



Florida Department of Transportation  
State Traffic Engineering and Operations Office

**Annual Report  
Fiscal Year 2015/2016**

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Statewide  
Intelligent Transportation Systems  
Performance Measures



## 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 employs 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, developing and reporting operations performance measures is a high priority for FDOT to demonstrate and document the benefits of ITS. When FDOT's ITS Program began addressing performance in 2004, the Districts did not have 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.

Widespread ITS deployment and integration will allow more accurate documented and reporting of performance measures the resulting benefits (*outcome*). The Florida Transportation Commission approved three ITS *outcome* performance measures in 2005: incident duration, travel-time reliability, and customer satisfaction. Data collection and reporting for Incident duration and customer satisfaction began in 2006.

The fiscal year (FY) 2015/2016 report includes all output and outcome measures based on data collected from July 1, 2015 through June 30, 2016.

## TOTAL ANNUAL 511 TOUCHPOINTS

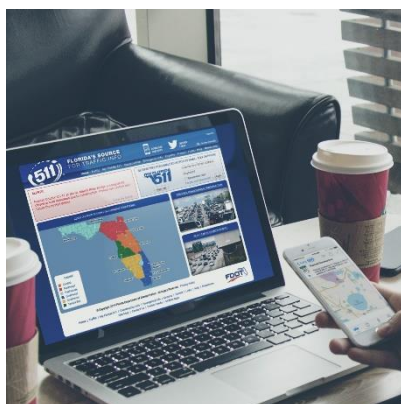
*FDOT 511 SYSTEM SETS NEW USAGE RECORD IN MARCH 2016*

The Florida Department of Transportation's (FDOT) 511 Traveler Information System is one of the public-facing aspects of Florida's Intelligent Transportation Systems (ITS). It provides real-time traffic and traveler information that allows Florida's residents and visitors to make smarter choices about their travels. A 2014 study commissioned by FDOT showed that 70 percent of 511 users changed their route due to information received from 511, 22 percent changed their departure time, and 14 percent changed their mode of travel. Nearly a quarter of users reported that 511 information reduced their stress level.



FDOT offers five ways for Floridians and visitors to access its real-time information. The Florida 511 mobile app, available for Apple and Android devices, is the most popular way to access the information. The 511 phone call is toll-free and available to any phone located in the state of Florida. The website ([www.FL511.com](http://www.FL511.com)) provides traffic information and FDOT traffic camera views. A growing number of people are signing up for My Florida 511 personalized services, and requesting that 511 text, email or call them with traffic conditions along their routes. FDOT also pushes out traffic alerts via 13 Twitter feeds, including statewide, region, and roadway-specific accounts.

Florida 511 provides information on congestion, construction, crashes, weather impacts, and any other incident that might affect the flow of traffic. It covers all Florida interstates and toll roads, plus many major arterials. Traffic information is collected at the state's Regional Transportation Management Centers via FDOT roadside sensors and cameras, Road Rangers, Florida Highway Patrol, Waze, local law enforcement, and citizen reports.



**Purpose:** To provide accurate, real-time information on traffic and road conditions, alternate routes (during incidents and emergencies), construction, and weather-related problems; and connections to public transportation.

**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 while maintaining a high level of user satisfaction.

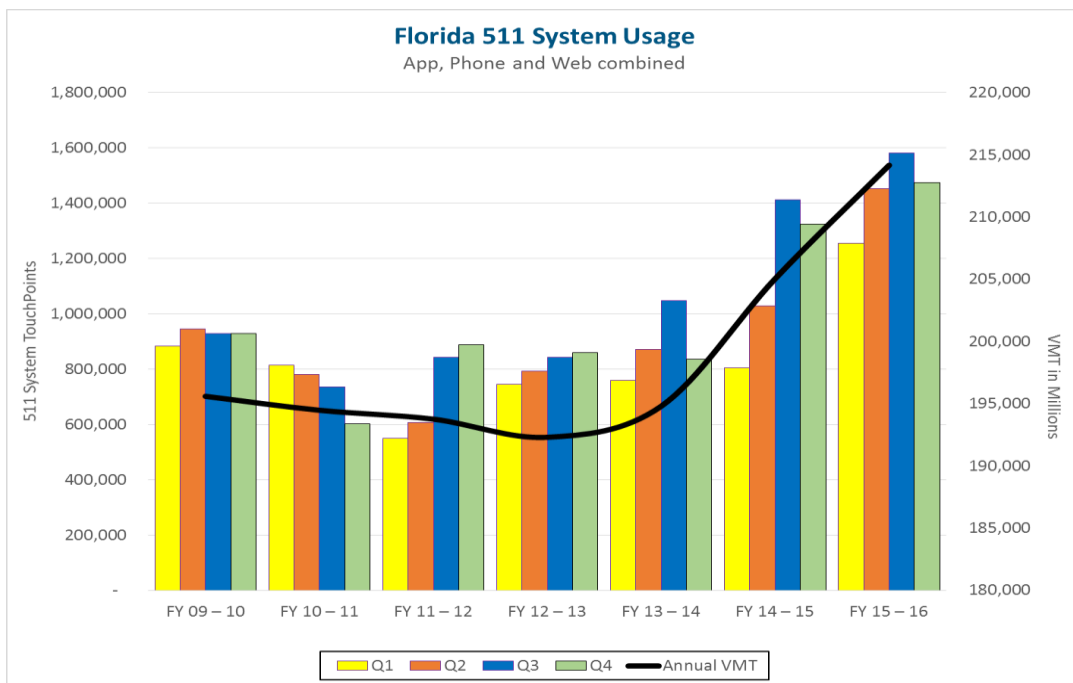
**Report Methodology:** Compilation of monthly 511 calls, web visitors, mobile app sessions and personalized alerts sent.

## TOTAL ANNUAL 511 TOUCHPOINTS 2015/2016 RESULTS

Floridians are using Florida’s 511 like never before. During FY 2015/2016, the state’s residents and visitors reached out to 511 via the mobile app, website, and phone call more than 5.7 million times; and the My Florida 511 system sent more than 25 million personalized alerts via text message, email, and phone call. The highlights of the fiscal year include:

- System usage exceeded the previous fiscal years by more than 26 percent, led by the mobile apps. Android app usage grew by 66 percent, and Apple app usage grew by 42 percent.
- The system’s highest monthly usage thus far, occurred in March 2016. The system received 584,794 calls, web visitors, and mobile app sessions. That’s nearly 8 percent higher than the previous busiest month: March 2015.
- The Florida 511 apps for Apple and Android have surpassed the phone call as the most popular way to access 511 information. Android app usage topped Apple usage for the first time in May 2016, and again in June 2016.
- For the past several years, 511’s busiest month has been March, driving the high usage in the Third Quarter (Q3) of each fiscal year.

Florida 511 system usage corresponds to vehicle miles traveled (VMT) statewide (the line shown in black on the graph), which has grown over the past few years.



## ROAD RANGER STOPS

### *QUICK RESPONSE FOR CLEARANCE OF INCIDENTS AND ASSIST OF 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 cleared, the sooner the highway returns to normal capacity.

