system that is able to meet future travel demands.

This article was provided by Javier Rodriguez, FDOT District Six. For information, please contact Mr. Rodriguez at (305) 470-5341 or email to Javier.Rodriguez2@dot.state.fl.us.

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SunGuide® Software Release 4.3 Update

The Florida Department of Transportation (FDOT) is about a month away from packaging media disks with the most recent SunGuide® software updates. All SunGuide users will receive this major release, assigned a numerical release number of 4.3. Release 4.3 will have significant enhancements for I-95 express lanes and is being deployed to make express lanes operations more efficient. This release also has proposed modifications that have a positive effect on the Florida 511 advanced travel information system and performance measures reporting as well as support for Teleste's new family of streaming video appliances.

Each software release goes through the software development life cycle. The life cycle includes tasks from the birth of an idea for the software update to the deployment of the updates at the user's computer system. A concept for the software enhancement originates at one location, but is prepared with collaboration of all SunGuide users and agreed upon in the statewide Change Management Board meetings. After finalizing the concept, the requirements are developed and agreed upon as the next step in the process. At that time, the software development goes into full swing to produce the proposed enhancements. After completion of the software development, the software contractor conducts internal tests to ensure that the software meets all of the requirements; then the contractor builds the installer for comprehensive testing.

FDOT follows stringent processes and conducts extensive testing on major software updates. To ensure that the software is adequately tested, FDOT conducts two sets of tests. For Release 4.3, FDOT conducted the first set of tests, called the factory acceptance test (FAT), at the contractor's facility in San Antonio, Texas, on February 1. The weather outside was brutal and icy cold, but the SunGuide team stuck to doing the software tests inside the facility. Testing was successful and almost all requirements passed the test. At that time, the contractor made minor adjustments and packaged the software for the second round of testing—the independent

validation and verification (IV&V). Due to the complex nature of this software update, FDOT chose to split the testing into two segments. FDOT conducted the IV&V testing for the first segment—software enhancements not relate to the I-95 express lanes—during the week of February 16, at the Traffic Engineering Research Lab in Tallahassee, Florida. The second segment of testing—enhancements specifically developed for I-95 express lanes—will be performed in the District Four regional transportation management center (RTMC). The first segment of testing identified a few minor issues that the software developer corrected with subsequent retesting during the week of March 29.

Each of these tests last two to three days and require detailed documentation of the testing steps. Most of these documents are several hundred pages long. Over the few days of testing, the team walks through each test step to ensure that the software behaves as expected. If not, discussions ensue to determine the corrective measures needed. FDOT conducts both sets of tests formally, with a "reader" reading aloud for the audience to hear the test steps and the "operator" performing the actions on the software. The SunGuide team spends this level of diligence on every software update to ensure that the software users have a good experience with the software.

This article is provided by Arun Krishnamurthy, FDOT Traffic Engineering and Operations Office. For more information, please contact Mr. Krishnamurthy at (850) 410-5615 or email to Arun.Krishnamurthy@dot.state.fl.us.

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You're Invited: Find Out What's New and What's Coming in ITS!

Join the Intelligent Transportation Society of America (ITS America) and 2,000 other transportation, technology, business, and policy leaders at the 20th Annual Meeting and Expo in Houston on May 3-5. The 2010 program brings together a rich slate of national leaders, unique demonstrations, and best practices centered on intelligent transportation systems (ITS) innovations.

Visit ITS Florida, which will be located in the ITS America and World Congress Pavilion, exhibit area number 533. Join us in the Countdown to ITS World Congress 2011 coming to Orlando! Get the first look at what's in store for the 18th ITS World Congress, which Florida will host next year in Orlando on October 16-20.

