Fiscal Year 2010/2011

Florida Department of Transportation

Intelligent Transportation Systems Performance Measures Annual Report

FY 2010/2011

INTELLIGENT TRANSPORTATION SYSTEMS

PERFORMANCE MEASURES ANNUAL REPORT

The Florida Department of Transportation (FDOT) is committed to implementing statewide, fully integrated intelligent transportation systems (ITS) in a cost-efficient manner to better accommodate Florida's rapid growth in population, tourism, and commerce. ITS represents the use of real-time information systems and advanced technologies as transportation management tools to improve the movement of people, goods, and services. ITS uses advanced technologies to remedy mobility and safety problems to efficiently build new roads and expand existing roads.

As ITS evolves in Florida, the development and reporting of operations performance measures is a high priority for FDOT to demonstrate and document the benefits of ITS. When the ITS Program began addressing performance in 2004, the districts had no automated data collection systems and were initially limited to measures of basic production and usage (*output*). The initial output measures reported statewide were Total Annual 511 calls, Road Ranger Stops, and centerline miles of limited-access highways managed by ITS.

The proliferation of ITS deployments and integration will allow more accurately documented and reported measures of performance and the resulting benefits (*outcome*). FDOT identified three ITS *outcome* performance measures that were subsequently approved by the Florida Transportation Commission (FTC) in 2005. These measures were incident duration, travel-time reliability, and customer satisfaction. Available data for the incident duration and customer satisfaction measures were collected and reported beginning in 2006.

For the 2010/2011 fiscal year, all output and outcome measures are reported. The data for these reported measures was collected for the period beginning July 1, 2010, and ending June 30, 2011.

TOTAL ANNUAL 511 CALLS

ACCURATE, REAL TIME INFORMATION FOR MOTORISTS

Travelers on Florida's highways have an invaluable resource known as "America's Traveler Information Telephone Number". FDOT also provides real-time traffic information to the public in a variety of other formats: FL511.com, mobile.FL511.com, My Florida 511 personalized services, dynamic message signs on FIHS facilities and through a mobile application. Additionally, FDOT traffic information is sent out through third party data feeds to news media who inform the public of roadway conditions.

Background: In July 2000, the Federal Communications Commission designated 511 as the national three-digit telephone number for traveler information. In Florida, most urban areas of the state currently offer this service to travelers. In 2009, Florida's statewide 511 services integrated all the Florida regional 511 services into one statewide system. In 2010, subscription services were added so that users could receive calls, texts and emails about their roadways of interest. In 2011, a mobile application was added for *iPhone*, *iPad* and *iPod Touch* users.

Purpose: To provide accurate, real-time information on traffic and road conditions, alternate route information (during incidents), construction information, weather-related problems, and public transportation information/options.

Objective: To reduce traveler delay and improve the overall quality of trip-making as evidenced by the growth in the use of 511 related services, and maintaining a high level of user satisfaction.

Report Methodology: Compilation of annual monthly (and ultimately, annual hourly) 511 calls and personalized alerts sent.

TOTAL ANNUAL 511 CALLS

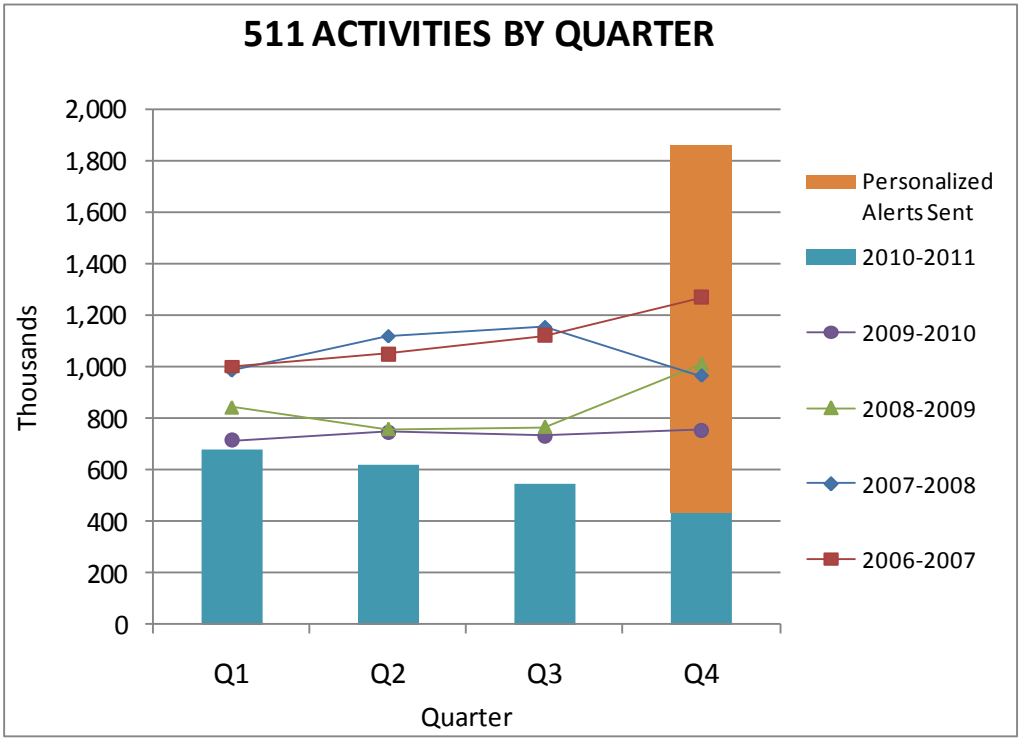
2010/2011 RESULTS

Approximately 2.2 million 511 calls were made during the 12-month period from July 2010 through June 2011 in Florida.

The FL511.com website received 656,607 visitors during the year and 1.4 million visitors since its launch. More than 10,000 people subscribe to My Florida 511 personalized services to receive e-mail, text and phone alerts about incidents on their regularly traveled routes. More than 450,000 alerts are sent to these subscribers each month.

A new option for travelers is the Florida 511 application for *iPhone*, *iPad* and *iPod Touch* users, which launched in June 2011. The technology pushes traffic information out to the user based on the user's predefined settings. The 511 app uses the mobile device's GPS system to provide users with information in their location. FDOT plans to launch a Florida 511 Android app in the coming year.

Calls to 511 decreased slightly this year. That can be attributed to other means of accessing traffic information provided by the Department. Private information providers often rely on Department-generated data that is fused with privately collected data to provide the public with needed information. Tracking the calls to 511 is no longer the sole indicator of system usage. The fourth quarter (April-June 2011) is the first time period that the alerts data was available. The personalized alerts and 511 calls will be tracked and reported together going forward.



ROAD RANGER STOPS

QUICK RESPONSE FOR CLEARANCE OF INCIDENTS AND TO MOTORISTS IN NEED

Road Ranger service patrols help motorists in need and thereby assist in clearing the roadway of incidents that may cause secondary incidents. The sooner an incident is removed, the sooner the highway returns to normal capacity.

Background: FDOT began funding the Road Rangers Program in December 1999. The Road Rangers service patrols are roving vehicles that patrol congested areas and high-incident locations of urban freeways, and provide highway assistance services during incidents to reduce delay and improve safety for the motoring public and responders. Districts 1, 2, 4, 5, 6, and 7, and Florida's Turnpike Enterprise currently operate Road Rangers Programs. However, the specific services provided, hours of operation, fleet size, and area coverage differs among these entities.

Purpose: The primary mission of the Road Rangers service patrol is to support emergency response personnel during incidents by establishing maintenance of traffic (MOT) for the incident and providing other assistance as needed for the incident. Providing quick response and clearance reduces the number of secondary incidents and returns the roadway to capacity sooner. Road Rangers assist in hurricane evacuations by providing support to evacuees and responders. Road Rangers also provide service to disabled vehicles.

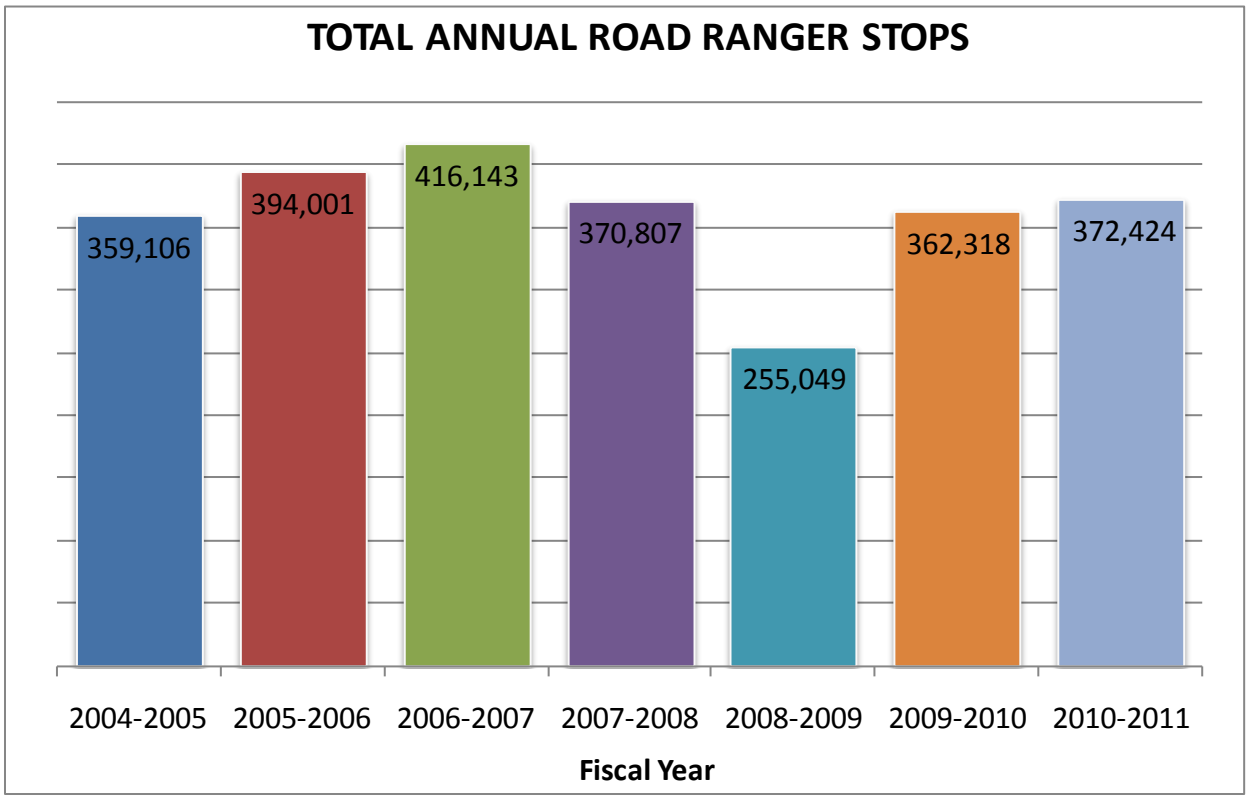
Objective: To help reduce the overall travel delay associated with incidents by providing quick response to motorists in need and assistance to other emergency responders.

Report Methodology: Compilation and summary of Road Rangers activity data is being logged through the SunGuide software in each District TMC. All of the districts are now providing Road Rangers data to the Central Office on a quarterly basis.

ROAD RANGER STOPS

2010/2011 RESULTS

For the period July 2010 to June 2011, there were 372,424* Road Ranger stops made statewide. Six districts and Florida's Turnpike Enterprise provided Road Rangers services in FY 2010/2011.



*Road Rangers data was unavailable for District 5 for the 4th quarter due to computer issues.

ITS MILES MANAGED

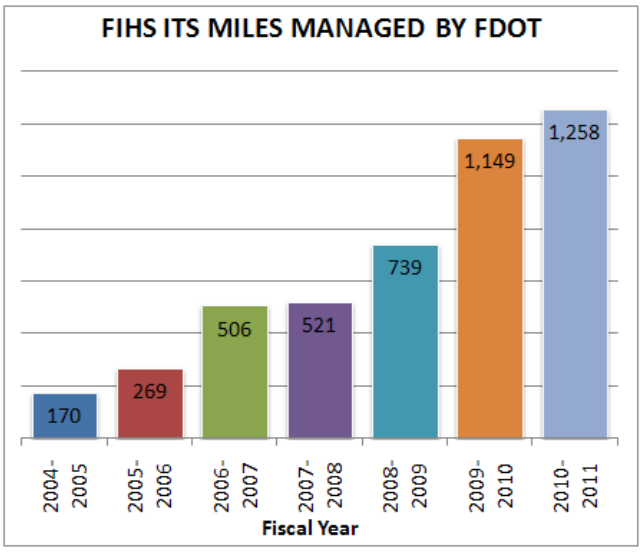
SEAMLESS, OPERATIONAL, REAL-TIME DEPLOYMENT OF ITS ACROSS FLORIDA

FDOT is committed to implementing a statewide, fully integrated ITS in a cost-efficient manner, to better accommodate our rapid growth in population, tourism, and commerce. ITS represents the use of real-time information systems and advanced technologies as transportation management tools to improve the movement of people, goods, and services. ITS uses advanced technologies to remedy mobility and safety problems, to efficiently build new roads and expand existing ones.

Background: All districts and Florida's Turnpike Enterprise are committed to the deployment of ITS; each is deploying at varying stages and pace according to the FDOT *Ten-Year ITS Cost Feasible Plan*. As a percent of the limited-access Florida Interstate Highway System (FIHS) mileage in each district, the definition of "miles managed by ITS" is centerline mileage that must include ALL of the following attributes:

1. Traffic probes and/or sensors,
2. Real-time traffic information reporting coverage,
3. Real-time incident response capabilities, and
4. Real-time traffic data availability to FDOT.

In order to meet the definition of miles managed by ITS, all of these attributes must be continuously operated and maintained, permitting contiguous coverage of the mileage noted.



Purpose: Report progress in completing deployment of the FDOT *Ten-Year ITS Cost Feasible Plan* and beyond, as appropriate.

Objective: To initially deploy ITS across the limited-access portion of the FIHS, and to ultimately integrate all ITS and ITS-related user services across the entire state in a seamless, fully operational, real-time fashion. This deployment will help improve mobility and safety throughout the state.

Report Methodology: Deployment progress, on an annual basis, as reported by each district and the Florida's Turnpike Enterprise. Corresponding geographic coverage is also being reported and mapped in terms of mile point limits.

ITS MILES MANAGED

2010/2011 RESULTS

At the end of June 2011, 1,257.8 miles are managed by ITS. This represents 59.7% ITS coverage of the limited access Florida Intrastate Highway System (FIHS). District 1 added 23 miles, District 3 added 38 miles, District 4 added 71 miles, and Florida's Turnpike Enterprise added 21 miles in 2010/2011.

