



# SUNGUIDE™ DISSEMINATOR

## FDOT District Six Launches Phase 1A of the 95 Express

### Introducing Congestion Pricing

The Florida Department of Transportation (FDOT) District Six recently launched Phase 1A of the 95 Express along Interstate 95 (I-95) in Miami-Dade County. The first of its kind in the state, this managed lanes project is part of an overall long-term strategy of initiatives designed to help improve the safety, throughput, and reliability of mobility along the roadways in southeast Florida.

I-95 is one of the most highly congested roadways in the District, and usually serves as a main point of access for cross-county commuters traveling between Miami-Dade and Broward Counties. High traffic volumes in conjunction with low travel speeds often caused congestion and increased delays for the more than 250,000 motorists who travel along the corridor each weekday, especially during rush-hour periods. With local population and traffic volumes expected to rise, District officials implemented the managed lanes as part of a cost-effective transportation management plan designed to mitigate congestion in areas where expansions of existing roadways are limited.

Construction for Phase 1A of the 95 Express began in February 2008, and toll collection commenced on December 5th, 2008. Roadway construction impacts were kept to a minimum, and the corridor itself was not widened. Instead, the entire facility was reconfigured and restriped to allow room for an additional lane to fit inside the existing roadway. Each lane was slightly narrowed from 12 feet to 11 feet, and the inside shoulder along the corridor was also reduced. The new lane and the former high occupancy vehicle lane were converted into the 95 Express, separated from the general purpose lanes with plastic poles spaced 10 feet apart along the 6.2 mile stretch of the project. Extending northbound between State Road 112 and the Golden Glades Interchange, Phase 1A converted the facility from a five-lane highway into a six-lane highway that provides motorists with travel options for their northbound commute.

Congestion pricing along the 95 Express is managed and operated at the District's regional transportation management center (RTMC). Rates are established based on the current traffic density of the express lanes throughout

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the day, in real-time. Toll rates vary, and increase during peak periods, when demand for the express lanes is higher, and decrease during non-peak periods, when the demand for use is lower. The goal is to keep the facility operating at free-flowing speeds in order to improve the overall mobility of the corridor at all times. Toll rates range between 25¢ and \$2.65 for motorists who choose to use the 95 Express, but can go up to \$6.25 in unusual circumstances of extreme conditions. Toll rates have ranged between 25¢ and \$2.00 since operations commenced, but have generally averaged \$1.50 during the evening rush hour period when traffic congestion is at its peak based on data collected from December 5 to 19, 2008. Rates are displayed on dynamic message signs (DMS) at each entry point in order to inform potential express lanes users of current toll rates before they decide to enter the lanes.

Tolls are collected electronically through the SunPass®, FDOT's prepaid toll program, supported through Florida's Turnpike Enterprise. Toll exemption is granted to vehicles that qualify as vanpools, carpools of three or more occupants, hybrid vehicles, over-the-road buses, transit buses, and public school buses, that register with South Florida Commuter Services. Motorcycles can also ride the express lanes toll free without having to register. All other vehicles must own and display a SunPass transponder to use the 95 Express, as toll enforcement, occupancy enforcement, and traffic citations will be enforced along the facility by SunPass and the Florida Highway Patrol.

The 95 Express is a two-phased north/south congestion management plan aimed to improve the regional mobility for commuters traveling along I-95 between Miami-Dade and Broward Counties. Phase 1B of the 95 Express, between the Golden Glades Interchange southbound to State Road 112/I-195 is expected to open for operation in late 2009. Phase 2 will extend northbound to I-595 in Broward County from near downtown Miami, and will cover a distance of approximately 22 miles and traverse two FDOT Districts, Four and Six, when completed. Final project completion is tentatively scheduled for 2010.

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## WiFi® for Travelers

As part of a pilot project, the Florida Department of Transportation (FDOT) has been providing a free WiFi® internet access service at the Florida Welcome Centers since last summer. The initial reaction to this service has been very positive. The service is operational at the four welcome centers and at the Turkey Lake Turnpike Service Plaza. In October, this service was used approximately 1,250 times with that number growing to 1,500 in November. The initial December statistics are showing a continuing growth trend.