Some of the Highlights

- The May 3 Opening Plenary focuses on the experience of Texas – known for technology innovation across the state. Speakers include Houston Mayor Annise Parker, Harris County Judge Ed Emmett and a panel of top Texas transportation officials moderated by Dennis Christiansen, Director of Texas A&M's renowned Texas Transportation Institute. Also on Monday morning, the Texas Senate Transportation and Homeland Security Committee will conduct a hearing focused on congestion and air quality, overweight vehicles, hurricane response, and other issues such as transportation finance and traffic safety.
- On Tuesday, May 4, America's highest ranking federal transportation officials will preside at the United States Department of Transportation (DOT) Plenary. Senior officials from the Research and Innovative Technology Administration, the Federal Highway Administration, the Federal Transit Administration, and the National Highway Traffic Safety Administration, among others, will share with us the current state of play and the outlook for the future.
- The closing plenary on May 5 is keynoted by US Transportation Secretary Ray LaHood and IBM Chairman and CEO Sam Palmisano, two national leaders at the forefront of transportation innovation.

Explore a Cutting-Edge Technology Demonstration or Technical Tour

- Watch as a team of first responders from the region—complete with police helicopters and live streaming video—use the latest technology and techniques to "upright" an overturned 18-wheeler in a live demonstration.
- Ever seen a bus drive itself? The "Driver Assist System" developed by the University of Minnesota's Intelligent Vehicles Lab comes pretty close, providing lane assistance by helping the driver maintain the proper vehicle placement in a narrow lane, and collision avoidance by providing alerts and warnings for obstacles in the front and the sides of the vehicle. Conference attendees will get to see buses equipped with this system navigate narrow bus shoulders on roads near the George R. Brown Convention Center.
- Practitioners from coastal states will appreciate the rare opportunity to tour the security system at the Port of Houston; this port ranks second in the US in total tonnage.

Visit the Exhibition Hall and Choose From Over 50 Sessions and Forum Showcases

The Annual Meeting brings you topic-specific briefings in the exhibition hall with guided tours to representative exhibits, opportunities to build your business development network at the exposition and networking events, 50+ educational sessions, and the ability to earn "professional development hours." In addition, you can attend a co-located meeting or workshop hosted by other well-known organizations such as the American Association of State Highway Officials, DOT, the International Association of Chiefs of Police, and the National Transportation Security Center of Excellence.

Time-saving conference registration is available online. The Hilton Americas Houston, conference hotel, is 90 percent full, so reservations should be made soon. Conference information is available on the ITS America Web site at www.itsa.org/.

See you in Houston!

For more information on ITS Florida, please check the ITS Florida Web site at www.itsflorida.org or contact Sandy Beck, Chapter Administrator, at itsflorida@itsflorida.org. If you wish to contribute an article to the *SunGuide Disseminator* on behalf of ITS Florida, please email Mary Hamill at MaryKHamill@global-5.com.