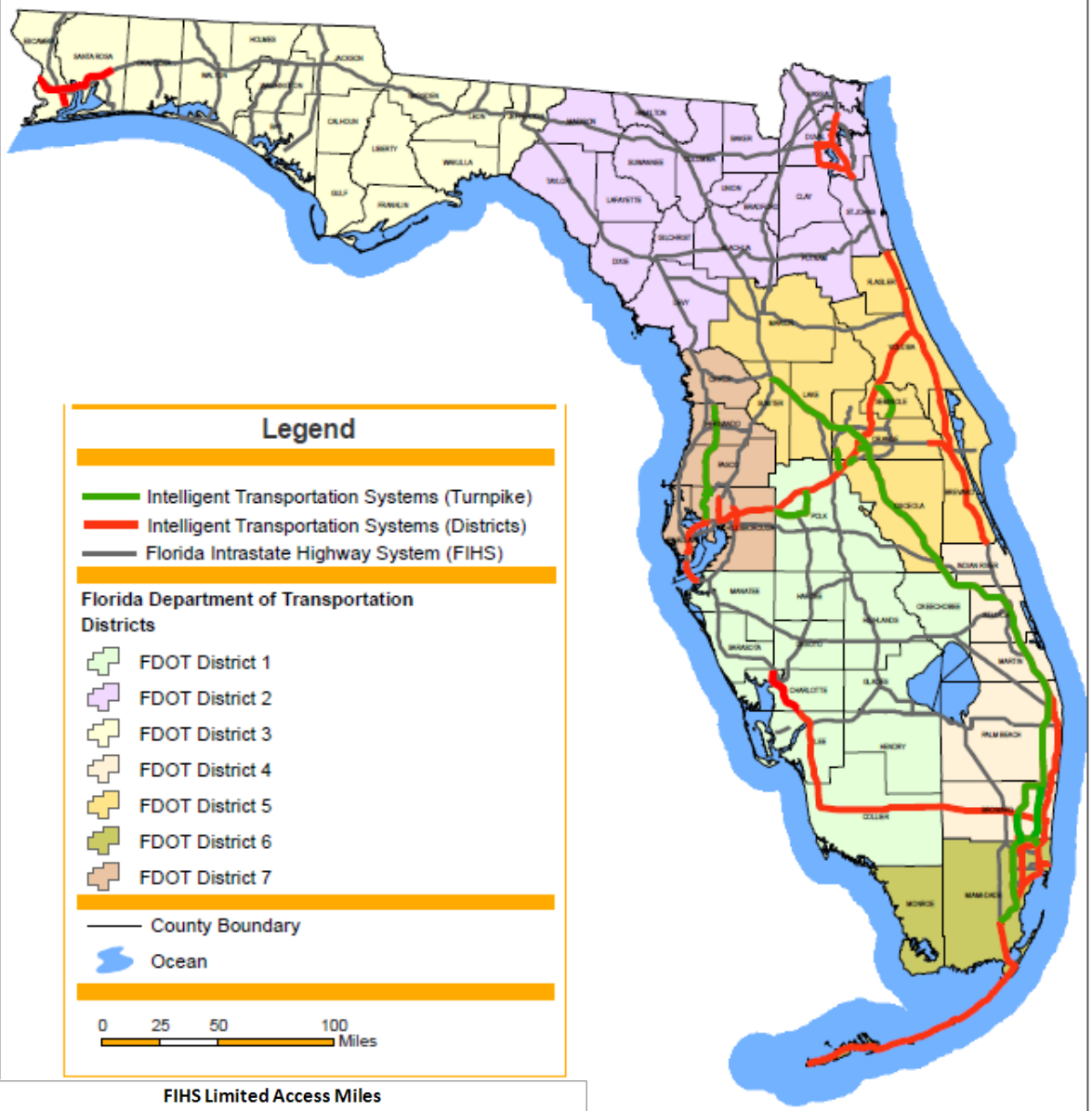
District	Amount of FIHS Miles per District (Limited Access)	Number of FIHS Miles Managed by FDOT	District Percentage of FIHS Limited Access Miles Managed
1	222.9	153.3	68.8%
2	372.3	63.1	16.9%
3	242.2	38.0	15.7%
4	203.2	202.7	99.8%
5	386.1	222.7	57.7%
6	53.5	53.5	100.0%
7	166.5	76.5	45.9%
TPE	460.0	448.0	97.4%
State Total	**2,106.7**	**1,257.8**	**59.7%**

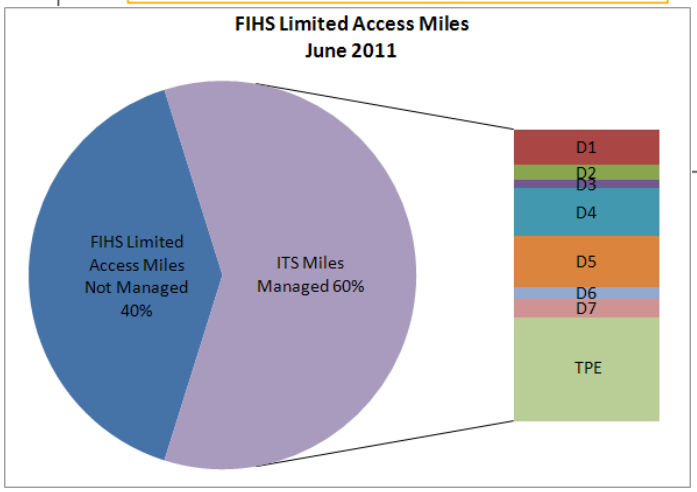
ITS Miles Managed
Roadway Segment Limits

District	Roadway	From	To	Length
1	I-75	Broward/Collier Co. Line	Charlotte/Sarasota Co. Line	121.3
1	I-4	Hillsborough/Polk Co. Line	US 27 (managed by Dist 7)	28.4
1	I-4	US 27	Polk/Osceola Co. Line (managed by Dist 5)	3.6
2	I-95	Race Track Road	Pecan Park Rd (Duval/St. Johns Co. Line)	33.7
2	I-295	I-10	I-95 (south)	20.4
2	I-10	I-95 (Exit 363)	West of Chaffee Road (MM 354)	9.0
3	I-10	Florida/Alabama State Line	One mile east of SR 87 (MM32)	32.0
3	I-110	I-110 spur in its entirety		6.0
4	I-95	Indian River/Brevard Co. Line	Broward/Miami-Dade Co. Line	142.6
4	I-595	I-75	US 1	12.9
4	I-75	Broward/Miami-Dade Co. Line	Broward/Collier Co. Line	45.4
4	Sawgrass Expressway	North of I-75		1.9
5	I-4	SR 532 / Polk Co. Line	I-95	74.5
5	SR 528	SR 520 East	I-95	11.0
5	I-95	Flagler/St. Johns Co. Line	Brevard/Indian River Co. Line	137.2
6	I-195	NW 11 Avenue	Alton Road (SR 907A)	4.9
6	SR 826	US 1	I-95	24.6
6	I-75	SR 826	Broward/Miami-Dade Co. Line	5.4
6	I-95	Broward/Miami-Dade Co. Line	US 1	17.3
6	I-395	I-95	West end MacArthur Causeway Bridge	1.3
7	I-275	22nd Ave. South	SR 60	19
7	I-275	North Blvd.	East of Nebraska Ave. (US 41)	11.0
7	I-4	I-275	Charlie Taylor Road (MM23)	23.0
7	I-75	US 301	CR 582-A	12.5
7	Sunshine Skyway Bridge	entirety		6.0
7	SR 60	I-275	Courtney Campbell Causeway	2.0
7	SR 589	I-275	One mile south of Courtney Campbell Cswy	1.0
7	SR 600	Crosstown Expy	North of Bay to Bay Blvd.	2.0

ITS Miles Managed Roadway Segment Limits				
District	Roadway	From	To	Length
TPE	Sawgrass Expressway	I-595	Atlantic Blvd. in Broward Co.	22.0
TPE	Seminole Expressway (SR 417)	Orange/Seminole Co. Line	I-4	17.0
TPE	Southern Connector (SR 417)	I-4	International Dr.	5.0
TPE	Western Beltway (SR 429)	I-4	Seidel Rd.	10.0
TPE	Polk Parkway (SR 570)	I-4	I-4	24.0
TPE	Veteran's Expressway (SR 589)	SR 60	Suncoast Parkway	16.0
TPE	SR 568	Veteran's Expressway	Dale Mabry Dr.	3.0
TPE	SR 589 (Suncoast Parkway)	Veteran's Expressway	US 98	38.0
TPE	HEFT (Homestead Extension/SR 821)	US 1	Turnpike Mainline	48.0
TPE	Florida's Turnpike (SR 91)	SR 826 (US 441)	Turnpike Mainline	3.0
TPE	SR 408 (East West Expressway)	Turnpike Mainline	SR 50	1.0
TPE	Florida's Turnpike (SR 91)	Sawgrass Expressway	I-75	236.0
TPE	SR 528 (Beachline Expressway)	I-4	Florida Turnpike in Orange Co.	4.0
TPE	Florida's Turnpike (SR 91)	Miramar Parkway	Griffin Road	6.0
TPE	Florida's Turnpike (SR 91)	Broward Blvd. (Broward Co.)	Palm Beach Co. Line	15.0

Florida's Intelligent Transportation Systems Program Coverage





INCIDENT DURATION

MINIMIZE TRAFFIC INCIDENT TIMELINE

FDOT and its emergency response partners work to ensure that crashes and other incidents have minimal impact on Florida drivers by working to reduce the amount of time of each incident. Determining trends in incident clearance allows for analysis and improvement in the system. Quickly removing an incident allows the highway to return to normal capacity and traffic flow sooner.

Background: In 2005, the FDOT ITS Program incident duration was identified as an outcome measure to be reported to the Florida Transportation Commission. Initially, FDOT conducted an effort to collect incident timeline data from manual (paper) records. The pilot test results determined that manually collecting incident timeline data was too complex and time-consuming. In 2006, the SunGuide® Software was modified to include the data collection and reporting requirements for obtaining incident duration data.

In order to improve the incident duration timeline, Florida has developed a very active Statewide Traffic Incident Management Program. There are three major components to this program:

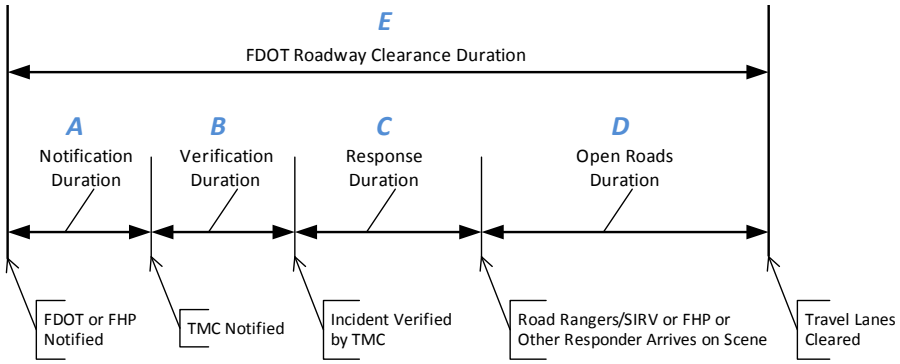
- *Road Ranger Service*
- *Open Roads Policy*
- Rapid Incident Scene Clearance (RISC) Program
- Traffic Incident Management (TIM) Teams

The Florida *Open Roads Policy* is an agreement between FDOT and the Florida Highway Patrol (FHP). Both agencies signed this agreement in November 2002. The agreement states that it is policy of FHP and FDOT to expedite the removal of vehicles, cargo, and debris from state highways and to restore, in an urgent manner, the safe and orderly flow of traffic on Florida's roadways. Both agencies agreed to work together to clear roadways as soon as possible. A goal was set to clear incidents from the roadway *within 90 minutes* of the arrival of the first responding officer.

The Rapid Incident Scene Clearance (RISC) Program is a highly innovative, incentive-based program to meet the goal of safely clearing major highway incidents and truck crashes. This program pays bonuses of $2,500 to wrecker operators with specialized heavy equipment for successful removal of all wreckage and roadway re-opening within 90 minutes of being given a notice-to-proceed. Additionally the wrecker company is paid $1,000 if approval of additional specialty equipment for use during the incident cleanup is given. As a further incentive, if the travel portion of the roadway is not cleared in three hours, the wrecker company can be assessed a penalty of $10/minute ($600/hour) until the roadway is reopened. Most of the seven FDOT Districts and the Florida's Turnpike Enterprise have adopted this program.

TIM Teams bring together all agencies involved in clearing an accident, including FHP and local law enforcement, fire departments, emergency medical personnel, towing companies, and spill response firms, along with FDOT transportation management center (TMC) operators, Road Rangers, and maintenance crews. The TIM Teams may be district-wide or they may be local to one county. These teams strive to reduce the time needed to reopen travel lanes and get traffic moving again by reviewing past response actions, exploring ways to improve incident management, and coordinating upcoming planned events or planning for unplanned events, such as hurricanes, wildfires, and floods. Most TIM Teams have four program areas: incident detection, verification, and response; incident clearance; communications; and training. TIM Teams are currently active in most of FDOT's districts and Florida's Turnpike Enterprise.

The incident duration timeline measure is an indicator of the effectiveness of these programs.



Purpose: Report the total time of impact on traffic for an incident.

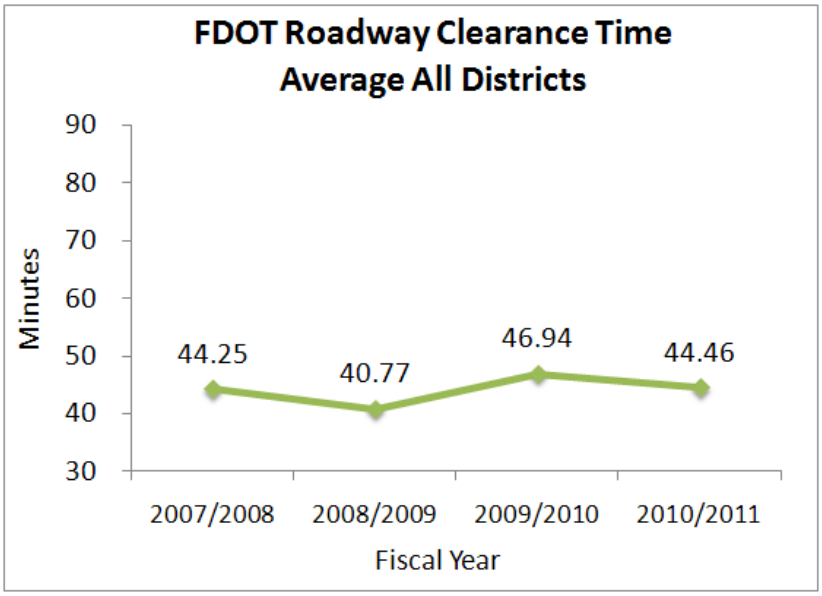
Objective: To minimize the incident timeline from the time any FDOT or FHP staff is notified to the time that all travel lanes are cleared.