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

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

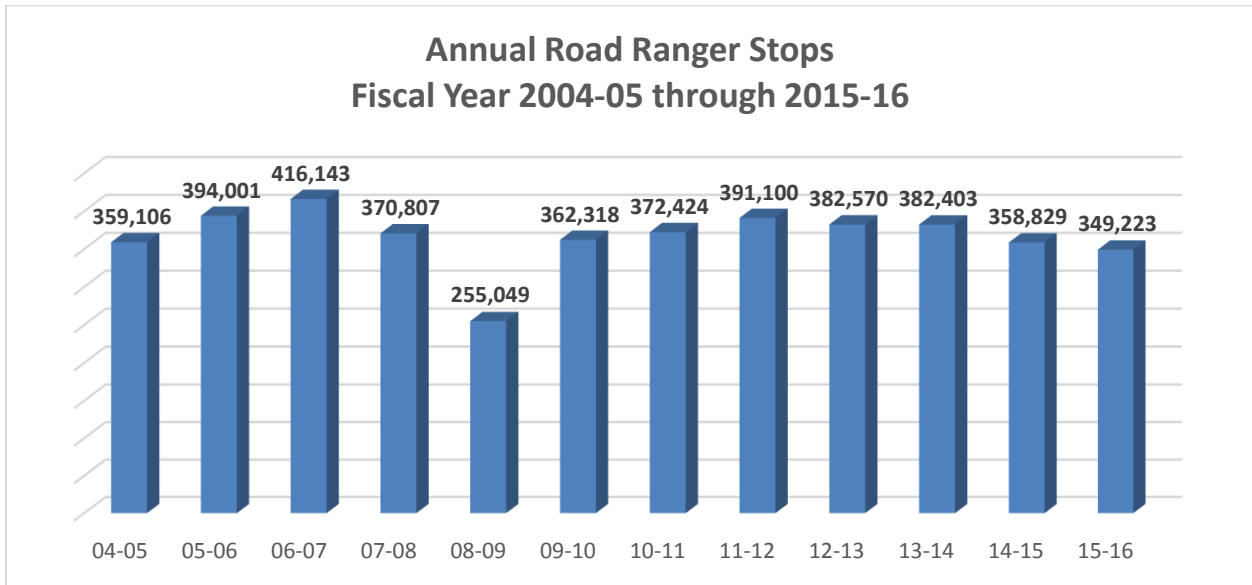
**Objective:** To help reduce the overall travel delay associated with incidents by providing quick response to motorists in need and assistance to other emergency responders.

**Report Methodology:** Compilation and summary of Road Ranger activity data is logged through the SunGuide® software in each District transportation management center (TMC). All of the Districts are now providing Road Ranger data to the Central Office on a quarterly basis.

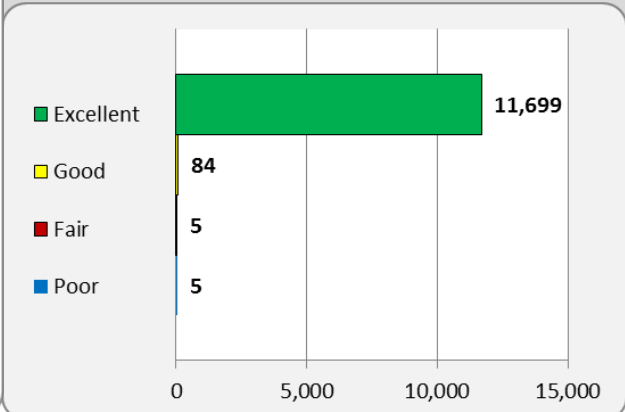
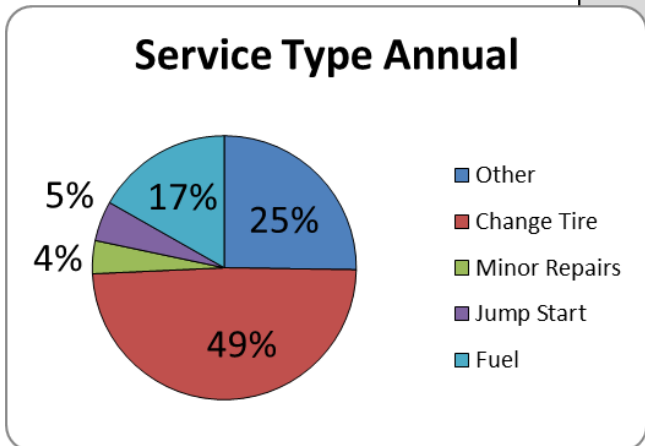
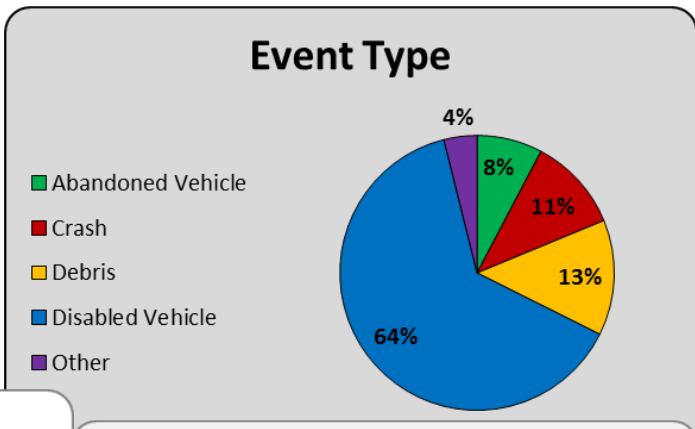


## ROAD RANGER STOPS 2015/2016 RESULTS

From July 2015 to June 2016, there were 349,223 Road Ranger stops made statewide. All seven Districts and Florida's Turnpike Enterprise provided Road Ranger services covering 1,493 centerline miles of Florida's Interstate, Turnpike, and other highways.



The most common Road Ranger stops were for disabled vehicles experiencing flat tires. Disabled vehicle drivers receiving assistance submitted 11,793 comment cards. Of these, 11,699, or 99.2%, rated the quality of the service as "Excellent". 11,783, or 99.9%, rated the quality of the assistance as "Excellent" or "Good".



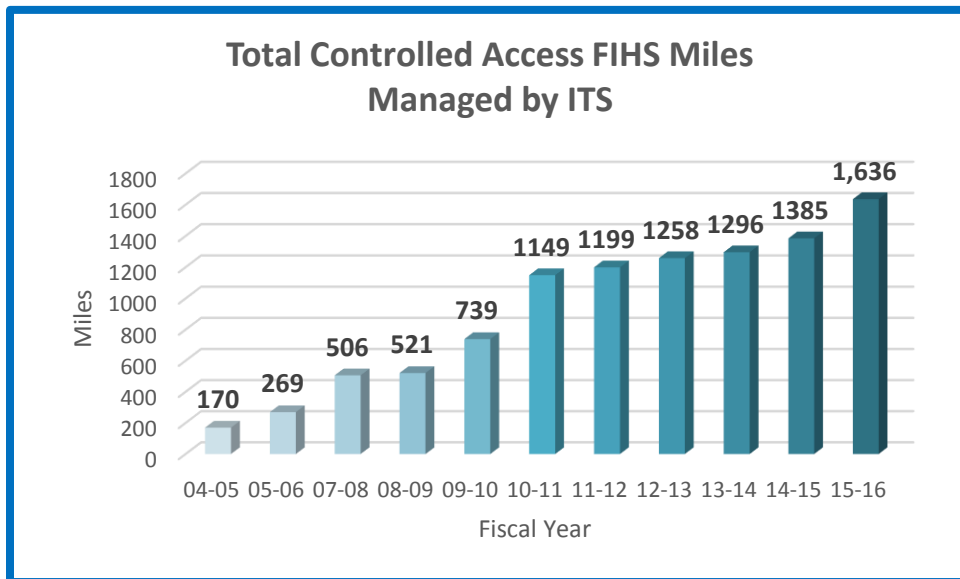
## ITS MILES MANAGED

### *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 Florida’s rapid growth in population, tourism, and commerce. ITS employs real-time information systems and advanced technologies to improve the movement of people, goods, services and to remedy mobility and safety problems.