This WiFi® service is being operated by FDOT contractor, Zoom Information Systems (Zoom). Travelers who access the WiFi® service are greeted with an FDOT welcome page, custom designed by Zoom. From this welcome page travelers may check on the weather or traveling conditions. They can also transfer to the internet. Currently, FDOT is not charging for internet access, but plans are being developed to institute a modest fee for continued use of the internet after an initial 15 minute free period. This will allow travelers to quickly check their email or travel itinerary without incurring a cost. Those who wish to continue to browse the internet will then be charged, with usage being limited to 90 minutes.



The network is monitored 24 hours a day by Zoom at their headquarters in Indiana. They can detect a problem with the service within 40 minutes and have contracted to resolve any problems within 48 hours. The challenges with this service have been associated with the satellite connections to internet at these relatively remote locations. Severe thunderstorms cause short service outages and at least one problem has been associated with a lightning strike.

As part of this project, an FDOT equipment trailer is also being outfitted with WiFi® internet services. The trailer design is 60 percent complete and construction is expected to be completed this winter. FDOT intends to use the trailer as a transportable WiFi® hotspot, relocating it to various rest areas and other designated locations to provide internet access to travelers. The mobility of the trailer makes it ideal to also investigate other intelligent transportation systems-related services, such as weather monitoring and traffic video surveillance.

This article was provided by Randy Pierce, FDOT Traffic Engineering and Operations Office. For information, please contact Mr. Pierce at (850) 410-5608 or email to Randy.Pierce@dot.state.fl.us.

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# Upcoming Probe-based Data Collection Concept Testing in Florida

Due to limits in the number of miles of roadway that can be cost-effectively monitored using traditional data collection infrastructure (e.g., loop detectors, radar-based sensors, etc.), there has been increasing interest on the part of public agencies in the potential for probe-based data collection technologies to provide information on traffic conditions for extensive geographic areas (for both freeways and arterials).

As discussed in prior editions of the SunGuide™ Disseminator, the Florida Department of Transportation (FDOT) previously released an Invitation to Negotiate (ITN) to solicit the participation of third party content providers capable of participating in a concept test to evaluate the quality of probe vehicle data generated by two technologies:

- Cell phones as probes
- Global positioning system (GPS)-based probes

FDOT's procurement process concluded during the spring of 2008, resulting in the selection of two data providers, INRIX and Cellint, to participate in the concept test.

INRIX, based in the Seattle area, aggregates anonymous, real-time GPS probe data from more than 800,000 commercial fleet, delivery, and taxi vehicles across the U.S., integrating it with data from state department of transportation sensor networks and information on construction, road closures, incidents, and weather. Using this data, INRIX offers real-time and predictive travel time estimates, predictive dynamic routing, incident data, and traffic speeds.

Cellint is an Israeli company that provides a cell phone-based data collection solution referred to as TrafficSense. Unlike most of the other cell phone-based data collection systems, which rely on cell phone tower hand-off and other location-related data collected by the cell phone provider, Cellint uses a pattern matching geo-location approach which provides them with the ability to correlate each probe vehicle's location with an exact location on a roadway.

Unfortunately, despite having a real interest in participating in this concept test, Cellint was unable to come to agreement with any cellular service providers (i.e., cell phone company) operating within the project area regarding use of data from their cell phone network to support the determination of travel times. Due to the apparent difficulty associated with finding a cellular service provider interested in participating in the concept test, FDOT opted to terminate the cell phone data collection-based component of the project. As a result of this change, the concept test will proceed with the abbreviated goal of evaluating the quality of data provided by INRIX using GPS-based probes.

## Overview of the Nature of this Test

Previous demonstrations of probe vehicle technology have been fairly successful when applied to freeways and other limited-access roadways, but remain relatively unproven for signalized arterials. Consequently, the FDOT test, which will evaluate INRIX's ability to provide accurate traffic flow data on a range of roadway types during different times of the day, is anticipated to provide FDOT and other interested parties with the information necessary to support future decisions concerning the procurement of traffic data from private vendors. Some of the key factors that will be evaluated as part of this concept test include:

- Ability of INRIX to provide 90 continuous calendar days worth of probe data on both limited-access road (i.e., I-10) and arterials (Thomasville Road, Monroe Street, and Capital Circle) in the Tallahassee metropolitan area.
- Data quality attributes of INRIX's traffic content:
  - o Accuracy
  - o Reliability
  - o Timeliness

In addition to testing the quality of data being provided by INRIX using GPS-equipped "floating vehicle probes," FDOT is also considering the application of a new data validation technique that would compare the movement of Bluetooth-equipped devices (e.g., cell phones, personal data assistants, etc.) against the data provided by INRIX. This technology was recently evaluated as part of the I-95 Corridor Coalition's Vehicle Probe Project (VPP) in Maryland and Virginia, and may prove to be an extremely cost-effective and accurate method for the field measurement of roadway travel times.