Methodology: The FDOT roadway clearance duration timeline includes the following components: notification duration, verification duration, response duration, and open roads duration. The definition for open roads duration is the amount of time needed to clear all mainline travel lanes, starting with the arrival of the first responder, either FHP or FDOT. The open roads clearance time is directly comparable with Florida's *Open Roads Policy* for clearing all travel lanes in 90 minutes or less. FDOT Roadway Clearance Duration is an overall component of incident duration, defined as the time between first awareness of the incident and the time all mainline travel lanes are cleared. This component includes notification, verification, and response durations, as well as the open roads duration. Although the terminology changed in 2008, the individual components of the incident duration timeline are still the same as those used for previous reporting.

INCIDENT DURATION

2010/2011 RESULTS

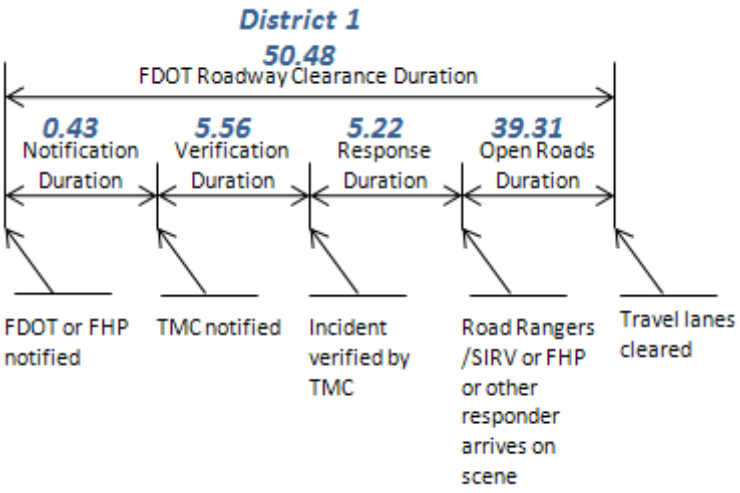
FDOT Roadway Clearance Duration varied from month to month, but the average time from the reporting districts is 44.46 minutes, ranging from 30 to 77 minutes for monthly averages. The Open Roads Clearance Duration averages about 37 minutes for the reporting districts. This is well under the *Open Roads Policy* target of 90 minutes. The graphics below show the averages for the five reporting districts and Florida's Turnpike Enterprise. The Roadway Clearance duration will not necessarily correspond to the sum of the Verification, Response, and Open Road's averages, since they are averaged independently of one another.

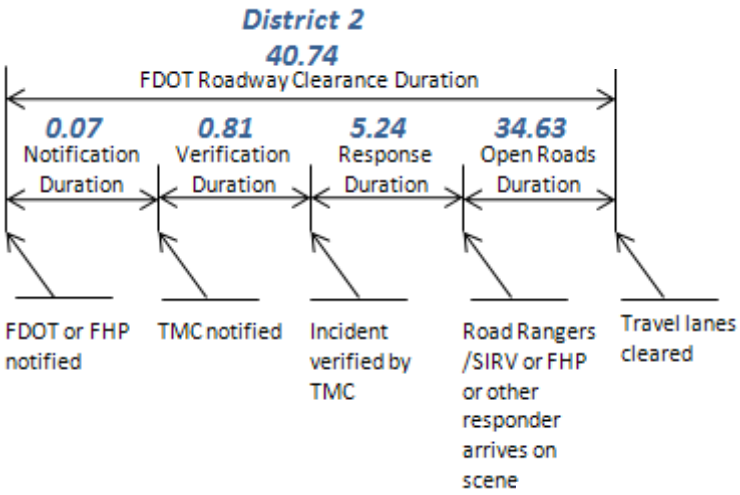


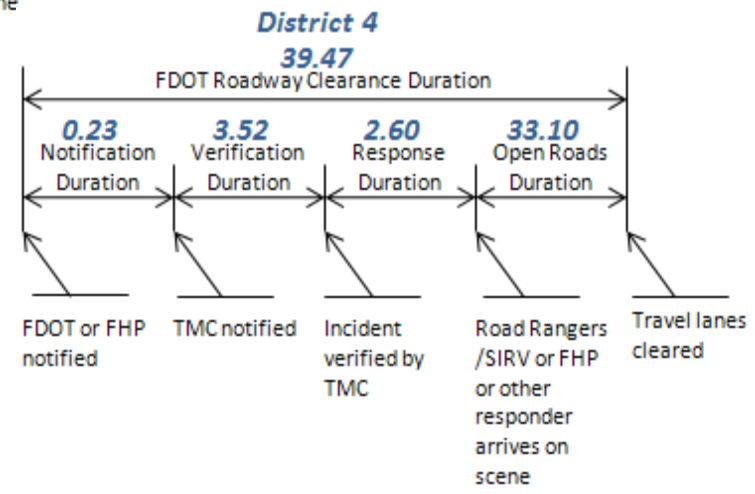
District	2007/08	2008/09	2009/10	2010/11
1	NA	NA	NA	50.48
2	46.11	43.34	59.36	40.74
4	38.77	34.26	37.16	39.47
5	50.48	38.53	57.18	55.51*
6	36.20	37.62	34.34	30.53
7	48.59	40.20	49.36	46.99
TPE	45.33	50.67	44.25	47.53
AVG ALL DISTRICTS	**44.25**	**40.77**	**46.94**	**44.46**

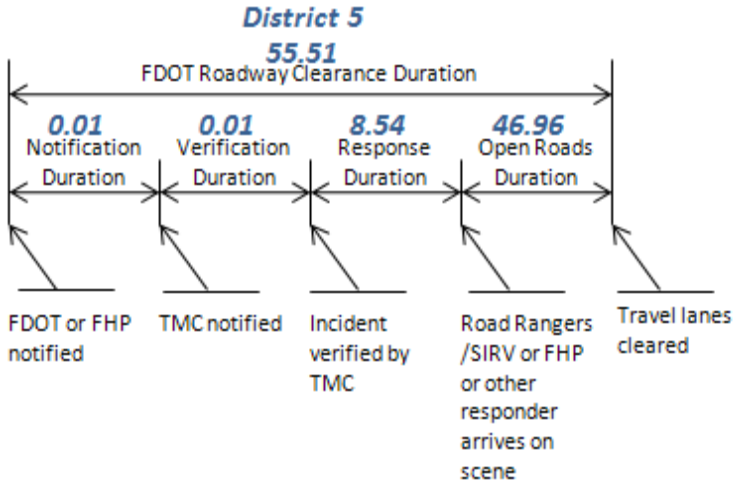
* Some data was lost in District 5 during the 4th quarter due to computer issues.

District Results (annual average in minutes):









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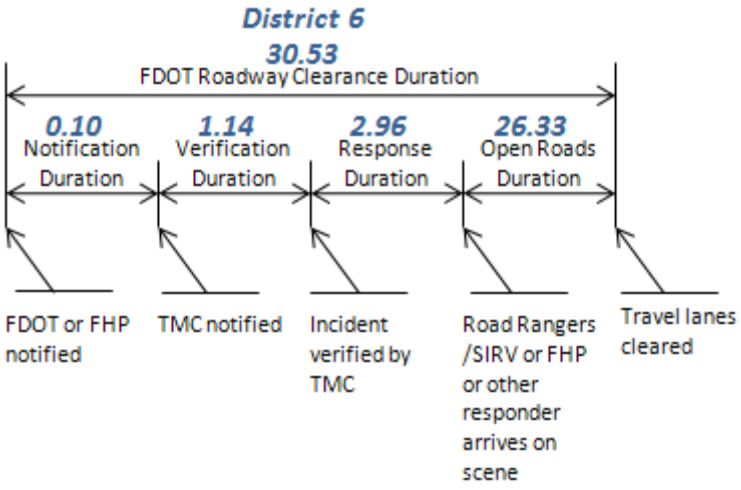
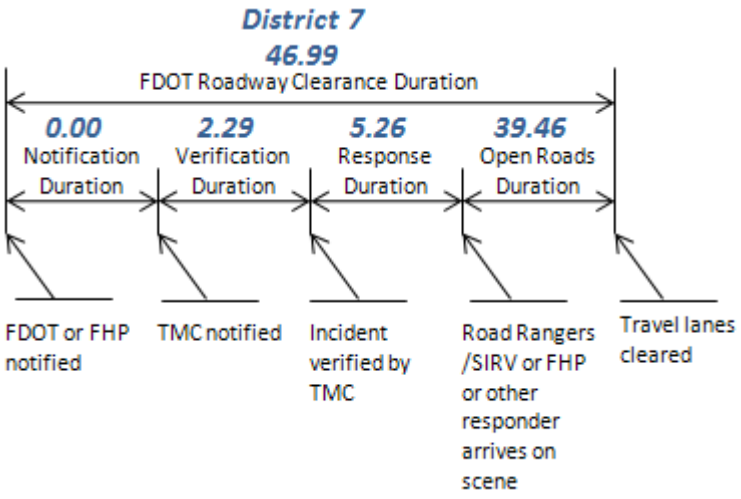
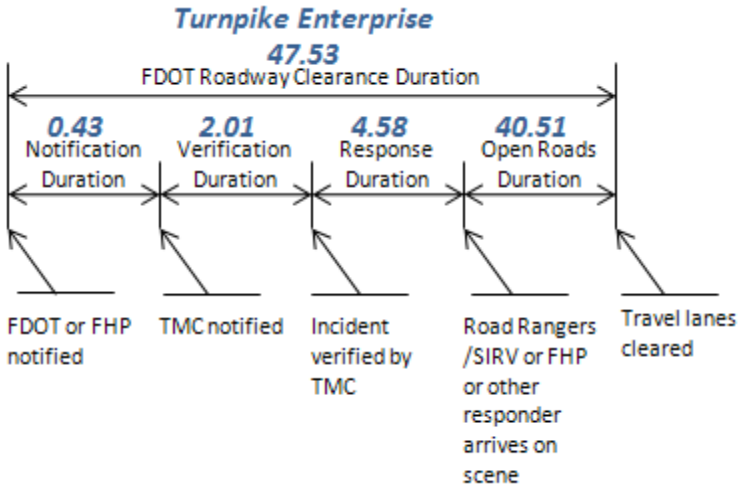






TRAVEL TIME RELIABILITY

ESTIMATE TRAVEL TIMES FOR TRIP PLANNING

Background: In 2005, FDOT adopted reliability as an outcome performance measure to report to the Florida Transportation Commission on a statewide basis. FDOT identified reliability reporting definitions and data needs in FY 2006. Limited data was available for reporting reliability initially. Much progress in reporting reliability has been made and for 2010-2011, travel time reliability and congestion results are available for Districts 2, 4, 5, 6, and 7. These Districts provided data through the STEWARD system at University of Florida. The Statewide Transportation Engineering Warehouse for Archived Regional Data (STEWARD) was developed for Florida DOT by the University of Florida Transportation Research Center. STEWARD is a prototype of a data warehouse and it has been used to store speed detector data provided by the FDOT Districts since 2008. It is expected that in 2011-2012 many additional roadways will have reliability reported, including District 1 and the Florida Turnpike Enterprise.

Purpose: Report a qualitative measure of the variability or uncertainty in the performance of facilities over time.

Objective: To measure and track the variability of roadway congestion, measured using the Buffer time index as well as measure and track the congestion level, measured using the Travel Time Index.

Methodology: FDOT identified two metrics for measuring travel time reliability and congestion. The Buffer time index is a measure of the reliability of travel service. The Buffer time index is calculated as the ratio between the difference of the 95th percentile travel time and the average travel time divided by the average travel time, i.e. (95th travel time - average travel time)/average travel time. For example, a value of 0.4 means that a traveler should budget an additional 8-minute buffer for a 20-minute average peak trip time to ensure 95 percent on-time arrival. A secondary metric is the Travel Time Index (TTI), which is a measure of traffic congestion. TTI is calculated as the ratio of average peak travel time to an off-peak (free-flow) standard, in this case 60 mph for freeways. For example, a value of 1.20 means that average peak travel times are 20 percent longer than off-peak travel times. Travel time, travel speed, and volume data are the basis of these measures. Travel time and speed data are obtained from either speed data from roadside detectors that communicate in real time to TMCs or probe data from various sources that report travel time directly. Volume data are used to compute vehicle miles traveled, which are then used as weights to compute an area wide or corridor wide measure average. Only non-holiday weekdays select periods are used in index calculations. The periods are: morning peak: 6 a.m. to 9 a.m., and evening peak: 4 p.m. to 7 p.m.

Freeway Segments: A typical freeway segment is about 5 to 15 miles between key major interchanges in urban areas, and can go up to 20 miles in suburban/rural areas with less congestion and fewer interchanges. When possible, congested freeways were segmented separately from freeways that had less congestion.

TRAVEL TIME RELIABILITY

2010/2011 RESULTS

Travel time and buffer indices were calculated for selected ITS managed corridors in each district that consistently show congestion and unreliable travel times (see following table on next page for segment limits). The following charts summarize congestion and reliability results for in Districts 2, 4, 5, 6, and 7 calculated over a rolling 12-month period for instrumented segments. The charts indicate the roadway, direction, limits, peak period, and travel time index/buffer time index.

The reported roadway segments have not been changed since the reliability data began to be collected, which provides for consistent comparison of these segments over time. However, it is becoming apparent that the segmentation will need to be adjusted to accommodate the continued expansion of the ITS miles managed on the limited access FIHS. For example, the entire length of I-95 in Florida will be managed within a few years and logical reporting segments need to be created. These adjustments will need to consider allowing for comparison to previous years, logical breaks points such as major and freeway-to-freeway interchanges and keeping segments to a reasonable length. It is anticipated that new roadway segments will be proposed in the 2011-2012 period.

District 2 experiences the most congestion during the evening (PM) peak on I-95 northbound from St. Augustine Road to I-10, with a travel time index of 1.11. The most unreliable travel times occur during the PM peak on the same road segment with a buffer time index of 0.34.

In District 4 the most congested section is I-95 southbound from Hillsboro to Commercial Boulevard during the PM peak, with a travel time index of 1.12. This is also the period and area experiencing the most unreliable travel times, with a buffer time index of 0.36.

In District 5 the most congested section is I-4 eastbound from between SR 408 and US 192 during the PM peak, with a travel time index of 1.3. The most unreliable section is on the same segment with a buffer time index of 0.48.