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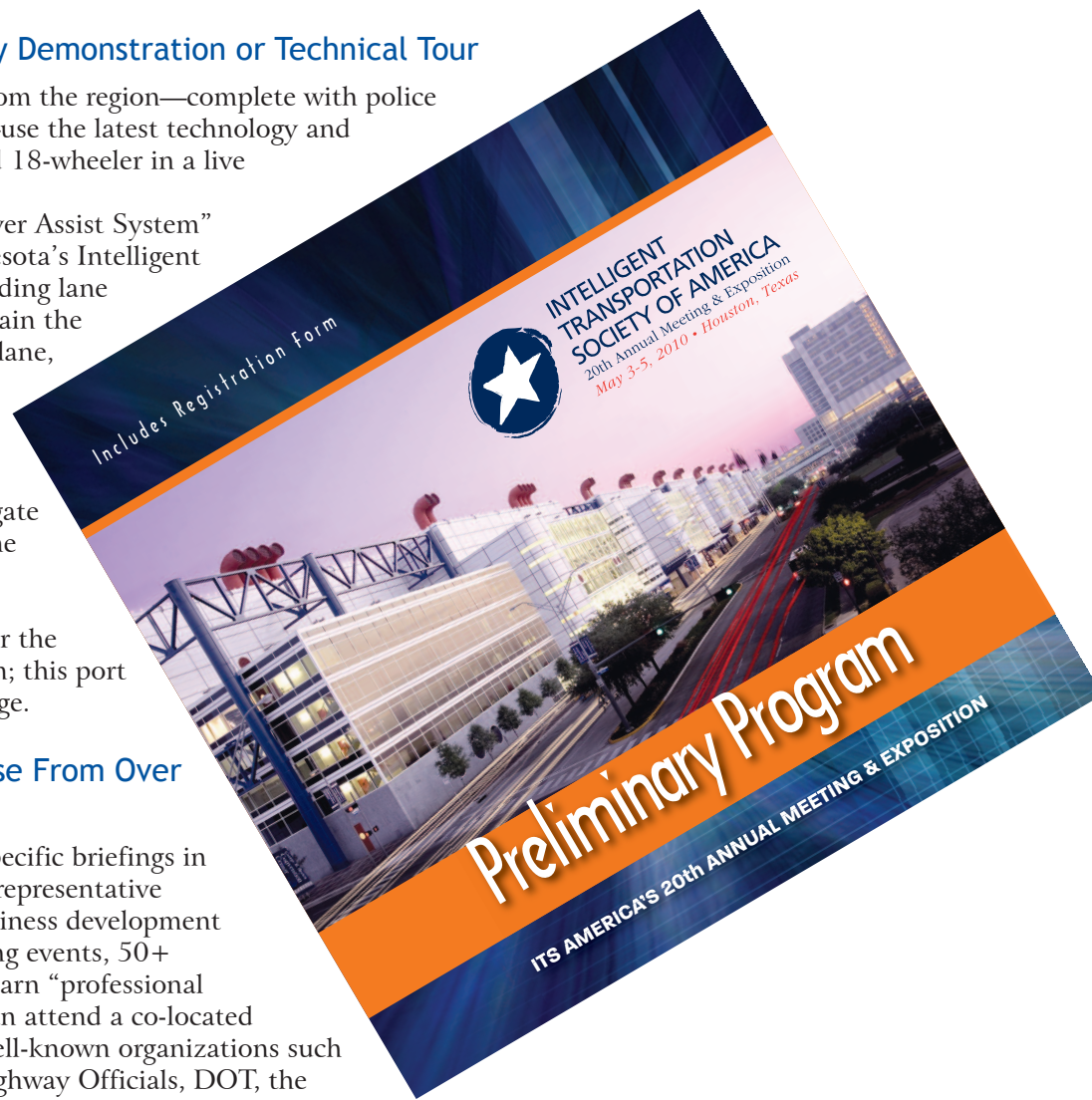
Editorial Corner—How Are We Doing?

The Florida Department of Transportation is fortunate to have a program, the Road Ranger service patrols, that regularly receives feedback from those travelers that we assist. This feedback comes in many forms: comment cards, emails, handwritten notes, and the occasional phone call. However, we infrequently receive information about the Road Rangers from the agencies that we work with day-to-day. The 2010 Statewide Road Ranger Survey for Incident Responders gave us just that opportunity to receive information from these agencies and it was a success.

The idea originate with District Four during a statewide video conference; the District mentioned that it would be nice to see how the Florida Highway Patrol and other traffic incident response agencies felt about the Road Ranger program. It was a terrific idea and from that a survey was drafted and reviewed by the Districts; adjustments were made and the final version of the survey was sent to each District on January 4, 2010, along with a one-page overview including instructions for completing the survey.

Distribution of the survey was handled at the District level. Once the surveys were completed, they could be emailed, faxed, or mailed back to the Traffic Engineering and Operations Office in Tallahassee. We received them in all formats and began the tabulation process. The surveys were divided by District and any written responses were captured in a separate annex so that they could be reviewed and categorized.