**Background:** All Districts and Florida’s Turnpike Enterprise are committed to the deployment, operation and maintenance of ITS; each is deploying at varying stages and pace according to FDOT’s *Ten-Year ITS Cost Feasible Plan*. Currently, the definition of “ITS miles managed” covers centerline mileage of FIHS limited-access routes that include ALL of the following attributes:

- Traffic probes and/or sensors
- Real-time traffic information reporting coverage
- Real-time incident response capabilities
- Real-time traffic data availability to FDOT



**Figure 1: Historical Total Controlled Access Miles Managed by ITS**

FY 15-16 experienced the largest one-year growth in the past five years as large sections of rural FIHS are now under active operations and maintenance.

**Purpose:** Report progress toward completing FDOT’s *Ten-Year ITS Cost Feasible Plan*.

**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 to help improve mobility and safety throughout the state.

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

*Note: FDOT no longer uses the FIHS; it has been replaced with the Strategic Intermodal System (SIS). However, for the sake of consistency, this report still reports the ITS miles managed in terms of the FIHS.*

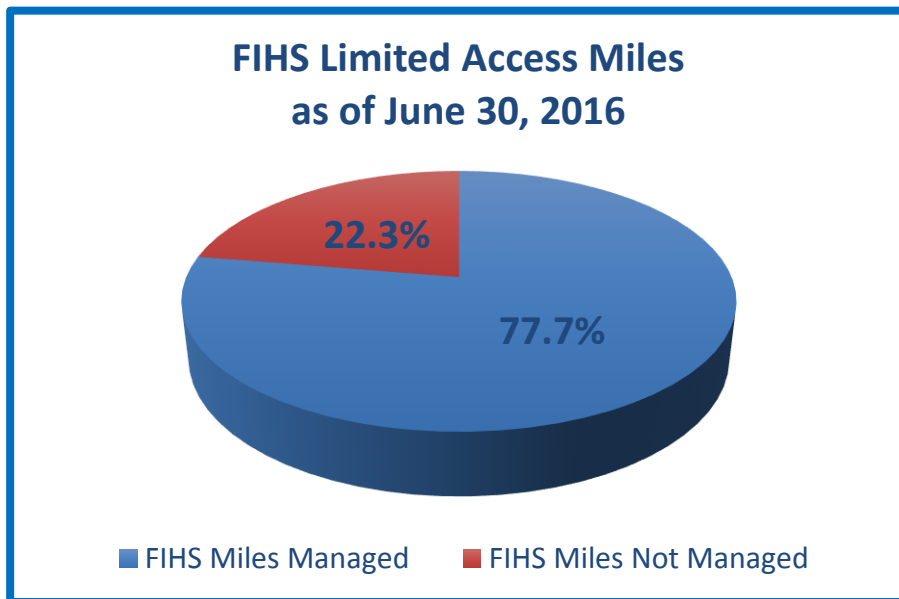


## ITS MILES MANAGED 2014/2015 RESULTS

At the end of June 2016, 1,635.80 miles were managed by ITS. This represents 77.7 percent ITS coverage of the limited-access FIHS.

**Table 1: ITS Miles Managed, by District**

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	222.9	100.00%
2	372.3	113.7	30.54%
3	242.2	215.0	88.77%
4	202.8	202.8	100.00%
5	386.1	226.3	58.61%
6	53.5	53.5	100.00%
7	166.5	153.6	92.25%
Turnpike	460.0	448.0	97.39%
<b>State Total</b>	<b>2,106.3</b>	<b>1,635.80</b>	<b>77.7%</b>



**Figure 2: Percentage of Controlled Access Miles Managed by ITS**

**ITS Miles Managed, Roadway Segment Limits**

**Table 2: Controlled Access Miles Managed by ITS - Roadway Segments**

Managing District	Roadway	From	To	Length
1	I-75	Broward/Collier Co. Line	I-275 Interchange in Manatee County	176.5
2	I-75	Marion County Line	To SR 24/Archer Rd	10
2	I-95	Race Track Road	Pecan Park Rd (Duval/St. Johns Co. Line)	33.7
2	I-295	SR 10 at Atlantic Boulevard	I-95 (south interchange)	61
2	I-10	I-95 (Exit 363)	West of Chaffee Road (MM 354)	9
3	I-10	Florida/Alabama State Line	One mile east of US 90 (MM 209)	209
3	I-110	I-110 (south terminus)	I-10	6
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 Expwy	North of I-75		1.9
5	I-4	US 27 (Polk Co.)*	I-95	78.1
5	SR 528	SR 520 East	George King Rd	23.4
5	Turnpike	North of US 27		32.2
5	I-95	Flagler/St. Johns Co. Line	Brevard/Indian River Co. Line	137.2
6	I-195	NW 11 Avenue	SR 907A/Alton Road	4.9
6	SR 826/ Palmetto Expwy	SR 5/US 1	Golden Glades Interchange (MM 24.572)	24.6
6	SR 93/I-75	SR 826/Palmetto Expwy	Broward/Miami-Dade Co. Line	5.4
6	SR 9A/I-95	SR 5/US 1	Broward/Miami-Dade Co. Line	17.3
6	I-395	I-95	West end MacArthur Causeway Bridge	1.3
7	I-275	I-75 Apex (Manatee Co)	I-75 Apex (Pasco Co Line)	58
7	I-4	I-275	US 27 (Polk Co.)*	54.9
7	I-75	South of Progress Boulevard	Pasco/Hernando Co Line	40.7
Turnpike	Sawgrass Expwy	I-595	Atlantic Blvd. in Broward Co.	8.5
Turnpike	Seminole Expwy (SR 417)	Orange/Seminole Co. Line	I-4	17
Turnpike	Southern Connector (SR 417)	I-4	International Dr.	5
Turnpike	Western Beltway (SR 429)	I-4	Seidel Rd.	10
Turnpike	Polk Parkway (SR 570)	I-4	I-4	24

Managing District	Roadway	From	To	Length
Turnpike	Veteran's Expwy (SR 589)	SR 60	Suncoast Parkway	12
Turnpike	SR 568	Veteran's Expwy	Dale Mabry Dr.	3
Turnpike	SR 589 (Suncoast Parkway)	Veteran's Expwy	US 98	38
Turnpike	HEFT (Homestead Extension/SR 821)	US 1	Turnpike Mainline	48
Turnpike	Florida's Turnpike (SR 91)	SR 826 (US 441)	Turnpike Mainline	3
Turnpike	SR 408 (East West Expwy)	Turnpike Mainline	SR 50	1
Turnpike	Florida's Turnpike (SR 91)	Sawgrass Expwy	I-75	236
Turnpike	SR 528 (Beachline Expwy)	I-4	Florida Turnpike in Orange Co.	4
Turnpike	Florida's Turnpike (SR 91)	Miramar Parkway	Griffin Road	6
Turnpike	Florida's Turnpike (SR 91)	Broward Blvd. (Broward Co.)	Palm Beach Co. Line	15

\* Districts 5 and 7 manage miles that exist in District 1.