In District 6 the most congested section is I-195 westbound from I-95 to Alton Road during the PM peak, with a travel time index of 1.26. This is also the period and area experiencing the most unreliable travel times, with a buffer time index of 0.57. These travel time reliability and congestion metric results might be due to long-term construction on the westbound I-195 ramps to I-95 NB/SB, between December 2010 and June 2011.

In District 7 the morning peak experiences the most congestion on I-275 southbound between Ashley Street and Livingston Avenue, with a travel time index of 1.30. This is also the period and area experiencing the most unreliable travel times, with a buffer time index of 0.41.

It should be noted that in some cases when the buffer time index or travel time index are 0.0 or 1.0 (indicating that there is good reliability and no congestion), respectively, the lines on the chart are printed on top of each other. This makes it seem as if data is missing, however the data is there and it is accurate.

2010/2011 Segment Limits				
District	**Roadway**	**Start**	**End**	**Approximate Miles**
2	I-95	Airport Road	I-10	12
2	I-95	I-10	St. Augustine Road	16
2	I-295	I-10	I-95 (south)	21
4	I-95 in Broward County	Hillsboro Blvd	Commercial Blvd	10
4	I-95 in Broward County	Commercial Blvd	Hallendale Beach Blvd	15
4	I-595	Hiatus Road	I-95	8
5	I-4	US17/92	SR 408	22
5	I-4	SR 408	SR 192	18
5	I-95 in Volusia County	SR 40	SR 44	19
5	I-95 in Brevard County	SR 520	SR 192	19
6	I-195	I-95	Alton Road	4
6	SR 826 (Palmetto Expressway)	I-95	I-75	8
7	I-275	SR 60	38th Avenue N in St. Pete	13
7	I-275	Ashley Street	Livingston Avenue	11
7	I-4	I-275	N. Park Road in Plant City	22

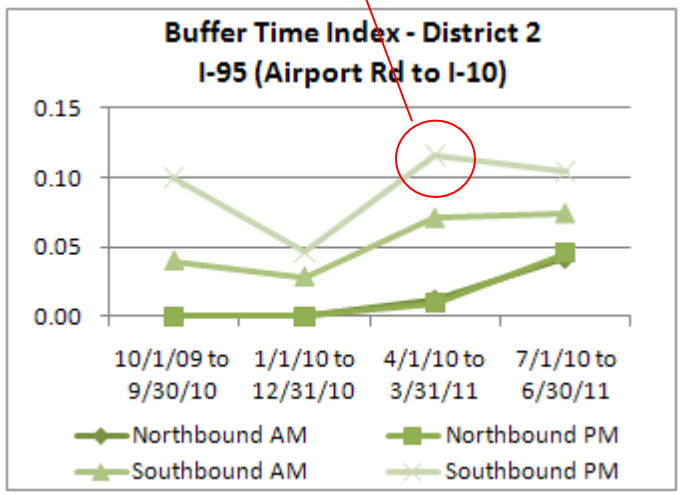
The following table shows the range of buffer time indices for all periods for the instrumented freeways within each district for fiscal year 2010/2011. The most unreliable section calculated throughout the state is a section of I-195 westbound in District 6 during the afternoon peak period (BTI of 0.57).

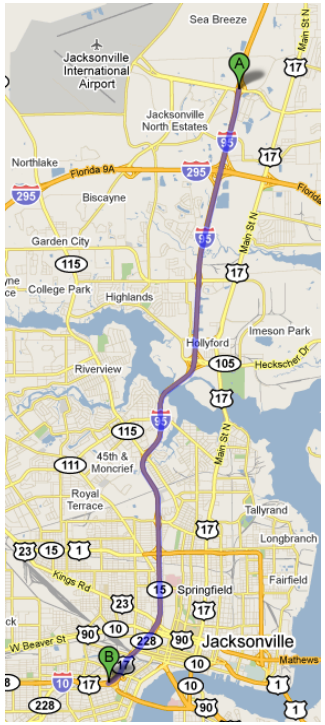
Buffer Time Index Range by District and Roadway 7/1/10 to 6/30/11								
	I-95	**I-295**	**I-595**	**I-4**	**SR 826**	**I-75**	**I-195**	**I-275**
D2	.04 to .34	0 to .12						
D4	.10 to .36		0 to .20					
D5	0			.05 to .48				
D6					.25 to .49		.02 to .57	
D7				0 to 0.31				0 to .41

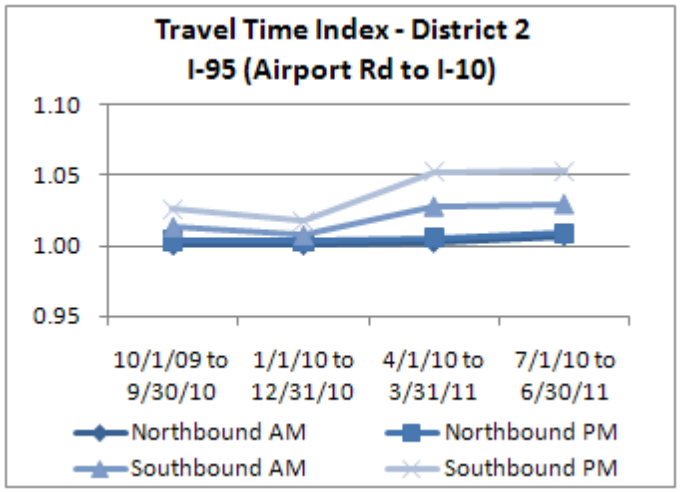
EXAMPLE:
The buffer time index varies from .05 to .48 on I-4 in District Five for the length of all segments from US 17/92 to SR 192. This means that the extra time that must be added to average peak trip time to ensure 95 percent on-time arrival varies from approximately 1 to 11 minutes.

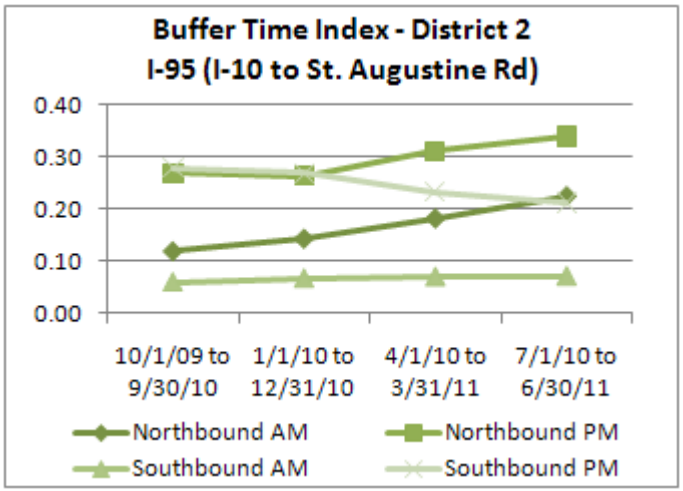
This table is only meant to summarize the BTI for all periods. It is more meaningful to review the more specific segment and time periods.

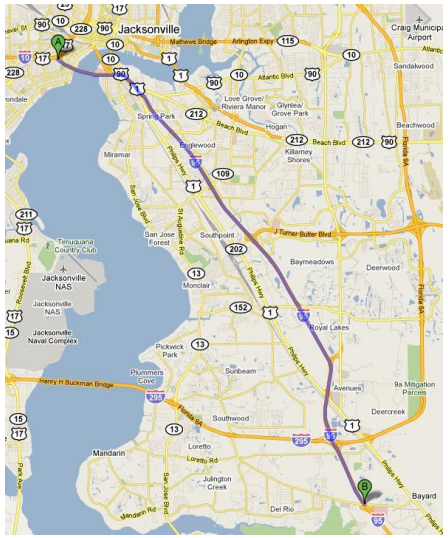
EXAMPLE: On I-95 in District 2 from Airport Road to I-10, during the period from 4/1/10 to 3/31/11, in the southbound lane during the PM peak (from 4 p.m. to 7 p.m.) the BTI is 0.12. A traveler had to budget an additional 1 minute and 20 seconds buffer to the approximate average trip time of 11 minutes to ensure 95 percent on-time arrival.

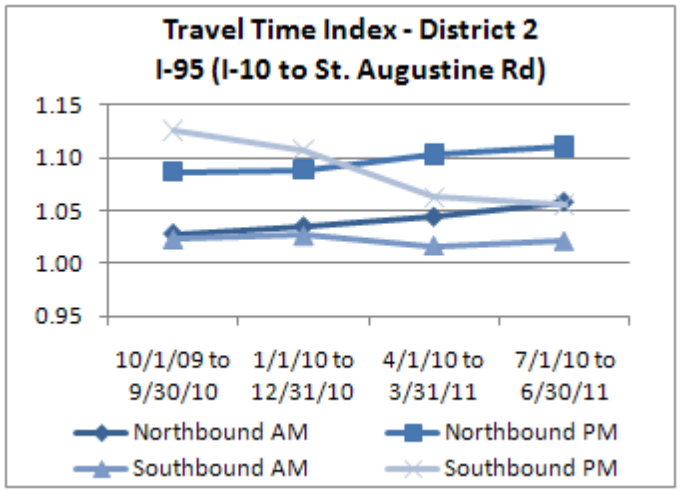


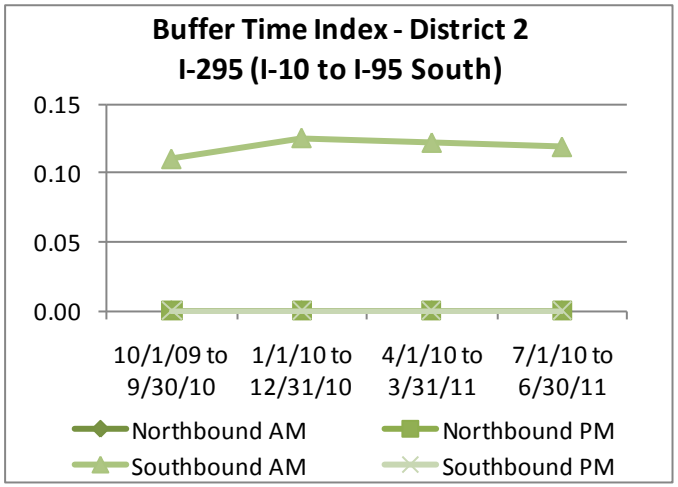


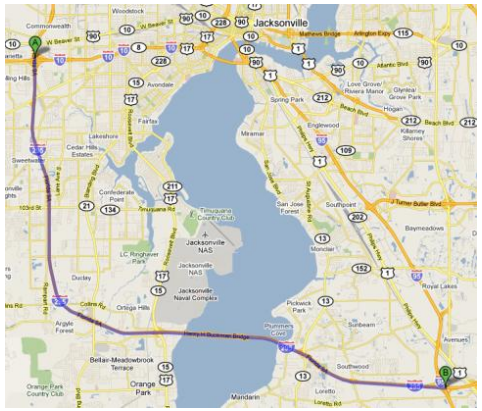


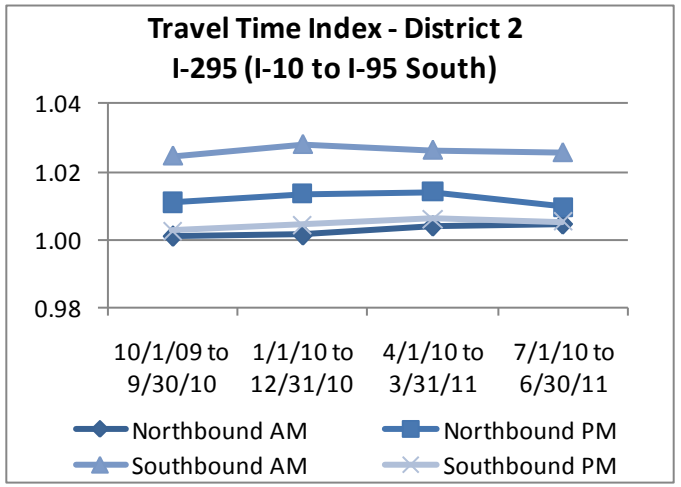


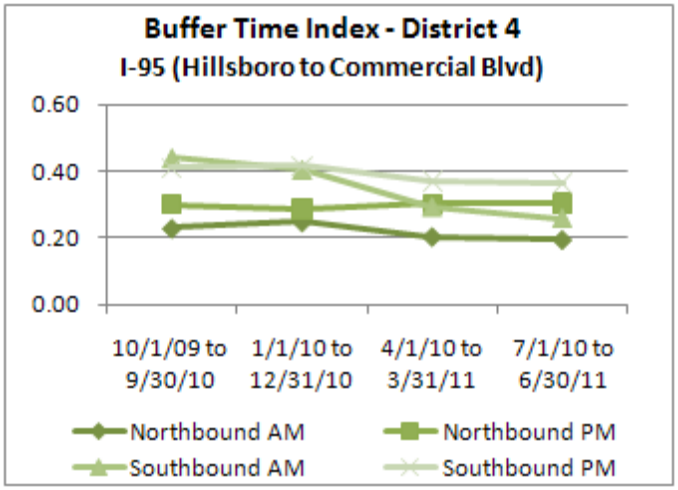


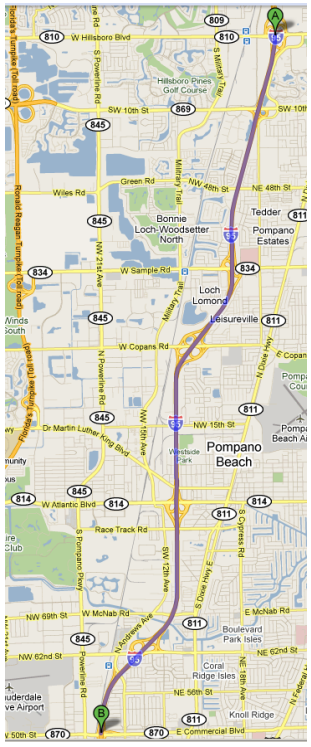


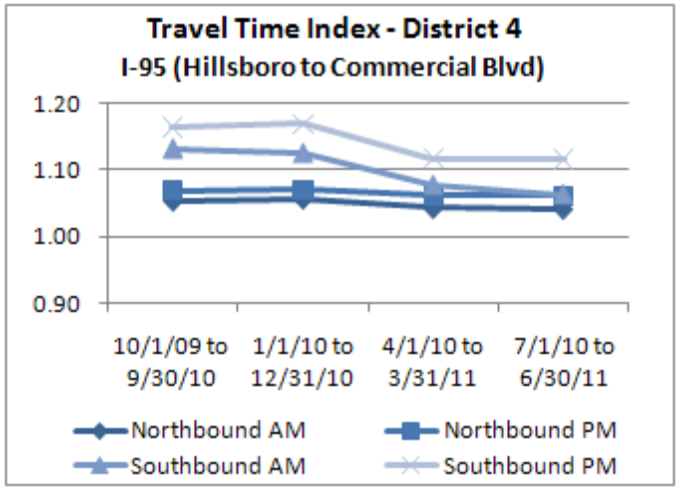

Buffer Time Index - District 2
I-295 (I-10 to I-95 South)
0.15
0.10
0.05
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Northbound AM
Northbound PM
Southbound AM
Southbound PM