A total of 792 responses were received during the survey period. The response rates for each District were similar. Survey response by the Florida Highway Patrol was excellent with over 600 responses received. We also received very good feedback from the local enforcement agencies, fire/rescue, and emergency medical service providers as well as other agencies and companies that interact with the Road Rangers.

The survey contained statements that were programmatic or operator oriented. For each statement, the respondent was provided choices of levels of agreement or satisfaction. In the analysis for the survey, each response was given a point value ranging from one—greatest dissatisfaction or least agreement—to five—highest satisfaction or agreement. The average programmatic score was 4.14 and the average operator score was 4.27.

The results of the survey were very positive, but there are areas in which we would like to see improvement. A number of respondents indicated that while the Road Rangers are proficient in their duties, they could have better awareness of the Incident Command System (ICS), and in several areas it was noted that it would be very helpful if the Road Rangers could have direct communications with the Florida Highway Patrol troopers.

This survey is a valuable learning tool because it is an objective evaluation of the program from the perspective of our incident response partners. We are constantly striving to improve the Road Ranger program and the results of this survey will help guide us in the right direction. The survey can be viewed at:

www.dot.state.fl.us/trafficoperations/Traf_Incident/pdf/RR_Annual_Survey_Report-FINAL_2010.pdf

This editorial is provided by Paul Clark, FDOT Traffic Engineering and Operations Office. For more information, please contact Mr. Clark at (850) 410-5607 or email to Paul.Clark@dot.state.fl.us.

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Inside the TERL

The Florida Department of Transportation (FDOT) has a goal to assure that only a safe and uniform traffic control system is implemented in the state of Florida. The Traffic Engineering Research Lab (TERL) plays a part in obtaining this goal by satisfying Florida Statute 316.0745 - Uniform Signals & Devices. Below is a look Inside the TERL at activities that help accomplish our goal.

The primary mission of the TERL is to maintain an Approved Product List (APL) of devices that have been tested and verified to meet FDOT requirements. Establishing and maintaining the APL encompasses a broad variety of activities. These activities include:

- The review of manufacturer quality assurance/quality control (QA/QC) programs, and comprehensive product evaluation and testing,
- The initial development and continuous improvement of all traffic control system product specifications,
- Maintenance and technical operations of the systems used for testing (including the design, installation, and operation of a small-scale transportation management center [TMC]) as well as the installation and integration of field devices around the TERL facility and various remote testing locations.

The primary goal of these efforts is to ensure that products sold and deployed on transportation projects in Florida are safe and reliable, are of good quality, and perform as required.

Notable activities during the past month included:

- Pelco Products pedestrian pushbutton detector model SP-1090-FL was evaluated to FDOT standards and listed on the APL. This pushbutton replaces the currently approved version.

- Testing was conducted on pull boxes manufactured by CDR Systems of Palatka, Florida. The TERL, which does not have the capability to perform load testing, relies on the FDOT's Structures Lab to perform the tests needed to verify loading capacities of the pull boxes. Many thanks to the Structures Lab for helping with this activity.

Vendor qualification activities included:

- Six new qualification submittals were received from the following manufacturers: General Electric Security; Jupiter Systems; Martin Enterprises; IST International; Advanced Protection Technologies; and American Signal Company. None of these manufacturers' products have been listed on the APL as they must first become qualified before being allowed to submit products for APL evaluation.

- A site quality assurance audit was performed on qualified vendor Optelecom in Germantown, Maryland. Optelecom manufactures video encoders, but has yet to submit product for APL listing. Site audits have been performed on several APL manufacturer facilities to verify that QA/QC procedures are in place as submitted during the initial qualification evaluation.

- During the preceding month, one manufacturer was added to the APL vendor qualification list. Stop Experts, Inc., the Rectangular Rapid Flashing Beacon (RRFB) pedestrian crosswalk system manufacturer, met the requirements to be listed as qualified. The product now moves on to the next step to get listed on the APL—product evaluation.