Figure 3: Florida Controlled Access Routes Managed by ITS

## 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 duration of each incident. Determining trends in incident clearance allows for system analysis and improvement. Quickly removing an incident allows the highway to return to normal capacity and traffic flow sooner.

**Background:** In 2005, FDOT's 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, SunGuide® software was modified to include data collection and reporting requirements for obtaining incident duration data.

In order to improve the incident duration timeline, Florida developed a very active statewide Traffic Incident Management (TIM) Program. There are four major components to this program:

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

For a description of the *Road Ranger Service Patrol* please reference page 4.

The Florida *Open Roads Policy* is a written agreement between FDOT and the Florida Highway Patrol (FHP). Both agencies signed this agreement in November 2002. The agreement states that it is the 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.

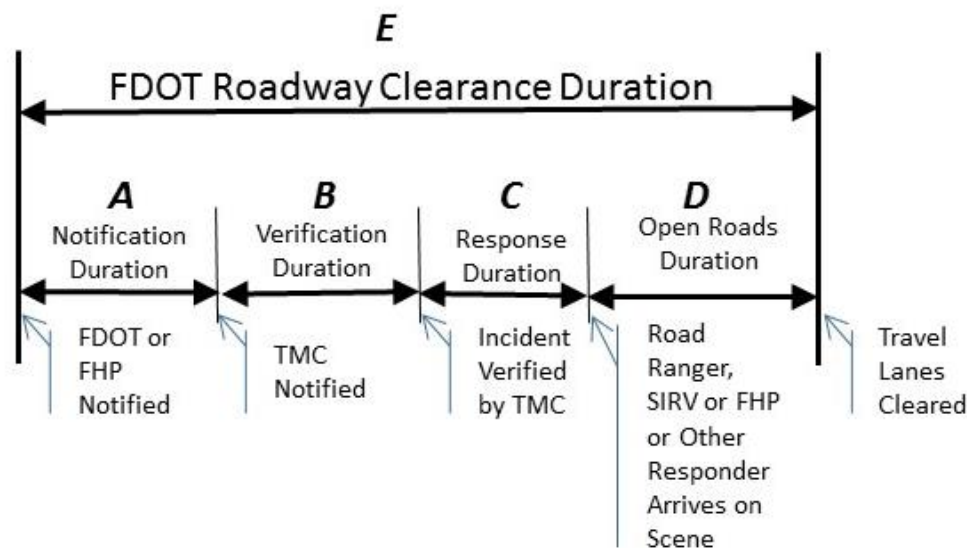
The *Rapid Incident Scene Clearance (RISC)* Program is a highly innovative, incentive-based program to meet the goal of safely clearing major highway incidents and truck crashes. This program pays bonuses of \$2,500 to wrecker operators with specialized heavy equipment for successful removal of all wreckage and roadway re-opening within 90 minutes of being given a notice-to-proceed. Additionally, the wrecker company is paid \$1,000 when approved to use additional specialty equipment. The maximum incentive for a single RISC event is \$3,500. 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 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 TMC operators, Road Ranger service patrols, and maintenance crews. 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 is a measure 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  
2015/2016 RESULTS

FDOT Roadway Clearance Duration varied from month to month, but the annual average time from the reporting Districts is 44.1 minutes, ranging from 27 to 57 minutes. The Open Roads Clearance Duration averages about 36 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 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.

**Table 3: FDOT Roadway Clearance Times by District**

District	07/08	08/09	09/10	10/11*	11/12	12/13	13/14	14/15	15/16**
1	NA	NA	NA	50.5	54.9	64.7	62.4	57.9	64.2
2	46.1	43.3	59.4	40.7	53.4	55.7	55.1	50.6	58.8
3	NA	NA	NA	NA	NA	36.0	39.8	34.8	68.6
4	38.8	34.3	37.2	39.5	36.0	36.2	39.0	36.0	39.3
5	50.5	38.5	57.2	55.5	62.8	53.4	52.0	54.0	49.9
6	36.2	37.6	34.3	30.5	27.6	29.2	28.0	27.7	28.0
7	48.6	40.2	49.4	47.0	45.3	45.5	46.1	43.8	44.4
FTE	45.3	50.7	44.3	47.5	47.5	49.5	50.1	48.0	47.5
<b>AVG*** ALL DISTRICTS</b>	<b>44.2</b>	<b>40.8</b>	<b>46.9</b>	<b>44.5</b>	<b>46.8</b>	<b>46.3</b>	<b>46.5</b>	<b>44.1</b>	<b>50.1</b>

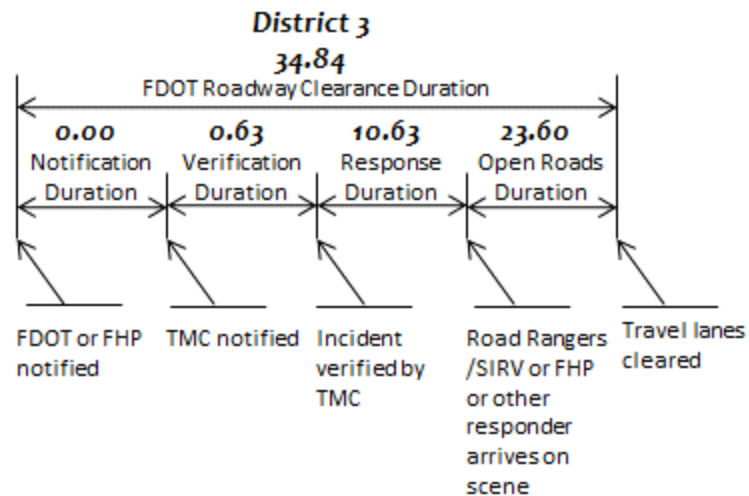
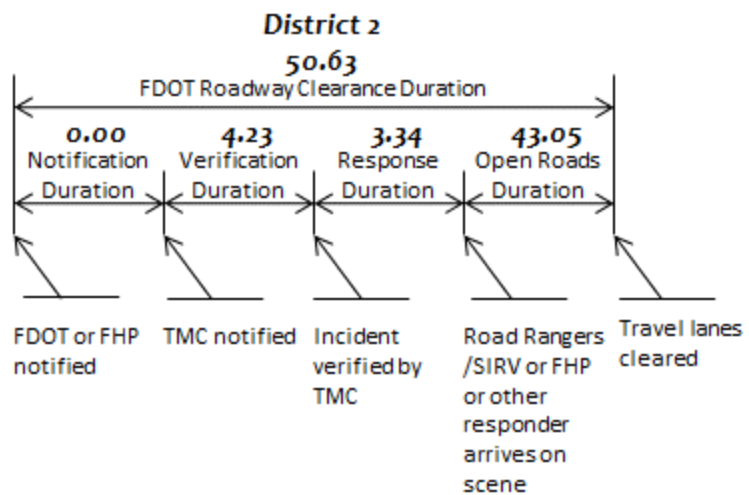
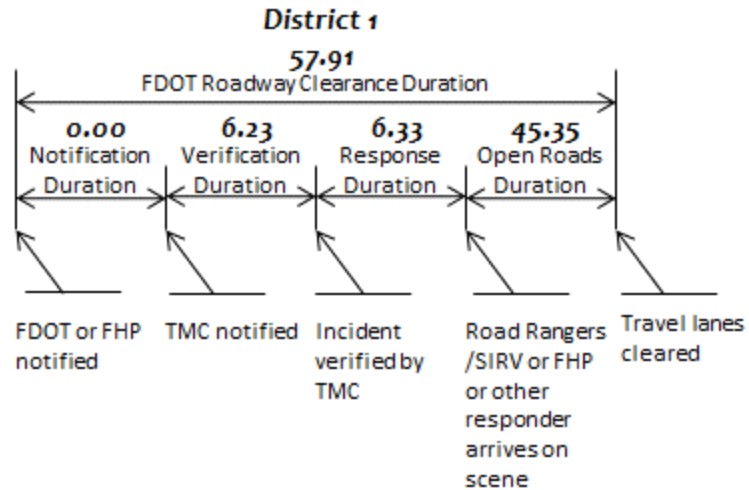
\* Some data was lost in 2010/11 in District 5.