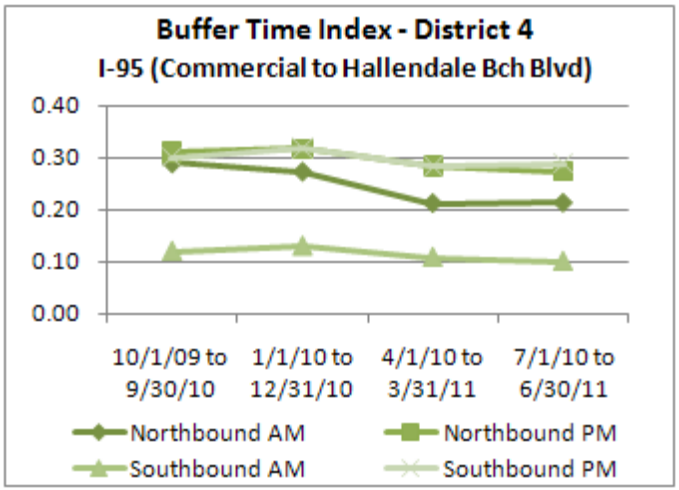

Jacksonville

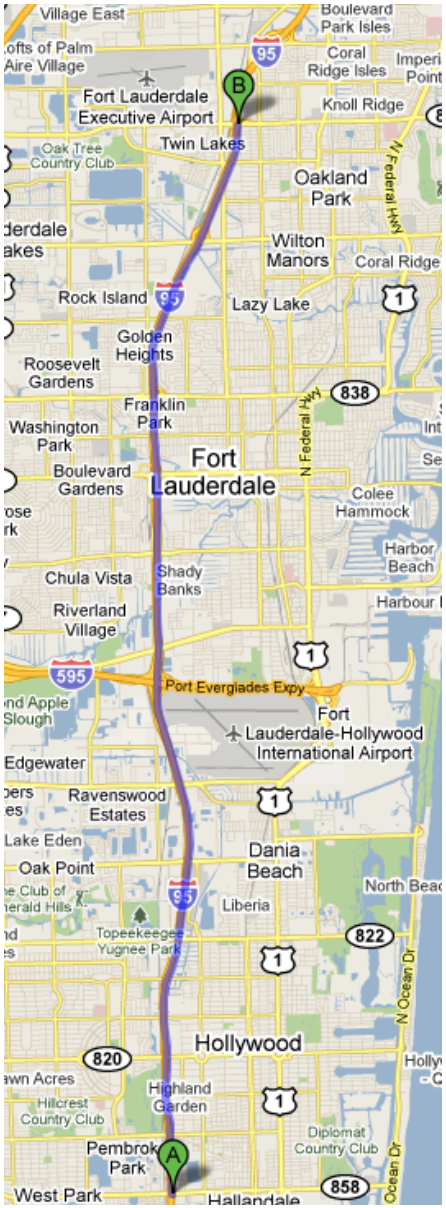

Travel Time Index - District 2
I-295 (I-10 to I-95 South)
1.04
1.02
1.00
0.98
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Northbound AM
Northbound PM
Southbound AM
Southbound PM

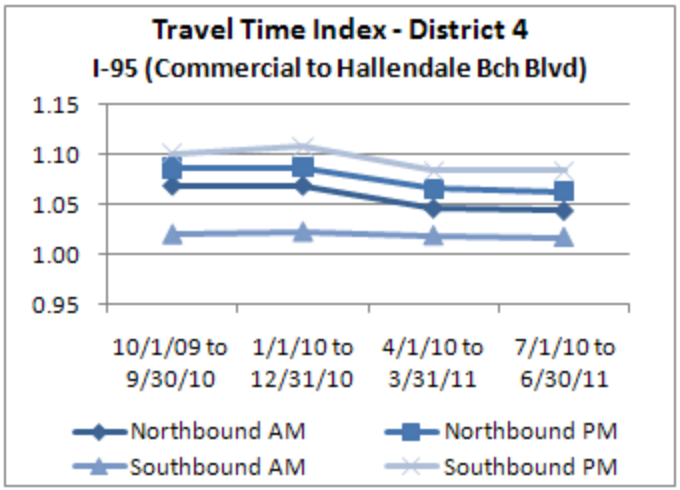

Buffer Time Index - District 4
I-95 (Hillsboro to Commercial Blvd)
0.60
0.40
0.20
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Northbound AM
Northbound PM
Southbound AM
Southbound PM


Pompano Beach


Travel Time Index - District 4
I-95 (Hillsboro to Commercial Blvd)
1.20
1.10
1.00
0.90
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Northbound AM
Northbound PM
Southbound AM
Southbound PM

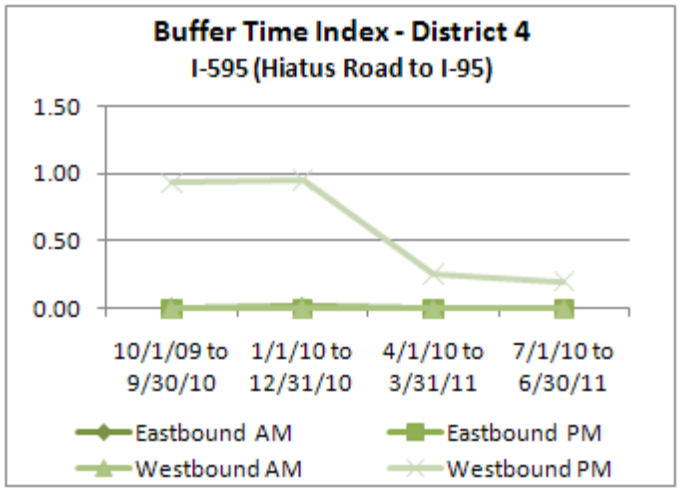

Buffer Time Index - District 4
I-95 (Commercial to Hallendale Bch Blvd)
0.40
0.30
0.20
0.10
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Northbound AM
Northbound PM
Southbound AM
Southbound PM


Village East
Boulevard Park Isles
Fort Lauderdale Executive Airport
Coral Ridge Isles
Knoll Ridge
Twin Lakes
Oak Tree Country Club
Oakland Park
Wilton Manors
Coral Ridge
Rock Island
Lazy Lake
Golden Heights
Roosevelt Gardens
Franklin Park
Washington Park
Fort Lauderdale
Boulevard Gardens
Colee Hammock
Harbor Beach
Chula Vista
Shady Banks
Riverland Village
Port Everglades Expy
Fort Lauderdale-Hollywood International Airport
Edgewater
Ravenswood Estates
Lake Eden
Oak Point
Dania Beach
Liberia
Topeekeegee Yugnee Park
Hollywood
Highland Garden
Hillcrest Country Club
Diplomat Country Club
Pembroke Park
West Park
Hallandale
N Federal Hwy
N Ocean Dr
Ocean Dr
95
595
838
822
820
858
1

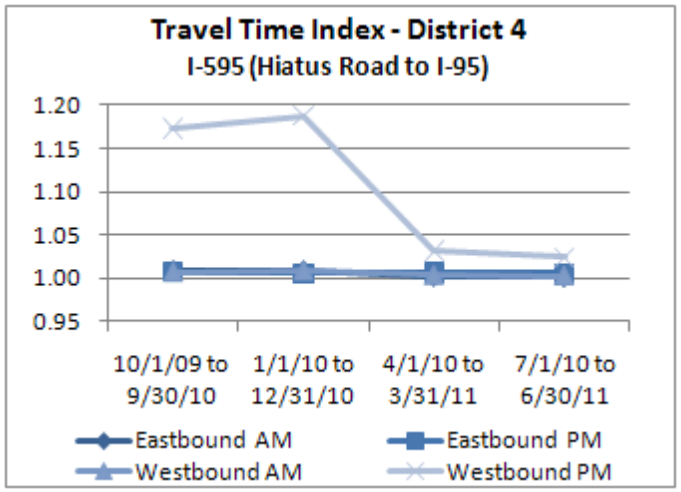

Travel Time Index - District 4
I-95 (Commercial to Hallendale Bch Blvd)
1.15
1.10
1.05
1.00
0.95
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Northbound AM
Northbound PM
Southbound AM
Southbound PM

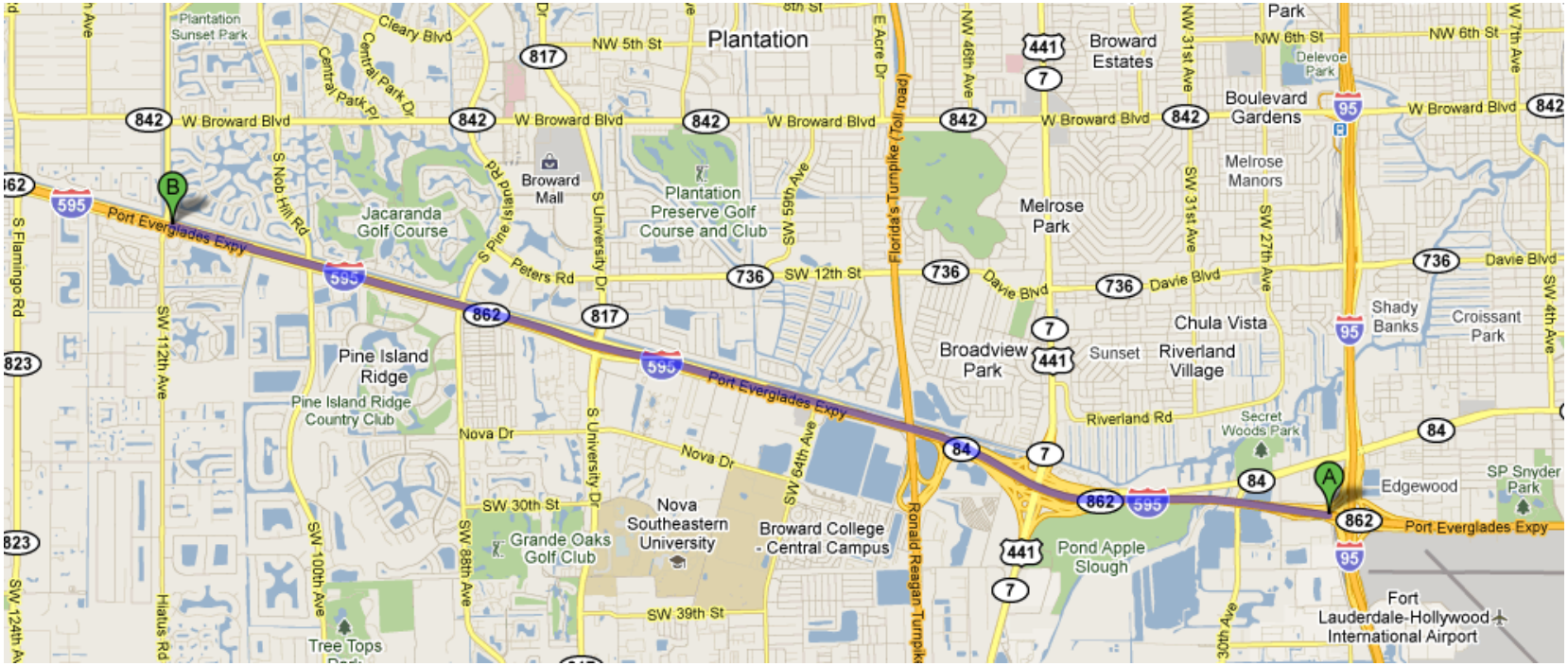

9015 95 at Hallandale
SW
8/8/2011 12:16 PM

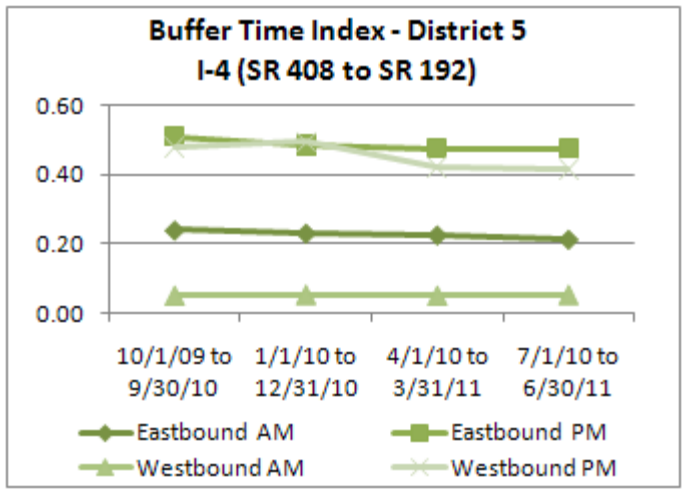

9028 95 S of Sunrise
SE
Brought to you by FDOT
8/8/2011 12:28 PM

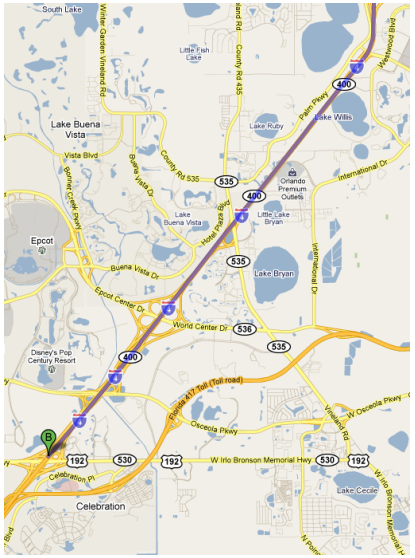

Buffer Time Index - District 4
I-595 (Hiatus Road to I-95)
1.50
1.00
0.50
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