The TERL welcomes and encourages any comments and feedback regarding products listed on the APL. Is there a product you would like to have placed on the APL? Are you a maintaining agency in Florida that would like to sponsor a project to evaluate a new product; would you like to share your experiences with a product (good or bad) with us? If so, we want to hear from you.

This article was provided by Jeff Morgan and Trey Tillander, FDOT Traffic Engineering and Operations Office - TERL. For more information, please contact Mr. Morgan at (850) 921-7354 or email Jeffrey.Morgan@dot.state.fl.us.

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Announcements

Congratulations Randy!

Catherine Pierce (Randy's daughter) became a big sister to Jacob Ryan, born February 17, weighing 8.2 pounds, and 20.3 inches.

Please join us in congratulating Randy.

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Congratulations Erik Gaarder

Erik Gaarder, a project manager in PBS&J's transportation group, recently completed the requirements to be named an ASQ-Certified Six Sigma Black Belt (ASQ CSSBB) by the Certification Board of ASQ (American Society for Quality).

The certification indicates an individual has attained a proficiency in and a comprehension of Six Sigma principles and practices, including supporting systems and tools in a variety of business situations. A Black Belt demonstrates team leadership and manages team dynamics in all aspects of the DMAIC model (define, measure, analyze, improve, control), understands lean enterprise concepts, and uses tools to identify non-value-added activities.

"ASQ provides certification as a way to provide formal recognition to professionals who have demonstrated an understanding of, and a commitment to, quality techniques and practices in their job and career," explains Peter Andres, ASQ president. "This is a great accomplishment and, although not a formal registration or licensure, it represents a high level of peer recognition."

Adds PBS&J senior program manager and vice president C. Paul Watson, PE, "This is a marked accomplishment even for someone with Erik's abilities. The certification speaks volumes about his work ethic and dedication to his job."

With more than 85,000 individual and organizational members, ASQ (www.asq.org) has been the world's leading authority on quality for more than 60 years. Since 1968, when the first ASQ certification examination was given, more than 163,000 individuals have taken the path to reaching their goal of becoming ASQ-Certified in their field or profession.

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United We Guide

The United We Guide Team won a Certificate of Commendation in the 2010 Prudential - Davis Productivity Awards program. This multi-agency partnership consists of members from FDOT (Gail Holley – Traffic Engineering and Operations, Trenda McPherson – Safety, and Amy Datz – Transit); Florida Department of Health (Kyla Shelton), Florida Department of Elder Affairs (Buddy Cloud), Florida Department of Highway Safety and Motor Vehicles (Selma Sauls – retired), Florida Highway Patrol (Lt. Bill Leeper), Florida Commission for the Transportation Disadvantaged (John Irvine), and a transportation consultant (Lisa Bacot). The team developed and implemented a pilot project in St. Johns and Putnam Counties where the team trained Community Transportation Coordinators (CTC) to be true mobility managers. By revising the roles and responsibilities of the CTC they were able to assist seniors in identifying transportation safety and mobility resources that are best suited to meet their own individual needs to help them to remain independent and active within their own communities.

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Get Ready

The ITS America's 20th Annual Meeting & Exposition – Connecting Communities through Smart Transportation Solutions will be held on May 3-5, 2010, at the George R. Brown Convention Center in Houston, Texas. The 20th Annual Meeting & Exposition will focus on core issues that relate to connecting communities through smart transportation solutions.

Mark the date on your calendar. More information is available at http://www.itsa.org/annualmeeting/c80/News_and_Events/Calendar/Annual_Meeting_and_Exposition.html.

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Save These Dates for Transpo 2010

Transpo 2010 will be held on December 12-15, 2010 at the Sawgrass Marriott in Ponte Vedra Beach. More information on participating in this event can be found at http://itstranspo.org/.

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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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