

2014 PERFORMANCE REPORT



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WHAT are performance measures?

Performance measures are indicators of progress toward attaining a goal, objective, or target (a desired level of future performance). The Florida Department of Transportation's (FDOT) [Performance Management/Measurement Policy](#) provides the basis and foundation for that which follows.

HOW does FDOT use performance measures?

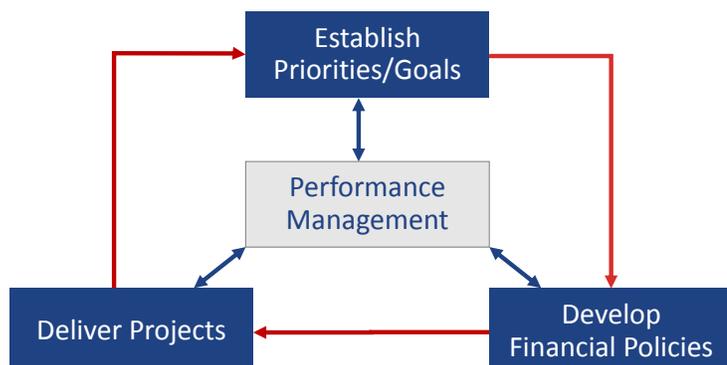
Florida's transportation system improvement needs exceed available funding. Resources must be invested in the most strategic, effective and efficient ways possible. Performance measures provide useful "feedback" and are integrated into FDOT's business practices on three levels:

At the strategic level – Performance measures help to *establish and inform goals and objectives*, and to monitor progress in carrying out FDOT's Mission. Performance measures also communicate progress toward achieving goals in various programs and plans such as the [Florida Transportation Plan](#), the [Strategic Highway Safety Plan](#), and the [Freight Mobility and Trade Plan](#).

At the decision-making level – Performance measures are used to *inform and assess the financial policies* for allocating funds across programs such as highway preservation, system expansion, and public transportation. These programs are defined in the [Program and Resource Plan](#).

At the project delivery level – After projects are selected, performance measures help to *monitor the efficiency and effectiveness* of projects and services in the [Five Year Work Program](#). The measures also support organizational and operational improvements.

As shown in the **Performance-Based Planning and Programming Process** graphic below, performance measurement is at the heart of FDOT's planning and programming process.



WHY do we use them?

FDOT uses performance measures to:

- Assess how well Florida's multimodal transportation system is functioning
- Provide information to support and inform decision-making
- Assess how effectively and efficiently transportation programs, projects and services are being delivered
- Determine customer satisfaction levels
- Demonstrate transparency and accountability to Florida's citizens and FDOT's many other stakeholders

WHAT does FDOT measure?

Performance reports help to evaluate results in relation to our mission execution and other priorities, plans and programs. Each performance report is listed below along with some of the associated performance measures:

Safety & Security – Fatal and serious injuries related to impaired driving, aggressive driving, distracted driving, at-risk drivers, and vulnerable road users

Maintenance & Operations – Percent of pavement and bridges meeting condition standards, percent of maintenance activities (such as roadway striping, guardrail repair and mowing) that meet department standards

Mobility & Economic Competitiveness – Vehicle miles travelled, transit ridership, freight tonnage, freight and port access, hours of delay, jobs by transportation intensive sector, return on investment of FDOT programs

Quality of Life & Environmental Stewardship – Air quality; impacts to the physical, natural and cultural environment; vibrant and healthy communities; and customer satisfaction

For more information

In addition to this report, the Florida Transportation Commission annually issues a [Performance and Production Review](#). For more details on FDOT's extensive performance reporting, including a MAP-21 Florida Performance Report, go to FDOTPerforms.org.

FLORIDA DEPARTMENT OF TRANSPORTATION



SAFETY & SECURITY

2014 PERFORMANCE REPORT

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SAFETY and SECURITY

This report is part of the Performance-Based Planning and Programming Process used by the Florida Department of Transportation (FDOT). For a description of that process, updates to this report and other transportation performance reporting initiatives of FDOT, go to FDOTPerforms.org.

INTRODUCTION

The Strategic Highway Safety Plan (SHSP) provides a foundation for FDOT's safety activities and plans through engineering, enforcement, education, and emergency response.

Transportation system safety and security is among the state's highest commitments to its residents and visitors. Safety improvements save lives, enhance quality of life, and support Florida's economic competitiveness. It is also important to be ever vigilant about transportation system security for people and freight without compromising mobility.

Transportation safety is important for every mode of transportation. It is affected by many factors, such as driver behaviors, infrastructure, innovations in technology, enforcement and education, and even by weather and the natural environment. It is vital that Florida's federal, state, regional and local safety partners and stakeholders work together to improve transportation safety.

FDOT's long-term goal is zero deaths on Florida's roadways and to help achieve this goal, safety is a focus area in numerous FDOT plans, including the Florida Strategic Highway Safety Plan (SHSP) and the Florida Transportation Plan (FTP). Safety is front and center with a goal to "Provide a safe and secure transportation system for all users" with a clear objective to "Reduce by 5 percent annually the number of highway fatalities and serious injuries." FDOT has also collaborated with its safety partners to craft Florida's SHSP to reduce fatalities and serious injuries by strategically concentrating resources on the problems with the greatest potential for improvement. The SHSP provides a foundation for FDOT's safety activities and plans, including this safety chapter of the Performance Report.