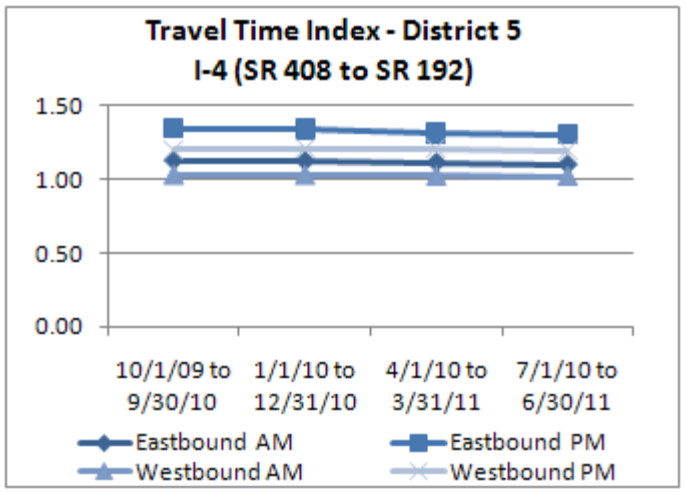

POLE 3
Brought to you by FDOT
8/8/2011 12:30 PM

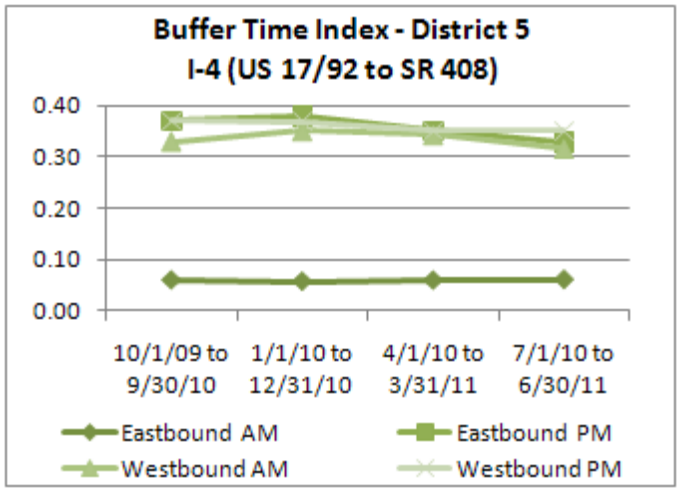

Travel Time Index - District 4
I-595 (Hiatus Road to I-95)
1.20
1.15
1.10
1.05
1.00
0.95
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

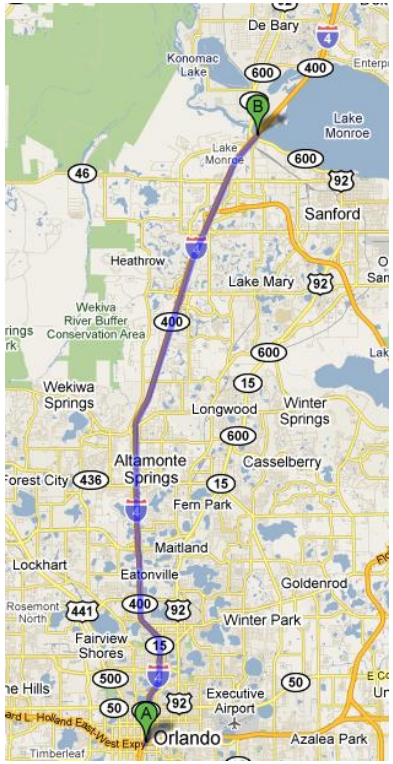

Plantation
Broward Estates
Boulevard Gardens
Melrose Manors
Melrose Park
Broadview Park
Chula Vista
Sunset
Riverland Village
Shady Banks
Croissant Park
Edgewood
SP Snyder Park
Secret Woods Park
Pond Apple Slough
Fort Lauderdale-Hollywood International Airport
Broward Mall
Plantation Preserve Golf Course and Club
Jacaranda Golf Course
Pine Island Ridge
Pine Island Ridge Country Club
Nova Southeastern University
Broward College - Central Campus
Grande Oaks Golf Club
Tree Tops
Port Everglades Expy
W Broward Blvd
NW 5th St
SW 12th St
Davie Blvd
Peters Rd
Riverland Rd
Nova Dr
SW 30th St
SW 39th St
Florida's Turnpike (Toll)
Ronald Reagan Turnpike
A
B

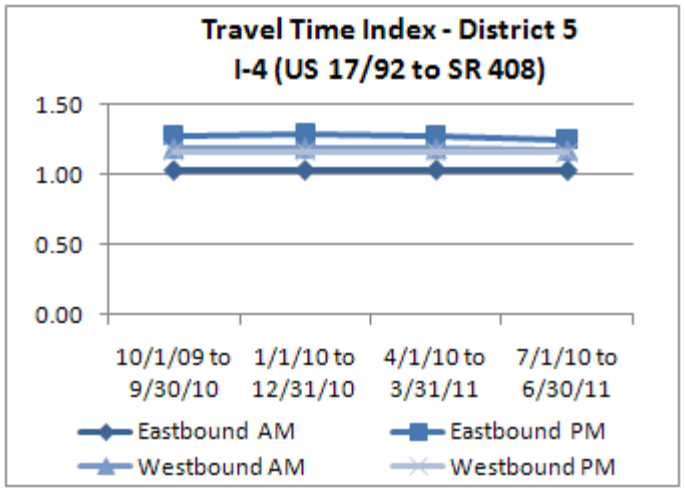

Buffer Time Index - District 5
I-4 (SR 408 to SR 192)
0.60
0.40
0.20
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

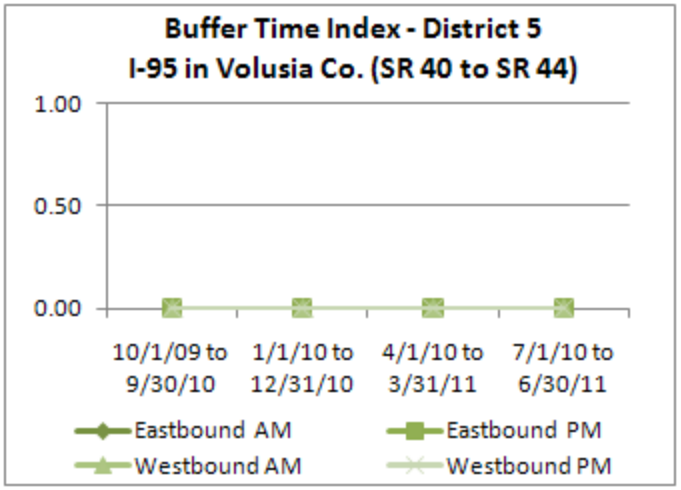

Lake Buena Vista
Epcot
Lake Bryan
Celebration
Osceola Parkway
W Irlo Bronson Memorial Hwy

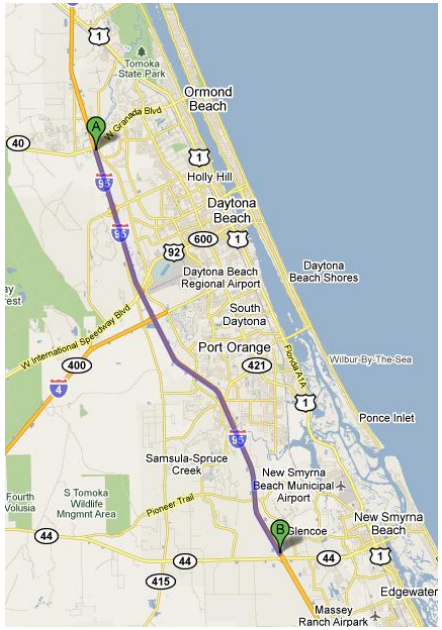

Travel Time Index - District 5
I-4 (SR 408 to SR 192)
1.50
1.00
0.50
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

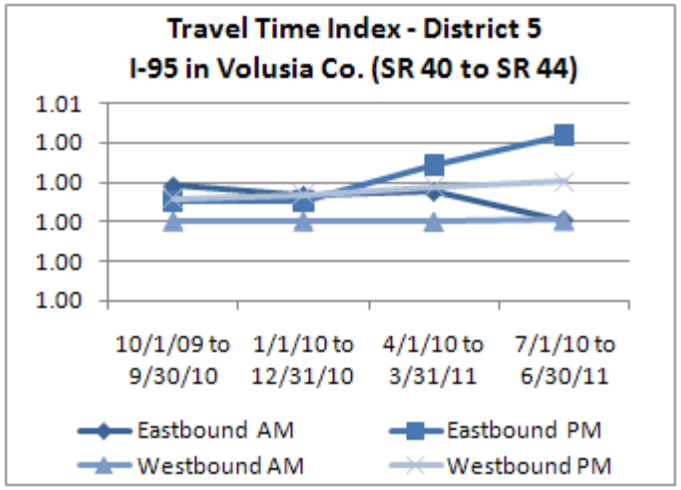

Buffer Time Index - District 5
I-4 (US 17/92 to SR 408)
0.40
0.30
0.20
0.10
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

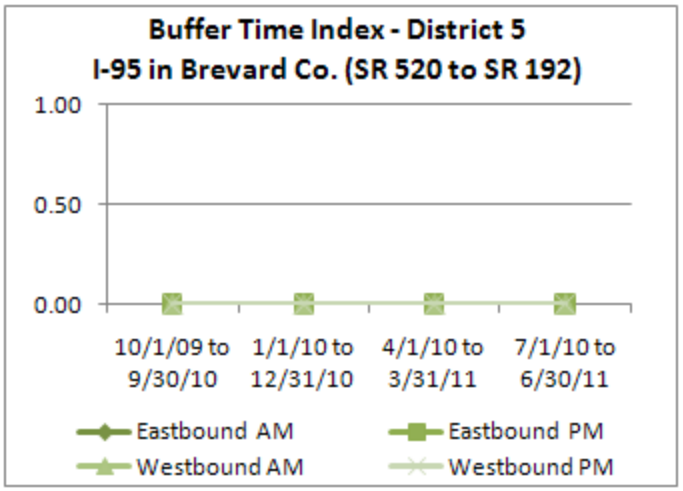

De Bary
Konomac Lake
Lake Monroe
Sanford
Heathrow
Lake Mary
Wekiva River Buffer Conservation Area
Wekiwa Springs
Longwood
Winter Springs
Altamonte Springs
Casselberry
Fern Park
Maitland
Lockhart
Eatonville
Goldenrod
Winter Park
Fairview Shores
Executive Airport
Orlando
Azalea Park

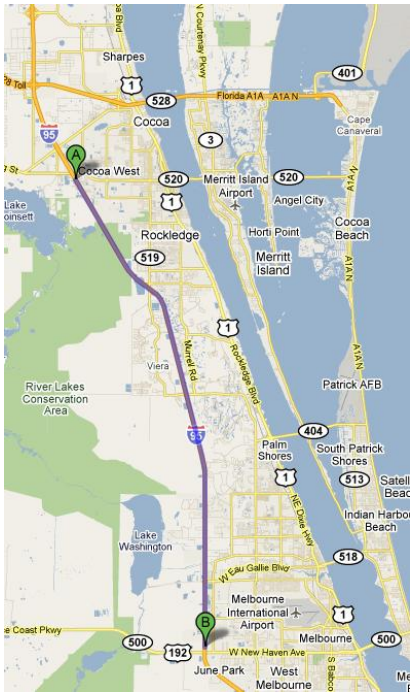

Travel Time Index - District 5
I-4 (US 17/92 to SR 408)
1.50
1.00
0.50
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

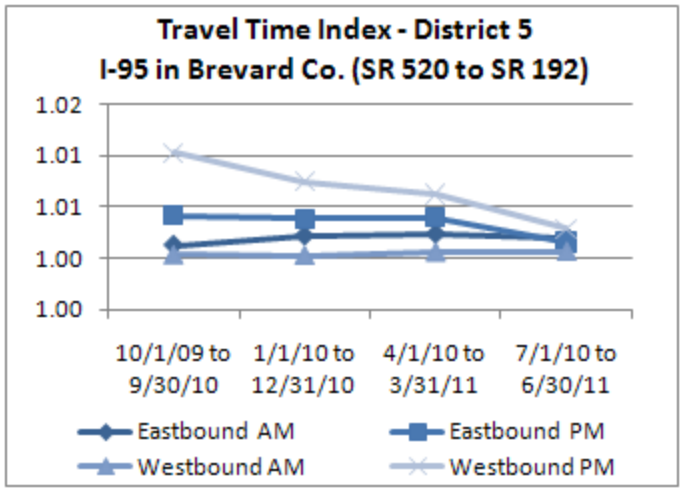

Buffer Time Index - District 5
I-95 in Volusia Co. (SR 40 to SR 44)
1.00
0.50
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

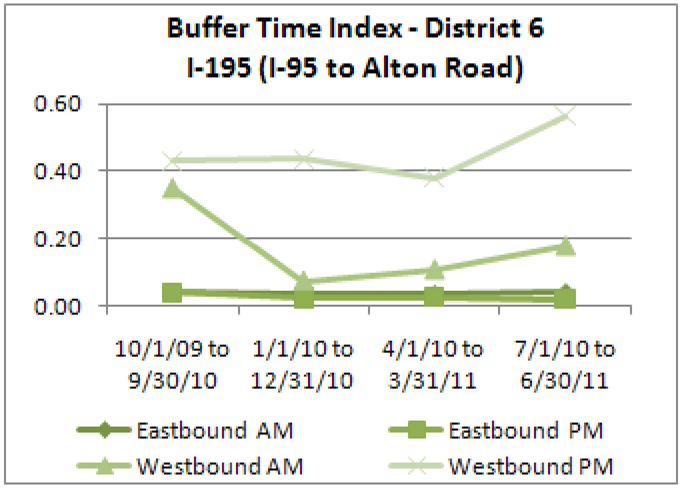

Tomoka State Park
Ormond Beach
Holly Hill
Daytona Beach
Daytona Beach Regional Airport
Daytona Beach Shores
South Daytona
Port Orange
Wilbur-By-The-Sea
Ponce Inlet
Samsula-Spruce Creek
New Smyrna Beach Municipal Airport
S Tomoka Wildlife Mngmnt Area
Pioneer Trail
Glencoe
New Smyrna Beach
Edgewater
Massey Ranch Airpark
W International Speedway Blvd
N Grandview Blvd

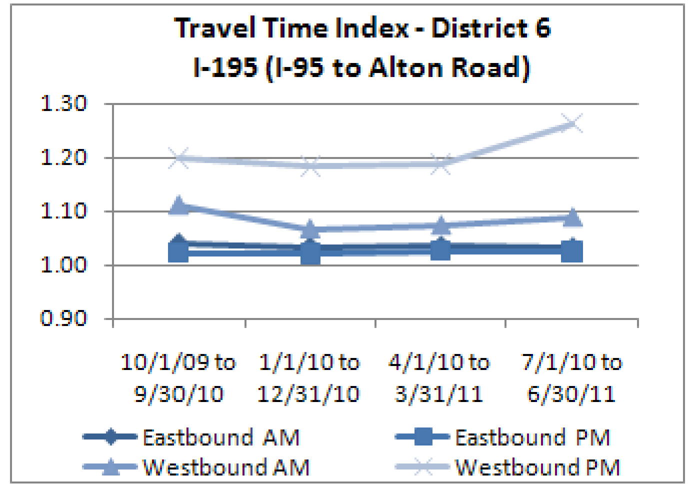

Travel Time Index - District 5
I-95 in Volusia Co. (SR 40 to SR 44)
1.01
1.00
1.00
1.00
1.00
1.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