\*\* Large increase in time in District Three is attributed to placing 150 miles of rural SR 8 (I-10) under ITS management in early 2016. Previously only I-10 and I-110 in the Pensacola area were under ITS management.

\*\*\* Averages may vary by 0.1 minutes due to rounding. 0.1 minute equates to 6 seconds.

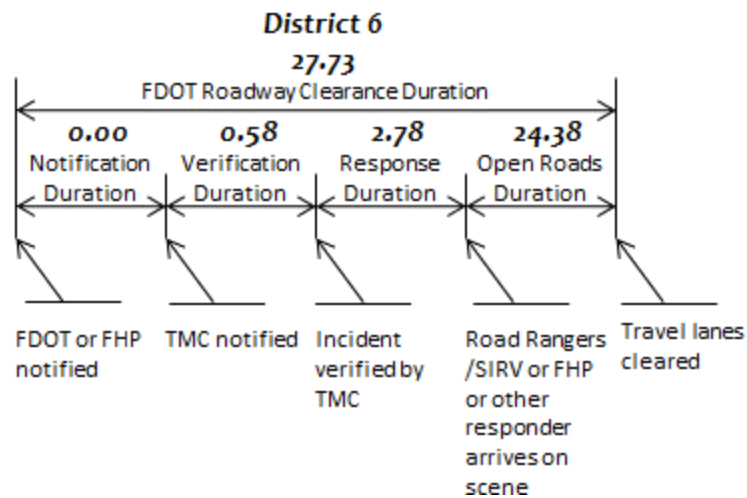
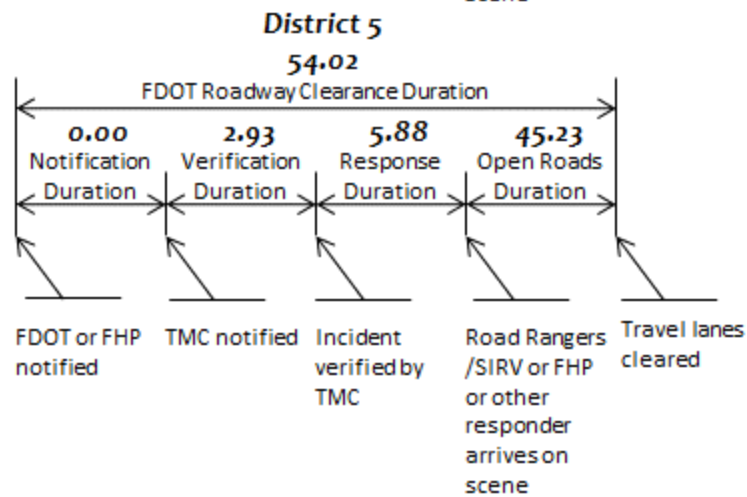
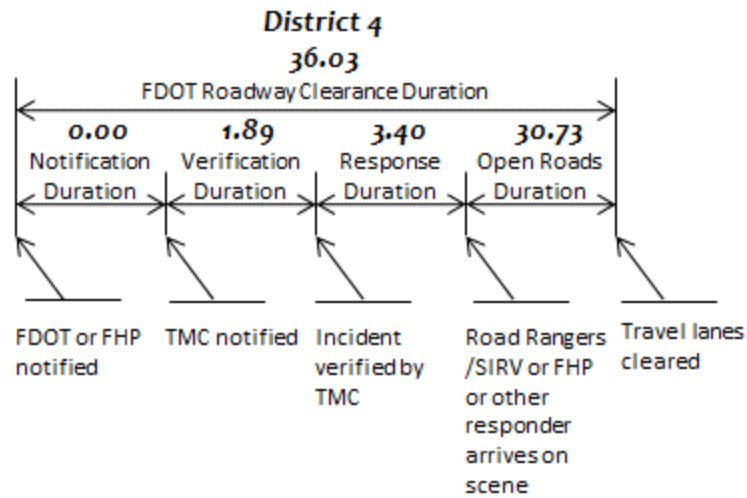
The following series of graphs depicts average roadway clearance times for each District.

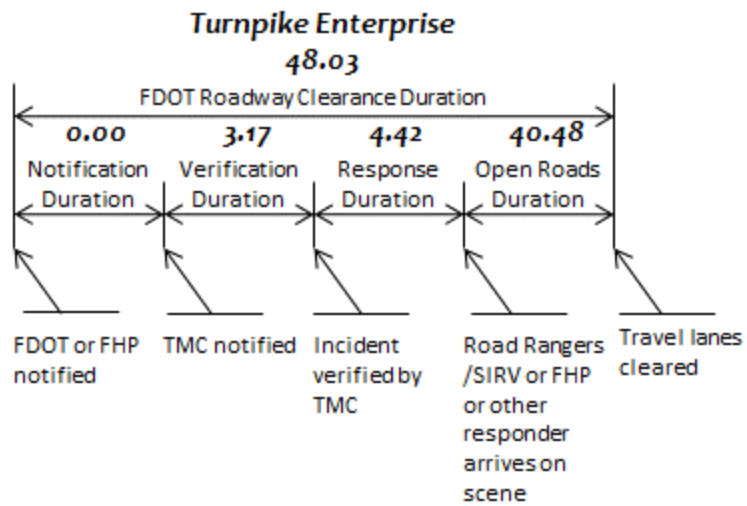
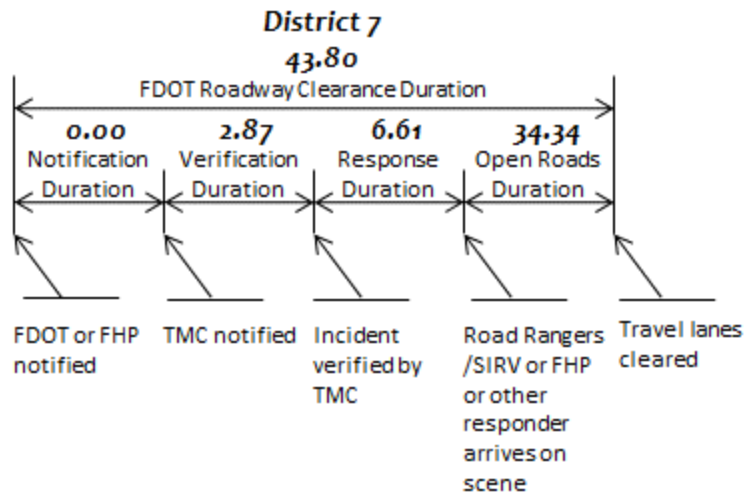
District Results (annual average in minutes):





District Results (annual average in minutes):





Here is a picture of a Florida TMC in action:



## TRAVEL TIME RELIABILITY

### ESTIMATE TRAVEL TIMES FOR TRIP PLANNING

**Background:** In 2005, FDOT adopted travel time reliability as an outcome performance measure to report to the Florida Transportation Commission on ITS miles managed segments. FDOT identified reliability reporting definitions and data needs in FY 2006. Limited data was available for reporting reliability initially. Travel time reliability and congestion results are presently available for Districts 1 through 7 and Florida's Turnpike Enterprise. FDOT currently uses the University of Maryland's Regional Integrated Transportation Information System (RITIS) as its production data warehouse for ITS data. Beginning in 2014, the travel time reliability was collected from RITIS.