This article was provided by Gene Glotzbach, FDOT Traffic Engineering and Operations Office. For information, please contact Mr. Glotzbach at (850) 410-5616 or email to [Gene.Glotzbach@dot.state.fl.us](mailto:Gene.Glotzbach@dot.state.fl.us).



## A Message From the ITS Florida President

I would like to express my appreciation to the Intelligent Transportation Society of Florida (ITS Florida) Membership community for allowing me to serve as your President in 2009. I will do my best to honor the confidence you have placed in me.

The mission of ITS Florida is to foster the application of intelligent transportation systems (ITS) solutions in Florida by:

- sharing ideas and timely information with our membership,
- stimulating public-private partnerships,
- advocating ITS deployment,
- offering guidance to policy managers, and
- encouraging interest and support of ITS throughout the state.

The history of ITS Florida leadership is a list of outstanding individuals who gave selflessly of their time and talents to serve the membership of ITS Florida. In doing so they carried the important message of how ITS technology improves transportation systems on a real-time, meaningful basis for the citizens of Florida. The current leadership of President Anita Valdervalk has held this banner high for 2008 and our challenge for 2009 will be to continue the excellent work underway and look for opportunities to add value to ITS Florida membership.



*Left to Right: Anita Vandervalk; Denise Bunnewith; Dr. Amr Oloufa; Mary Hamill; Jesus Martinez; Ken Jacobs; L. A. Griffin; Elizabeth Birriel (Not Pictured: John Easterling; Dale Cody; K. K. Saxena; Tahira Faquir)*

We have a total of 109 members in ITS Florida and every membership is very important. We would not exist except for the members and the work of so many volunteers that commit themselves to every facet of the operations of ITS Florida. They truly make things happen for ITS Florida. Our thanks to each one of you for your efforts. For 2009 I am sharing with our Board that our primary emphasis should be to focus on "service to our members," to add value to the membership of ITS Florida. We salute 2008 ITS President Anita Valdervalk and the Board for holding the line on dues which will not increase for 2009.

I am on staff of a public toll road agency which is experiencing a decline in revenue due to the current economic conditions facing our state and nation. We have cut budgets, shelved some projects, and continue to look for other ways to reduce expenditures. Most likely our members are facing these same decisions and we will work hard in 2009 to provide a good return for your membership investment in ITS Florida. On a more positive note, the current economic conditions may provide excellent opportunities to showcase and demonstrate how ITS can enhance and improve transportation infrastructure, considering the general decline in funds available for major capacity improvements.

Many of you are involved in ITS Florida activities, but if not, please consider offering your expertise and talent to one of our committees:

- Events
- Member Services
- Outreach
- Professional Capacity Building

Visit the ITS Florida Web site at [www.itsflorida.org](http://www.itsflorida.org) for details and other information.

I look forward to meeting with as many of you as possible in the coming year and I welcome your ideas, thoughts, and comments on how we may better serve our members and honor the trust you have placed in us. If you are not a member, please consider joining. You are missing great benefits and opportunities. You may reach me at the following:

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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](mailto:MaryKHamill@global-5.com).

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## Editorial Corner—Finding Leadership Throughout Your Life

As I move from one phase of my life to the next, I would like to reflect back on where I have been in order to view how far I have come and how my life has followed that of many of the people who shaped it.

My first carrier was that of a military man; and I had many influences that shaped and molded me into the leader I am today. Many individuals taught me hard lessons that without I could never have reached my potential. Things learned, such as honesty, loyalty, and commitment to fellow soldiers, that we all carry on into our civilian lives. One of the best lessons was in Southeast Asia when I was read the “riot act” for not stepping up and taking charge when things had gone wrong in my company. I was only a young soldier and the individuals who outranked me had made some errors in judgment. I did not step in, thinking that it was not my place to correct an individual above me in the chain of command. Boy, did my First Sergeant straighten me out on that point! I realize today that his points and direction were directly attributable to my change in attitude and understanding of leadership. His point to me, and I to you, is that many times we may not be the leader, but the leader will never make the right choices without proper input from all those around them. Additionally, we don’t always understand how we are viewed by those same leaders and, in my case I found out that many of them looked up to me; and for what reason I still do not understand. But the point is that you must share your ideas and not be afraid of how your opinion is viewed.