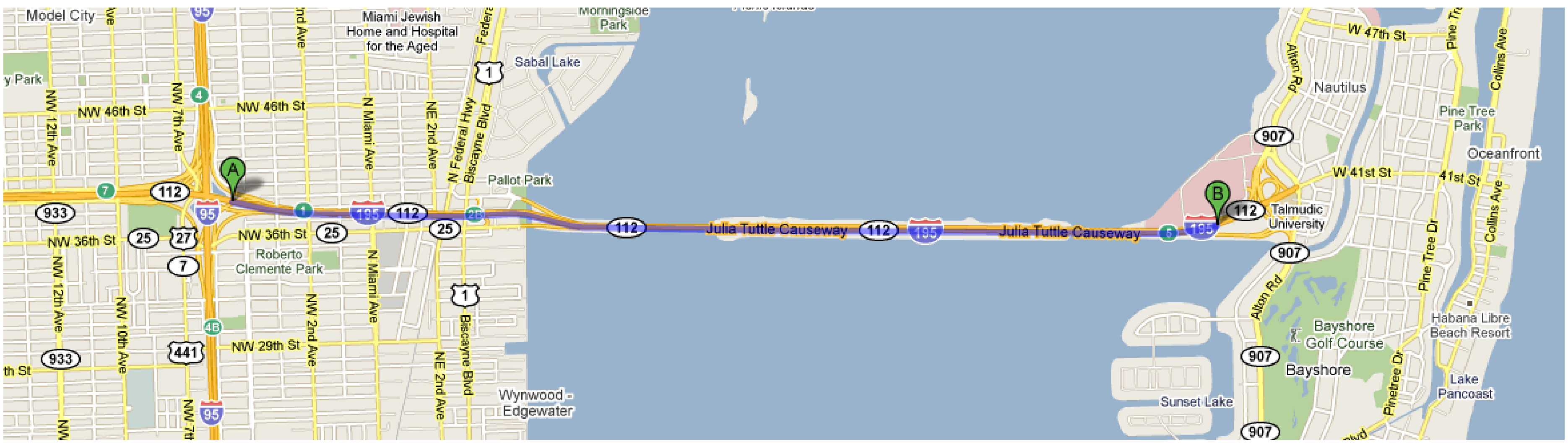

Buffer Time Index - District 5
I-95 in Brevard Co. (SR 520 to SR 192)
1.00
0.50
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

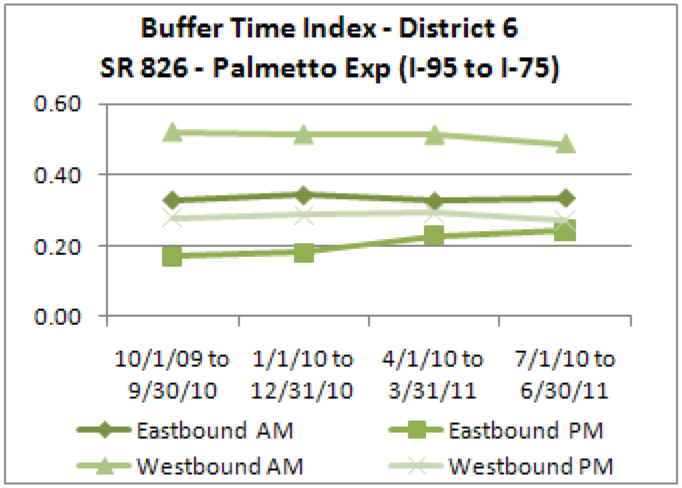

Sharpes
Cocoa
Cocoa West
Merritt Island Airport
Angel City
Rockledge
Horti Point
Cocoa Beach
Merritt Island
Viera
River Lakes Conservation Area
Patrick AFB
Palm Shores
South Patrick Shores
Lake Washington
Melbourne International Airport
Melbourne
June Park
West Melbourne
Florida A1A
Cape Canaveral
Rockledge Blvd
Murrell Rd
W Eau Gallie Blvd
W New Haven Ave

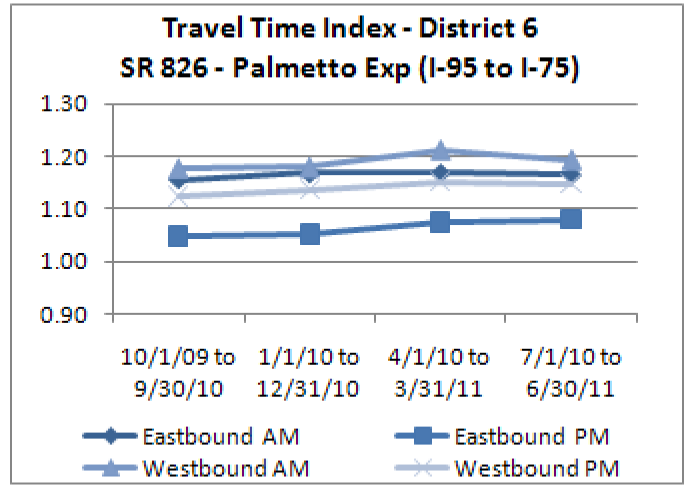

Travel Time Index - District 5
I-95 in Brevard Co. (SR 520 to SR 192)
1.02
1.01
1.01
1.00
1.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

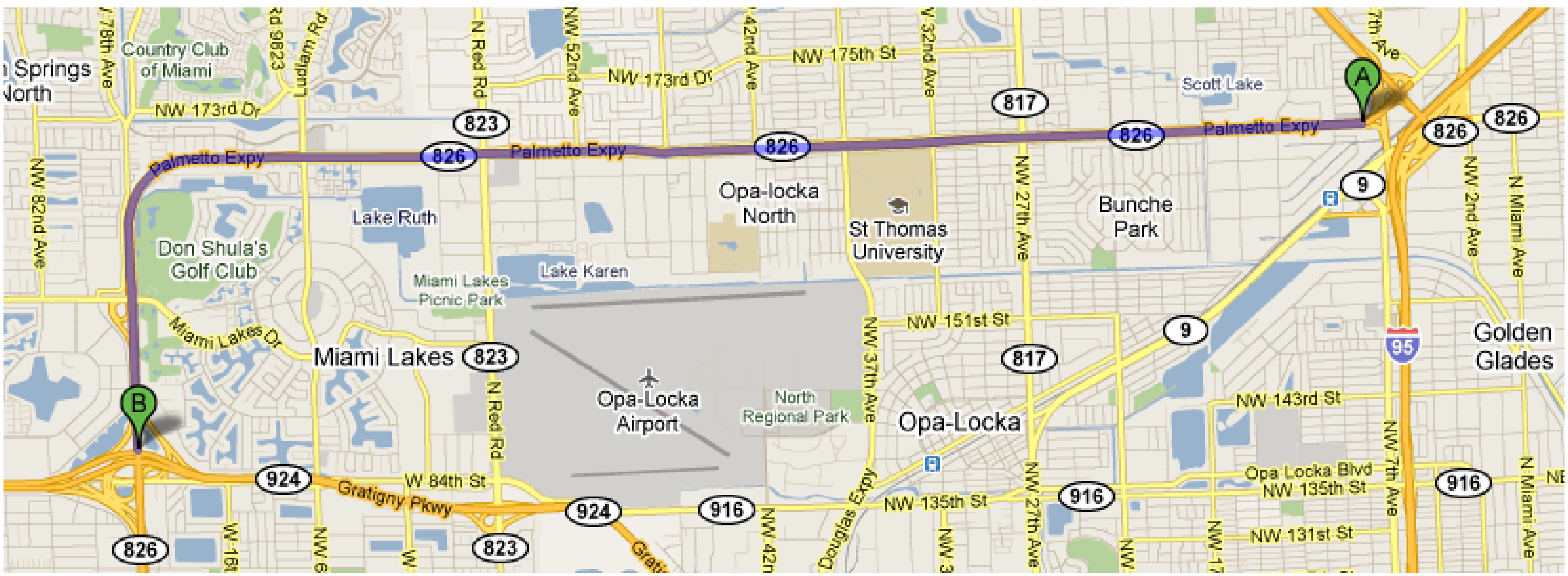

Buffer Time Index - District 6
I-195 (I-95 to Alton Road)
0.60
0.40
0.20
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

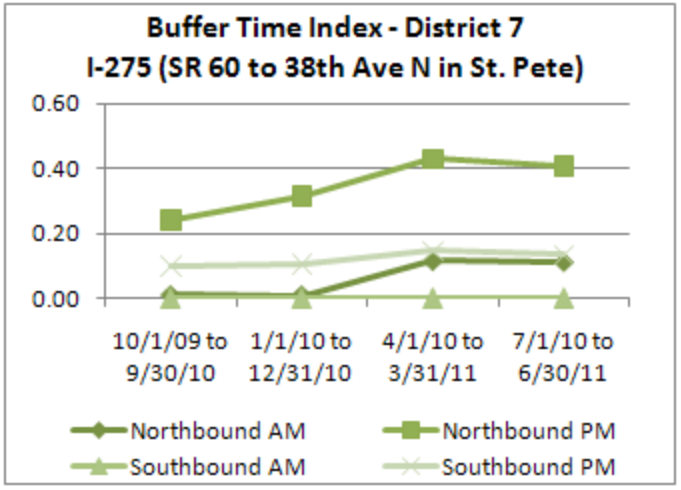

Travel Time Index - District 6
I-195 (I-95 to Alton Road)
1.30
1.20
1.10
1.00
0.90
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

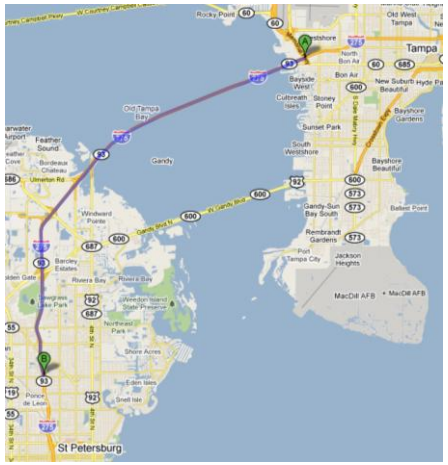

Model City
Miami Jewish Home and Hospital for the Aged
Sabal Lake
NW 46th St
NW 36th St
NW 29th St
Roberto Clemente Park
Pallot Park
Julia Tuttle Causeway
Nautilus
W 47th St
W 41st St
41st St
Pine Tree Park
Oceanfront
Talmudic University
Bayshore Golf Course
Bayshore
Sunset Lake
Habana Libre Beach Resort
Lake Pancoast
Wynwood - Edgewater
A
B

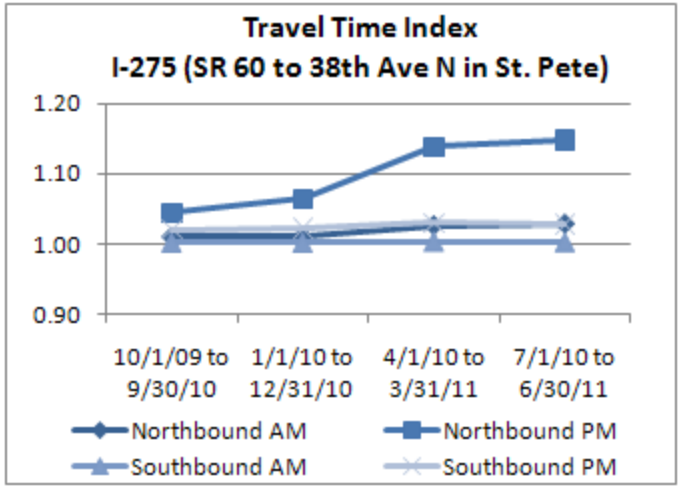

Buffer Time Index - District 6
SR 826 - Palmetto Exp (I-95 to I-75)
0.60
0.40
0.20
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

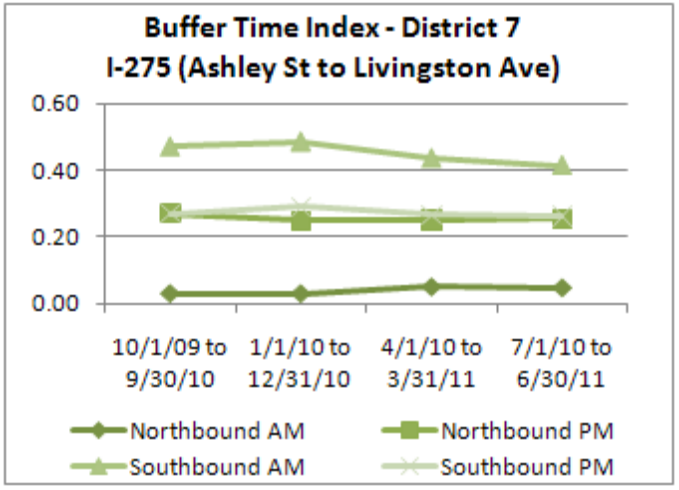

Travel Time Index - District 6
SR 826 - Palmetto Exp (I-95 to I-75)
1.30
1.20
1.10
1.00
0.90
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM

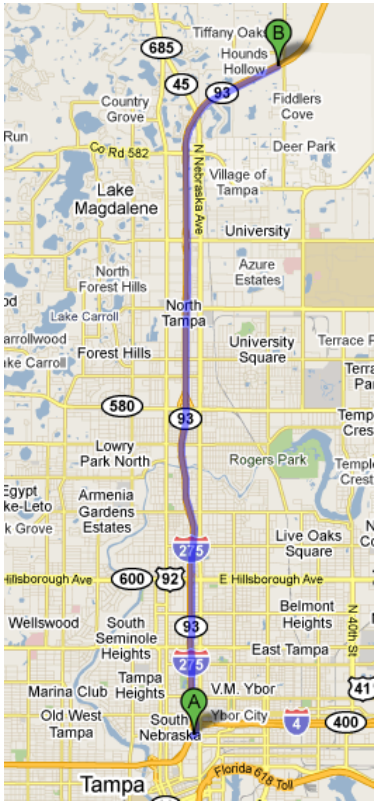

Country Club of Miami
NW 173rd Dr
Palmetto Expy
826
823
N Red Rd
NW 173rd Dr
NW 175th St
817
Scott Lake
A
B
Opa-locka North
St Thomas University
Bunche Park
Lake Ruth
Don Shula's Golf Club
Miami Lakes Picnic Park
Lake Karen
Miami Lakes Dr
Miami Lakes
NW 151st St
9
95
Golden Glades
Opa-Locka Airport
North Regional Park
Opa-Locka
NW 143rd St
924
Gratigny Pkwy
W 84th St
916
NW 135th St
Opa Locka Blvd
NW 131st St
Douglas Expy
NW 27th Ave
NW 37th Ave
NW 2nd Ave
N Miami Ave
NW 82nd Ave
NW 7th Ave