**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 *planning 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 *planning time index* (PTI) is also called the 95th percentile travel time index. The PTI is the 95th percentile travel time divided by free flow travel time. For example, PTI of 1.60 means that for a trip that takes 15 minutes in light traffic, a traveler should budget a total of 24 minutes to ensure on-time arrival 95 percent of the time. PTI is now being used instead of the buffer time index.

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 miles per hour (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 (AM) peak: 6 a.m. to 9 a.m., and evening (PM) peak: 4 p.m. to 7 p.m.

**Freeway Segments:** A typical freeway segment used in this analysis 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

### 2014/2015 RESULTS

Travel time and planning indices were calculated for ITS-managed corridors in each District. The following table shows the segments, limits, and results for both TTI and PTI. This year's report includes more segments than in the past – for example, the Turnpike was not included prior to this year. The data was obtained through RITIS. Due to differences in processing the data this year, comparisons to previous years are not shown.

#### 2015/2016 Reliability Segment Limits and Results

District	Roadway	Start	End	Approx Length	Direction	Peak Period	TTI	PTI
1	I-75	Hillsborough/Manatee Co. Line	Fruitville Road (SR 780)	25.1	NB	AM	1.06	1.17
						PM	1.13	2.08
					SB	AM	1.09	1.71
						PM	1.07	1.43
	I-75	Fruitville Road (SR 780)	Jackaranda Boulevard	16.8	NB	AM	1.05	1.13
						PM	1.07	2.07
					SB	AM	1.06	1.15
						PM	1.05	1.20
	I-75	Jackaranda Boulevard	Kings Highway	23.2	NB	AM	1.06	1.23
						PM	1.05	1.15
					SB	AM	1.05	1.11
						PM	1.07	1.79
	I-75	Kings Highway	Bayshore Road (SR 78)	26.9	NB	AM	1.06	1.13
						PM	1.03	1.12
					SB	AM	1.04	1.10
						PM	1.04	1.13
	I-75	Bayshore Road (SR 78)	Corkscrew Road	20.0	NB	AM	1.06	1.14
						PM	1.05	1.19
					SB	AM	1.06	1.14
						PM	1.04	1.14
	I-75	Corkscrew Road	Collier Blvd	21.5	NB	AM	1.06	1.14
						PM	1.06	1.52
					SB	AM	1.06	1.20
						PM	1.04	1.14
I-75	Collier Blvd	Broward/Collier Co. Line	50.5	NB	AM	1.05	1.12	
					PM	1.03	1.10	
					SB	AM	1.04	1.11

District	Roadway	Start	End	Approx Length	Direction	Peak Period	TTI	PTI
						PM	1.03	1.12
2	I-95	Airport Road	I-10	12.2	NB	AM	1.07	1.17
						PM	1.08	1.22
					SB	AM	1.07	1.47
						PM	1.08	1.59
	I-95	I-10	Race Track Rd. (MM 332)	21.8	NB	AM	1.14	2.32
						PM	1.31	2.52
					SB	AM	1.12	1.51
						PM	1.26	2.68
	I-295	I-10	I-95 (south)	20.4	NB	AM	1.17	2.30
						PM	1.07	1.43
					SB	AM	1.06	1.37
						PM	1.18	2.01
	I-10	I-295	I-95	5.5	EB	AM	1.45	4.34
						PM	1.05	1.19
					WB	AM	1.06	1.16
						PM	1.15	1.74
	I-10	US 90 in Sanderson	I-295	32.5	EB	AM	1.04	1.12
						PM	1.04	1.12
WB					AM	1.06	1.14	
					PM	1.05	1.14	
I-295	I-95 North	I-95 at end of 275 exit 61	26.3	NB	AM	1.13	1.67	
					PM	1.16	2.28	
				SB	AM	1.07	1.64	
					PM	1.24	1.98	
I-95	Airport Road	GA state line	18.5	NB	AM	1.07	1.20	
					PM	1.08	1.25	
				SB	AM	1.07	1.21	
					PM	1.06	1.20	
I-295	I-10	I-95 North	14.0	NB	AM	1.08	1.20	
					PM	1.06	1.17	
				SB	AM	1.05	1.13	
					PM	1.11	1.72	
3	I-10	SR 85	CR191	30.4	EB	AM	1.03	1.09
						PM	1.03	1.11
					WB	AM	1.03	1.10

District	Roadway	Start	End	Approx Length	Direction	Peak Period	TTI	PTI
	I-10	CR191	Florida / Alabama State Line (US 98)	25.8	EB	PM	1.03	1.09
						AM	1.07	1.21
					PM	1.06	1.24	
					WB	AM	1.05	1.16
	PM	1.06	1.24					
	I-110	all 6 miles in Pensacola		5.4	NB	AM	1.03	1.11
						PM	1.02	1.11
					SB	AM	1.02	1.10
						PM	1.02	1.10
	4	I-95 in Broward County	Hillsboro Blvd / SR 820	Commercial Blvd / SR 870	9.7	NB	AM	1.27
PM							1.34	3.21
SB						AM	1.21	2.56
						PM	1.67	3.87
I-95 in Broward County		Commercial Blvd / SR 870	Broward/Miami-Dade Co. Line / MM 17	15.4	NB	AM	1.23	2.80
						PM	1.36	3.24
					SB	AM	1.16	1.89
						PM	1.70	3.40
I-595		I-75	US 1	12.9	EB	AM	1.14	1.75
						PM	1.11	1.30
					WB	AM	1.09	1.21
						PM	1.21	1.89
I-75		Broward/Miami-Dade Co. Line	I-595	12.6	NB	AM	1.14	1.92
						PM	1.17	2.26
					SB	AM	1.12	2.16
						PM	1.14	1.64
I-75		I-595	Broward/Collier Co. Line	32.3	EB	AM	1.03	1.11
						PM	1.03	1.12
					WB	AM	1.05	1.14
						PM	1.04	1.15
I-95	Hillsboro Blvd / SR 820	SR 882 / Forest Hill Boulevard	24.2	NB	AM	1.12	1.41	
					PM	1.34	2.28	
				SB	AM	1.15	2.08	
					PM	1.36	2.38	
I-95	SR 882 / Forest Hill Boulevard	Palm Beach/Martin Co. Line	20.8	NB	AM	1.09	1.27	
					PM	1.08	1.42	
					SB	AM	1.07	1.18