My greatest influence came from my father, a man who never finished high school and yet worked as a Superintendent for a major construction company out of North Carolina. He was probably the best teacher I have ever had when it comes to math. Even without finishing school he could put the best minds to shame when it came to math problems; and he spent many a night frustrated with why I just couldn’t grasp the “simplicity” of the subject. He amazed the engineers on the Interstate 16 construction through the swamps of Georgia leading into Savannah with his ability to look at a grade and tell them without survey tools that it was off by so many degrees. I have no idea how many dollars changed hands when he adamantly insisted that they were wrong; and he was always on the receiving end.

Now after all my time in the military and all the hours I spent wading in the swamp with a grade stick. I would never have believed that I would be part of the transportation environment, but here I am following in his footsteps. There are similarities between my father and I, but there are differences as well. He, of course, was on the building side, while I am on the planning and design side (at least I think that is what I do); and we both educate, I in the commercial vehicle arena and he on the math side. But no matter what we have done it all comes down to one major similarity and that is doing your job well and be proud of all you have done.

It has been a real pleasure and challenge to have worked on projects, such as development of the telecommunications tower lease with folks like Gene Glotzbach; the fiber optic lease project (even though it never happened) with Chester Chandler; probe data collection with “Mr. 511,” Rick Schuman; the Incident Management Program with Buddy Cloud; and the visualization of virtual weigh station idea with folks like Barry Mason, Dr. Amr Oloufa, Jack Selter, and so many others from the private and public sectors. My time here has been filled with a variety of projects, and much like my carrier in the United State Air Force, I am proud of every minute.

While this editorial is not about intelligent transportation systems, incident management, emergency management, or commercial vehicle operations, it is about the leadership and commitment that each of us demonstrates every day. All of you, in each of these areas, are some of the finest people I have ever had the pleasure to work with. And while the public doesn’t always “give you your due,” I would like to say that for me the Florida Department of Transportation is the finest organization that anyone could ever have the pleasure to have served.

From me and my wife, Carmen, and our children, we thank you for your friendship, comradery, and dedication. May God bless you all and may you have a prosperous New Year.

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# Inside the TERL

The FDOT has a goal to assure that only a safe and uniform ITS and 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.

## Product Evaluation

### Signalized Intersection and ITS Products

A total of 102 applications have been submitted for listing on the FDOT's Approved Products List (APL). Of these applications, 77 were approved for product evaluation. Out of the 77 approved applications, 70 products have been received for evaluation. There have been 30 product approvals and 26 evaluations closed due to inactivity, insufficient data, or failure. The remaining 7 applications are awaiting the manufacturer to either submit the product or additional information.

Approved products can be viewed at the following Web pages:

Signalized Intersection products - <http://www3.dot.state.fl.us/trafficcontrolproducts/>

ITS products - [http://www.dot.state.fl.us/TrafficOperations/Traf\\_Sys/ITS%20APL/TemporaryITSAPL.shtm](http://www.dot.state.fl.us/TrafficOperations/Traf_Sys/ITS%20APL/TemporaryITSAPL.shtm)

## Product Specifications

There are currently four product specifications in the development stage and five planned for future development.

## APL Vendor Quality Assurance System Evaluation

Qualification of the manufacturer is required before a device can be evaluated for listing on the APL. One manufacturer was qualified in December 2008. We now have a total of 87 qualified manufacturers, of which 36 have recently been re-qualified. Re-qualification is due on a four year basis. There are currently two manufacturers under investigation regarding problems found in the field.

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

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## Announcements

After 16 years of service to the FDOT and 21 years with the State of Florida, Mike Akridge will retire on February 26, 2009. Mike will stay in the transportation business and plans to open his own company, MT Akridge Consultant Services. Mike's new company will focus on commercial vehicle operations ("and anything else that I can make money at!"), but most importantly, Mike will be playing lots of golf and enjoying his grandchildren.

Please join us in wishing Mike all the best in his future pursuits.

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## FDOT Traffic Engineering and Operations Mission and Vision Statements



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