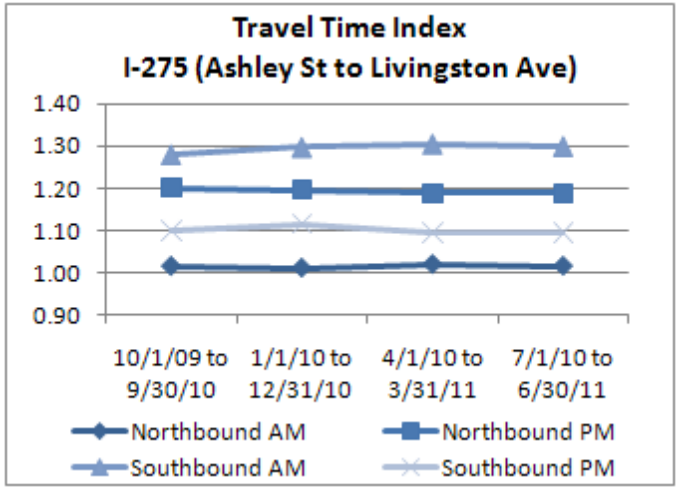

Buffer Time Index - District 7
I-275 (SR 60 to 38th Ave N in St. Pete)
0.60
0.40
0.20
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Northbound AM
Northbound PM
Southbound AM
Southbound PM

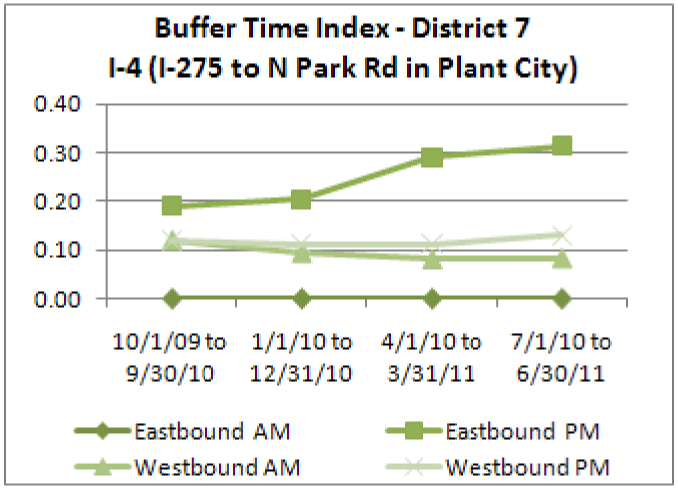

Tampa
St Petersburg

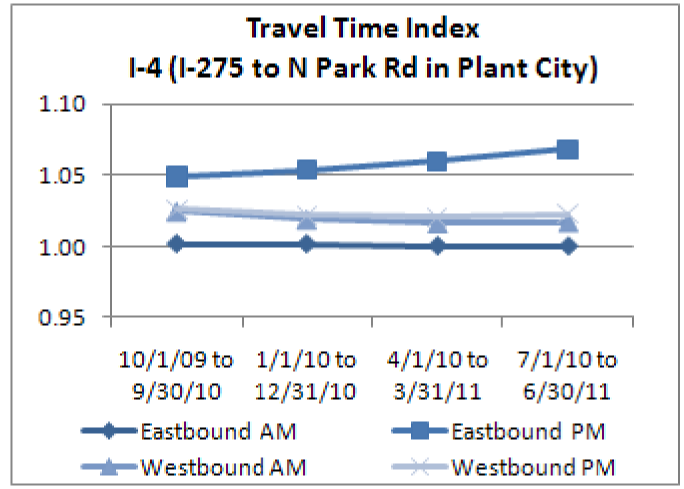

Travel Time Index
I-275 (SR 60 to 38th Ave N in St. Pete)
1.20
1.10
1.00
0.90
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Northbound AM
Northbound PM
Southbound AM
Southbound PM

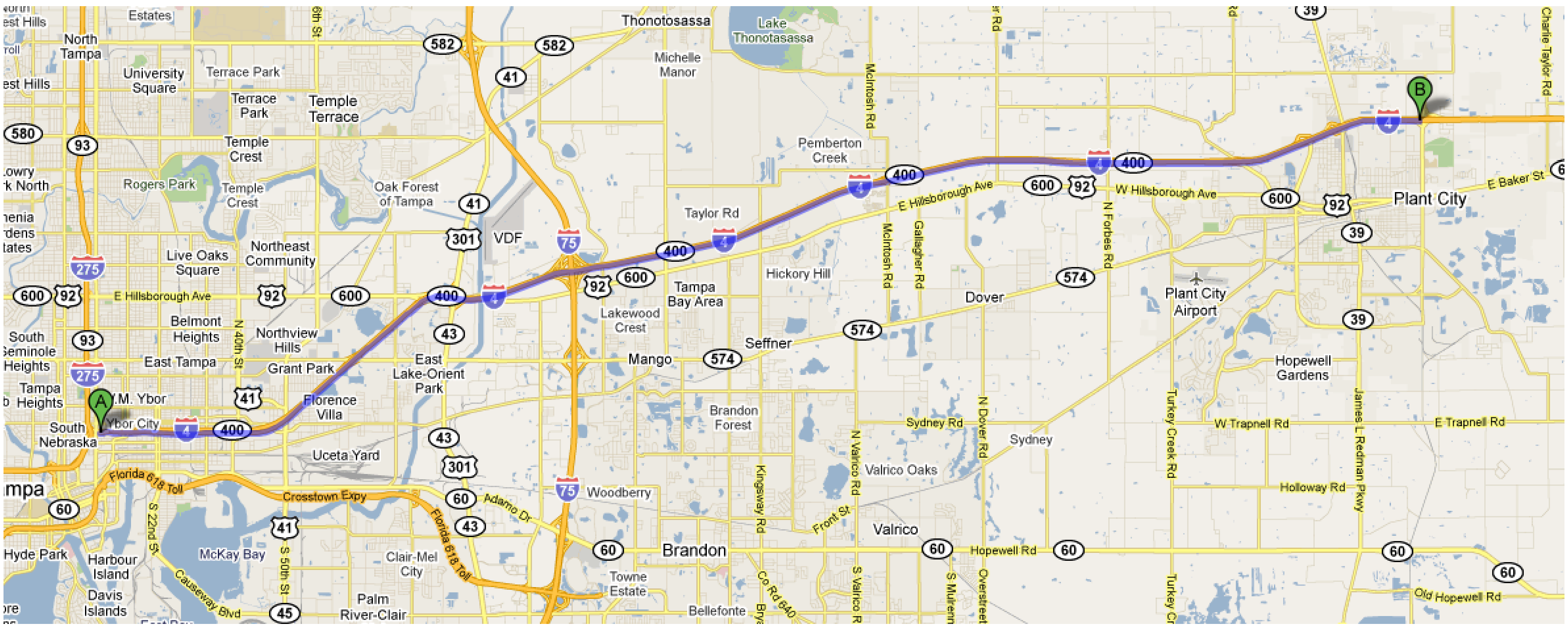

Buffer Time Index - District 7
I-275 (Ashley St to Livingston Ave)
0.60
0.40
0.20
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Northbound AM
Northbound PM
Southbound AM
Southbound PM


Tiffany Oaks
Hounds Hollow
685
45
93
Country Grove
Fiddlers Cove
Deer Park
Co Rd 582
N Nebraska Ave
Village of Tampa
Lake Magdalene
University
Azure Estates
North Forest Hills
Lake Carroll
North Tampa
University Square
Forest Hills
580
Lowry Park North
Rogers Park
Armenia Gardens Estates
Live Oaks Square
275
600
92
E Hillsborough Ave
Belmont Heights
Wellswood
South Seminole Heights
East Tampa
Tampa Heights
Marina Club
V.M. Ybor
Ybor City
Old West Tampa
South Nebraska
4
400
41
Tampa
Florida 618 Toll


Travel Time Index
I-275 (Ashley St to Livingston Ave)
1.40
1.30
1.20
1.10
1.00
0.90
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Northbound AM
Northbound PM
Southbound AM
Southbound PM


Buffer Time Index - District 7
I-4 (I-275 to N Park Rd in Plant City)
0.40
0.30
0.20
0.10
0.00
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM


Travel Time Index
I-4 (I-275 to N Park Rd in Plant City)
1.10
1.05
1.00
0.95
10/1/09 to 9/30/10
1/1/10 to 12/31/10
4/1/10 to 3/31/11
7/1/10 to 6/30/11
Eastbound AM
Eastbound PM
Westbound AM
Westbound PM


Thonotosassa
Lake Thonotosassa
Michelle Manor
North Tampa
University Square
Terrace Park
Temple Terrace
Temple Crest
Rogers Park
Oak Forest of Tampa
Pemberton Creek
Taylor Rd
VDF
Live Oaks Square
Northeast Community
E Hillsborough Ave
Belmont Heights
Northview Hills
East Tampa
Grant Park
Tampa Bay Area
Lakewood Crest
Hickory Hill
Mango
Seffner
Dover
Plant City
Plant City Airport
Hopewell Gardens
East Lake-Orient Park
Florence Villa
Ybor City
Uceta Yard
Brandon Forest
Sydney Rd
Sydney
Valrico Oaks
Valrico
Woodberry
Brandon
Towne Estate
Crosstown Expy
Adamo Dr
Hyde Park
Harbour Island
Davis Islands
McKay Bay
Clair-Mel City
Palm River-Clair
Bellefonte
W Hillsborough Ave
E Hillsborough Ave
W Trapnell Rd
E Trapnell Rd
Holloway Rd
Hopewell Rd
Old Hopewell Rd
E Baker St
South Seminole Heights
Tampa Heights
South Nebraska
A
B

Peak Hour Buffer Time Index by District and Roadway
7/1/10 to 6/30/11

District	Roadway	Direction	Peak Period	BTI
2	I-95	Northbound	AM	0.13
			PM	0.19
		Southbound	AM	0.07
			PM	0.16
	I-295	Northbound	AM	0.00
			PM	0.00
		Southbound	AM	0.12
			PM	0.00
4	I-95	Northbound	AM	0.20
			PM	0.29
		Southbound	AM	0.18
			PM	0.33
	I-595	Eastbound	AM	0.00
			PM	0.00
		Westbound	AM	0.00
			PM	0.20
5	I-4	Eastbound	AM	0.14
			PM	0.40
		Westbound	AM	0.18
			PM	0.38
	I-95	Eastbound	AM	0.00
			PM	0.00
		Westbound	AM	0.00
			PM	0.00
6	I-195	Eastbound	AM	0.04
			PM	0.02
		Westbound	AM	0.18
			PM	0.57
	SR 826	Eastbound	AM	0.34
			PM	0.25
		Westbound	AM	0.49
			PM	0.27
7	I-275	Northbound	AM	0.08
			PM	0.33
		Southbound	AM	0.21
			PM	0.20
	I-4	Eastbound	AM	0.00
			PM	0.31
		Westbound	AM	0.08
			PM	0.13

CUSTOMER SATISFACTION

REPORT PUBLIC SATISFACTION WITH SERVICES PROVIDED BY THE FDOT ITS PROGRAM

Background: In late 2005, the FDOT Central Office ITS Program initiated a project to conduct a customer satisfaction survey in order to determine public attitudes toward ITS services provided by the FDOT Districts. A draft questionnaire was developed and submitted for review by the districts at the December 8, 2005 ITS Working Group meeting. Further review was conducted by the FDOT Central Office Traffic Engineering and Operations Office staff. Approval of the Customer Satisfaction Outcome Performance Measure questionnaire was obtained in February 2006. A statewide ITS customer satisfaction survey is conducted once every two years throughout Florida.

Purpose: Report a qualitative measure of public satisfaction with services provided by the FDOT ITS Program.

Objective: To obtain the percentage of survey respondents that is satisfied with ITS services including Dynamic Message Signs (DMS) usage and performance, Road Ranger performance, 511 and traveler information web site usage and performance.

Methodology: Customer satisfaction is measured by collecting a statistically valid sample survey data from ITS users throughout the State. This task surveys via telephone a random sample of drivers in each of the seven FDOT districts. Respondents must drive at least three times per week on freeways or the Florida Turnpike to qualify.

District	Qualifying Freeways
1	I-75, I-275, I-4, SR 570
2	I-10, I-75, I-95, I-295, SR 9A, J. Turner Butler Blvd. (SR202), Arlington Expressway (SR115), Hart Bridge Expressway (SR 228)
3	I-10, I-110 (SR 8A)
4	I-95, I-75, I-595, Sawgrass Expressway (SR 869), Florida's Turnpike (SR821)
5	I-4, I-75, I-95, East-West Expressway (SR 408), Bee Line Expressway (SR 528), Central Florida Greenway (SR 417), Western Beltway (SR 429), Florida's Turnpike (SR 821)
6	I-95, I-195, I-395, I-75, Florida's Turnpike (SR 821), Dolphin Expressway (SR 836), Palmetto Expressway (SR 826), SR 878, Don Shula Expressway (SR 874), Airport Expressway (SR 112), Gratigny Parkway (SR 924)
7	I-75 I-275, I-175, I-4, Veterans Expressway/Suncoast Parkway (SR 589), SR 568

CUSTOMER SATISFACTION

2010/2011 RESULTS

The Customer Satisfaction survey was conducted during June and July 2010 and reported in October 2010. FDOT interviewed 2,800 drivers across Florida to explore usage of, attitudes toward, and perceptions of the Department's ITS services. The most significant findings of that survey are listed below.

- The days of radio and television traffic reports dominating traveler market share will eventually come to a close. This was evidenced in previous years by the generational divides in radio and television traffic information consumption. Young drivers—no matter how often, where, or when during the day they drive—were less dependent on these traditional traffic information sources and more inclined to turn to the Internet for traffic information. Use of traditional sources is generally down across all subgroups, and in-car navigation systems have already emerged as the second most popular alternative source of traffic information.

- Drivers who use 511 are effusive in their praise of it, are increasingly trusting of it, and are likely to act on the information it provides.

- There is increased interest in receiving traffic information via text message. With an increasing number of 511 users who have customized the service to meet their specific needs, drivers are less likely to call 511, and more likely to want traffic notifications sent to them.

- The Road Ranger Program and the electronic message signs continue to receive overwhelmingly positive ratings by customers and these services are highly valued and trusted by the driving public.

For more information on ITS Performance Measures:

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ITS Program Manager
Elizabeth.Birriel@dot.state.fl.us
Florida Department of Transportation
State Traffic Engineering and Operations Office
605 Suwannee Street, MS 90
Tallahassee, Florida 32399-0450
Phone: (850) 410-5600
Toll Free: 866-374-3368, Ext. 5600
http://www.dot.state.fl.us/trafficoperations/ITS/ITS.shtm