District	Roadway	Start	End	Approx Length	Direction	Peak Period	TTI	PTI
	I-95	Palm Beach/Martin Co. Line	SR 714 (Martin Hwy)	23.3	NB	PM	1.10	1.59
						AM	1.06	1.14
					SB	PM	1.04	1.17
						AM	1.04	1.10
	I-95	SR 714 (Martin Hwy)	SR 68 (Orange Avenue)	20.9	NB	AM	1.05	1.13
						PM	1.05	1.13
					SB	AM	1.04	1.11
						PM	1.04	1.12
	I-95	SR 68 (Orange Avenue)	Indian River / Brevard County Line	24.7	NB	AM	1.06	1.14
						PM	1.06	1.15
					SB	AM	1.05	1.12
						PM	1.05	1.14
5	I-4	US 192 (Irlo Bronson Mem Hwy)	SR 408 (East-West Expressway)	18.4	EB	AM	1.15	2.05
						PM	1.50	3.24
					WB	AM	1.13	1.62
						PM	1.41	3.10
	I-4	SR 408 (East-West Expressway)	US 17 / 92 (SR 15)	21.2	EB	AM	1.19	1.47
						PM	1.65	3.48
					WB	AM	1.26	2.64
						PM	1.28	2.36
	I-95 in Volusia County	SR 40	SR 44	18.9	NB	AM	1.06	1.17
						PM	1.06	1.16
					SB	AM	1.06	1.16
						PM	1.05	1.15
	I-95 in Brevard County	SR 520	US 192	20.8	NB	AM	1.04	1.12
						PM	1.05	1.14
					SB	AM	1.05	1.13
						PM	1.04	1.12
	I-4	17 / 92	I-95	28.5	EB	AM	1.07	1.22
						PM	1.09	1.32
					WB	AM	1.06	1.30
						PM	1.06	1.21
I-95	SR 46	SR 44	25.3	NB	AM	1.04	1.12	
					PM	1.05	1.13	
					SB	AM	1.03	1.11

District	Roadway	Start	End	Approx Length	Direction	Peak Period	TTI	PTI
	I-95	SR 520	SR 46	22.2	NB	PM	1.03	1.11
						AM	1.04	1.12
					SB	PM	1.05	1.12
						AM	1.03	1.11
	I-95	Brevard/Indian River Co. Line	US 192	24.4	NB	AM	1.05	1.12
						PM	1.05	1.12
					SB	AM	1.05	1.12
						PM	1.05	1.17
	I-4	US 27	US 192 / SR 530	9.4	EB	AM	1.08	1.44
						PM	1.07	1.32
					WB	AM	1.06	1.14
						PM	1.56	3.68
	I-95	SR 40	Flagler / St. Johns Co Line	30.0	NB	AM	1.06	1.14
						PM	1.06	1.14
SB					AM	1.05	1.12	
					PM	1.04	1.12	
6	I-195	I-95	Alton Road	4.4	EB	AM	1.23	3.31
						PM	1.09	1.60
					WB	AM	1.11	1.28
						PM	2.03	4.42
	SR 826 (Palmetto Expressway)	I-95	I-75	9.0	EB	AM	1.51	3.01
						PM	1.30	2.18
					WB	AM	1.84	3.82
						PM	1.29	2.72
	SR 826 (Palmetto Expressway)	I-75	SR 836	8.1	NB	AM	1.18	1.45
						PM	3.12	5.30
					SB	AM	1.74	3.33
						PM	1.93	5.37
	I-75	SR 826	Broward/Miami-Dade Co. Line	5.5	NB	AM	1.11	1.25
						PM	1.16	2.57
SB					AM	1.32	3.37	
					PM	1.13	1.29	
I-95	Broward/Miami-Dade Co. Line	US 1	17.2	NB	AM	1.13	1.44	
					PM	2.33	4.27	
					SB	AM	1.76	4.03



District	Roadway	Start	End	Approx Length	Direction	Peak Period	TTI	PTI	
	SR 826	SR 836	US 1	7.4	NB	PM	1.47	2.91	
						AM	1.26	3.65	
					SB	PM	1.16	2.59	
						AM	1.12	1.39	
	I-395	I-95	West end McCarthy Brd	1.3	EB	PM	1.27	1.98	
						AM	1.20	1.74	
					WB	PM	1.29	2.60	
						AM	1.10	1.32	
	7	I-275	38th Avenue N in St. Pete	SR 60	14.7	NB	PM	1.69	5.53
							AM	1.23	2.58
SB						PM	1.89	3.55	
						AM	1.08	1.19	
I-275		I-4	I-75	15.8	NB	PM	1.28	2.68	
						AM	1.06	1.16	
					SB	PM	1.41	2.03	
						AM	1.52	2.96	
I-4		I-275	SR 553 / Park Road	22.5	EB	PM	1.13	1.68	
						AM	1.09	1.18	
					WB	PM	1.28	2.96	
						AM	1.25	2.54	
I-275		SR 60	I-4	5.1	EB	PM	1.11	1.59	
						AM	1.18	2.09	
					WB	PM	2.38	5.29	
						AM	1.17	2.91	
I-75	US 301	I-275 (North side)	19.9	NB	PM	1.21	3.24		
					AM	1.11	1.72		
				SB	PM	1.12	1.99		
					AM	1.19	1.90		
I-275	38th Avenue North in St. Pete	I-75	23.0	NB	PM	1.22	2.11		
					AM	1.05	1.33		
				SB	PM	1.06	1.22		
					AM	1.04	1.16		
I-4	SR 553 / Park Road	US 27	31.7	EB	PM	1.08	1.42		
					AM	1.07	1.15		
				WB	PM	1.07	1.21		
					AM	1.06	1.13		

District	Roadway	Start	End	Approx Length	Direction	Peak Period	TTI	PTI
	I-75	I-275 North	Hernando/Sumter Co. Line	31.5	NB	PM	1.05	1.18
						AM	1.08	1.17
						PM	1.07	1.28
						AM	1.06	1.15
					SB	PM	1.05	1.16
						AM	1.06	1.12
I-75	Manatee/Hillsborough Co. Line	US 301	19.6	SB	PM	1.07	1.55	
					AM	1.06	1.12	
FTE	Florida's Turnpike Homestead Extension / SR 91	US 1	Tamiami Trail / US 41	25.5	NB	AM	1.61	4.04
						PM	1.09	1.27
					SB	AM	1.09	1.23
						PM	1.50	2.50
	Florida's Turnpike Homestead Extension / SR 91	Tamiami Trail / US 41	Original Turnpike Stub	21.1	NB	AM	1.13	1.34
						PM	1.53	3.17
					SB	AM	1.19	2.64
						PM	1.41	3.10
	Florida's Turnpike Homestead Extension / SR 91	Original Turnpike Stub	Broward/Palm Beach Co. Line	28.8	NB	AM	1.11	1.69
						PM	1.15	2.25
					SB	AM	1.22	1.78
						PM	1.19	1.90
	Florida's Turnpike Homestead Extension / SR 91	Broward/Palm Beach Co. Line	Southern Boulevard / US 98	25.9	NB	AM	1.09	1.37
						PM	1.10	1.86
					SB	AM	1.06	1.29
						PM	1.10	1.88
	Florida's Turnpike Homestead Extension / SR 91	Southern Boulevard / US 98	Palm Beach/Martin Co. Line	18.7	NB	AM	1.09	1.19
						PM	1.07	1.31
					SB	AM	1.04	1.11
						PM	1.08	1.95
	Florida's Turnpike Homestead Extension / SR 91	Palm Beach/Martin Co. Line	Martin/St. Lucie Co. Line	18.0	NB	AM	1.06	1.13
						PM	1.05	1.13
					SB	AM	1.04	1.09
						PM	1.05	1.13
Florida's Turnpike Homestead Extension / SR 91	Martin/St. Lucie Co. Line	St. Lucie/Indian River Co. Line	38.5	NB	AM	1.06	1.13	
					PM	1.06	1.14	
				SB	AM	1.05	1.11	
					PM	1.04	1.12	
			Yeehaw Junction / SR 60	19.8	NB	AM	1.05	1.14

District	Roadway	Start	End	Approx Length	Direction	Peak Period	TTI	PTI	
	Florida's Turnpike Homestead Extension / SR 91	St. Lucie/Indian River Co. Line			SB	PM	1.04	1.13	
						AM	1.04	1.12	
						SB	PM	1.03	1.12
							AM	1.06	1.13
	Florida's Turnpike Homestead Extension / SR 91	Yeehaw Junction / SR 60	Kissimmee Park Road	43.1	NB	AM	1.06	1.13	
						PM	1.05	1.11	
						SB	AM	1.05	1.10
							PM	1.04	1.11
	Florida's Turnpike Homestead Extension / SR 91	Kissimmee Park Road	East-West Expressway	29.6	NB	AM	1.07	1.19	
						PM	1.06	1.16	
						SB	AM	1.06	1.16
							PM	1.07	1.38
	Florida's Turnpike Homestead Extension / SR 91	East-West Expressway	US 27	23.1	NB	AM	1.07	1.15	
						PM	1.07	1.17	
						SB	AM	1.06	1.19
							PM	1.06	1.20
	Florida's Turnpike Homestead Extension / SR 91	US 27	I-75	19.7	NB	AM	1.06	1.13	
						PM	1.06	1.14	
						SB	AM	1.04	1.12
							PM	1.04	1.12
Sawgrass Expressway / SR 869	I-595	SR 845 / Powerline Road	21.7	NB	AM	1.10	1.34		
					PM	1.06	1.21		
					SB	AM	1.04	1.17	
						PM	1.04	1.17	
Polk Parkway / SR 570	I-4	I-4	23.8	EB	AM	1.04	1.15		
					PM	1.04	1.16		
					WB	AM	1.02	1.13	
						PM	1.03	1.14	
Veteran's Expressway / SR 589	Memorial Highway	Suncoast Parkway	11.3	NB	AM	1.04	1.18		
					PM	1.45	2.29		
					SB	AM	1.80	4.39	
						PM	1.05	1.20	
Suncoast Parkway / SR 589	Veteran's Expressway	US 98	41.6	NB	AM	1.02	1.10		
					PM	1.00	1.07		
					SB	AM	1.01	1.12	
						PM	1.02	1.10	
			3.1	EB	AM	1.07	1.26		

District	Roadway	Start	End	Approx Length	Direction	Peak Period	TTI	PTI
	Veteran's Expressway Spur / SR 568	Veteran's Expressway / Suncoast Parkway	Dale Mabry Highway / SR 597			PM	1.08	1.26
					WB	AM	1.01	1.05
						PM	1.02	1.06
	Beachline Expressway / SR 528	I-4	Orange Blossom Trail / US 17 / 92	4.3	EB	AM	1.08	1.23
						PM	1.22	3.01
					WB	AM	1.10	1.61
						PM	1.18	2.82
	East West Expressway / SR 408	Turnpike Mainline	SR 50	21.9	EB	AM	1.06	1.51
						PM	1.09	1.84
					WB	AM	1.08	1.63
						PM	1.07	1.37
	Seminole Expressway / SR 417	Orange/Seminole Co. Line	I-4	17.4	NB	AM	1.04	1.12
						PM	1.04	1.18
					SB	AM	1.04	1.47
						PM	1.05	1.17
	Southern Connector / SR 417	I-4	International Drive	6.4	NB	AM	1.03	1.15
						PM	1.02	1.17
					SB	AM	1.02	1.15
PM						1.02	1.18	
Western Beltway / SR 429	I-4	Seidel Road	9.1	NB	AM	1.03	1.12	
					PM	1.02	1.12	
				SB	AM	1.02	1.11	
					PM	1.02	1.12	

## CUSTOMER SATISFACTION

### REPORT PUBLIC SATISFACTION WITH SERVICES PROVIDED BY THE FDOT ITS PROGRAM

**Background:** In late 2005, FDOT's Central Office ITS Program initiated a project to conduct a customer satisfaction survey in order to determine public attitudes toward ITS services provided by FDOT Districts. A draft questionnaire was developed and submitted for review by the Districts at the December 8, 2005, ITS Working Group meeting. FDOT's Central Office Traffic Engineering and Operations staff conducted further review. 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 FDOT's ITS Program.

**Objective:** To obtain the percentage of survey respondents satisfied with ITS services, including dynamic message sign usage and performance, Road Ranger performance, and 511 and traveler information web site usage and performance.

**Methodology:** Customer satisfaction is measured by collecting 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 Expwy (SR115), Hart Bridge Expwy (SR 228)
3	I-10, I-110 (SR 8A)
4	I-95, I-75, I-595, Sawgrass Expwy (SR 869), Florida's Turnpike (SR821)
5	I-4, I-75, I-95, East-West Expwy (SR 408), Bee Line Expwy (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

### NEXT SURVEY CYCLE

FDOT has scheduled the next customer detailed satisfaction survey for the fall of 2016 after the updated FL511 system is running. FDOT plans to interview approximately 2,100 drivers across Florida (about 300 drivers in each FDOT District) to explore usage of, attitudes toward, and perceptions of FDOT’s ITS services. The interviews will address topics such as:

- Awareness, use, ratings and trust of FL 511 traveler information
- Awareness, ratings, trust of Road Ranger Program
- Information on alternative sources of traffic information, such as dynamic message signs  
Needs for other traveler information not currently provided through FL511

The FL511 website invites users to respond to on-line user satisfaction questions. The current on-line User Satisfaction Survey began October 2015 and will continue until FDOT receives at least 1,000 responses. The following are the most significant findings through June 30, 2016. This first table provides some background information about those who completed the on-line survey.

FDOT Received a Total of 691 Responses				
Full-time Florida Residents	Commute Between 10-49 miles	FL511 Users	Age Range	Education of Bachelor’s Degree or Higher
92%	57%	75%	36% in 60+ 33% in 50-59 20% in the 40-49	56%

74% of responders noted they are satisfied with information provided through FL511. The next table provides additional user information and FL511 resources they use the most.

FDOT Received a Total of 478 Responses from Active Current Users		
FL511 Users	FL511 Platform Usage (and Feedback)	Most Popular Sources of Information
<ul style="list-style-type: none"> <li>• 64% are weekly users</li> <li>• 69% “know before they go”</li> </ul>	<ul style="list-style-type: none"> <li>• 52% used the <b>phone</b> call (58% like the info, 41% like the platform)</li> <li>• 73% used the FL511.com <b>website</b> (70% like the info, 67% like the platform)</li> <li>• 47% used the <b>mobile app</b> (70% like the info, 70% like the platform)</li> <li>• 8% used 1+ of the <b>Twitter feeds</b> (82% like the info, 81% like the platform)</li> <li>• 39% are <b>My Florida 511 personalized services</b> subscribers (61% use SMS, 68% like the info)</li> </ul>	<ul style="list-style-type: none"> <li>• Mobile Apps</li> <li>• DMS</li> <li>• Website</li> </ul>

Many of the frequent users left comments about system improvements. The most common system improvement suggestions are as follows:

#### **System Improvements Suggested by Users**

- 54% want more roads, mostly arterials (state and county roads)
- 73% want more weather information
- 49% want airport information
- 95% want more detailed information on incidents
- 77% want a GPS-based push feed

For more information on ITS Performance Measures:

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