The SHSP is led by a group of dedicated, public and private sector safety partners working together to achieve successful implementation. In 2013 the five-year rolling average for traffic fatalities dropped for the sixth straight year. This trend is a result of the efforts and initiatives outlined in the SHSP. Despite safer highway design, safer motor vehicles, increased safety belt use, improved public education, vigorous enforcement of laws, and improved emergency response and trauma treatment, there is more work to do in pursuit of FDOT's long-term goal of zero deaths on Florida's roadways.

2014 PERFORMANCE HIGHLIGHTS

The safety and security performance highlights include:

- The rolling average for traffic fatalities dropped for the sixth straight year to 2,448 in 2013
- The rolling average for serious injuries dropped for the ninth straight year to 20,413 in 2013
- The annual targets, to reduce fatalities and serious injuries by 5 percent, were not achieved – the five-year rolling average for fatalities decreased by 4.5 percent and for serious injuries by 3.5 percent
- The fatality rate, the measure of fatalities per million vehicle miles traveled, decreased slightly to 1.25
- Safety belt usage continued to increase, improving to 89 percent statewide
- The 2013 five-year rolling averages for fatalities involving vulnerable road users were similar to prior years – pedestrian fatalities essentially remained unchanged, dropping from 491 to 490; motorcyclist fatalities dropped from 420 to 412, and bicyclist fatalities increased slightly from 106 to 109
- Transit safety was similar to previous years - the average number of revenue miles between incidents decreased slightly to approximately 156,000 miles

FATALITIES & SERIOUS INJURIES



CORE
MEASURE

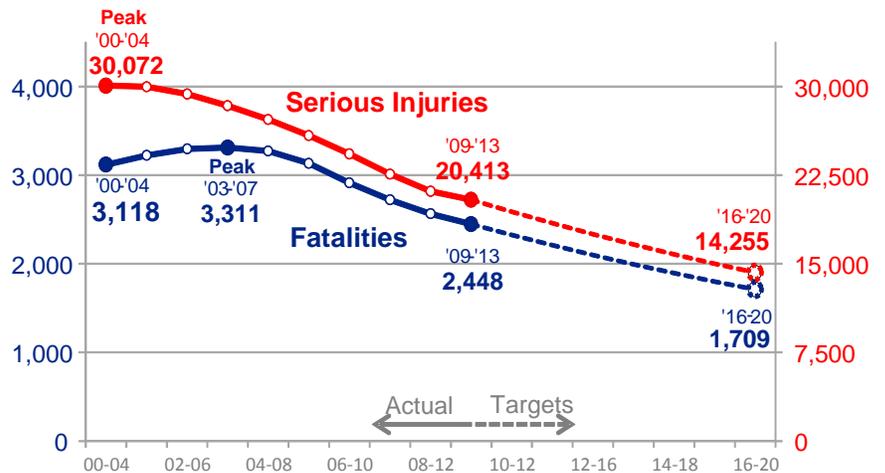
FDOT has identified a series of core measures that relate directly to a primary goal or function and/or support a key strategic initiative. FDOT's core measures for transportation safety are those related to the most severe consequences – fatalities and serious injuries.

It is common to measure fatalities and serious injuries in rolling multi-year averages instead of annual counts. This normalizes the effects of the random fluctuations that are common in traffic crash data and makes trends more apparent. Due to recent changes in the crash reporting form, some of the measures are not traceable back five years and are therefore measured in smaller increments.

FDOT’s target is to reduce the rolling five-year rolling average number of fatalities and serious injuries by 5 percent each year. This is a stretch target that may be difficult to achieve every year, but reflects a philosophy of continued improvement and recognition that one life lost is too many. As shown in **Figure 1**, since 2007 the five-year rolling average for fatalities has dropped from 3,311 to 2,448, a more than 26 percent reduction. Over the same time period, serious injuries have decreased by 28 percent, from 28,371 to 20,413.

Since 2007, the five-year averages for fatalities and serious injuries have dropped by 26 percent and 28 percent, respectively.

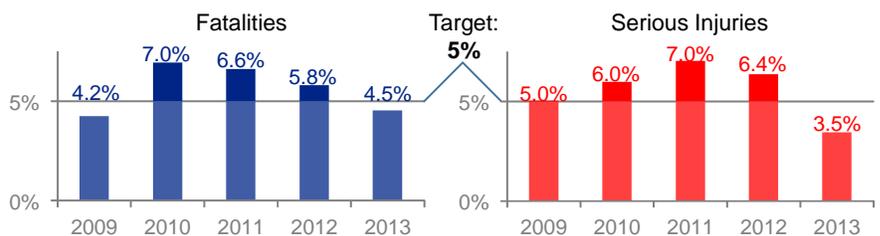
Figure 1: Fatalities and Serious Injuries
(5-Year rolling averages)



In 2013, 618, or approximately one quarter, of all fatalities and 4,133, or approximately one fifth, of serious injuries occurred on Florida’s Strategic Intermodal System (SIS).

As shown in **Figure 2**, in 2013, FDOT fell just short of its 5 percent annual reduction target – the five-year rolling average for fatalities of 2,448 was 12 fatalities higher than the target and the 20,413 serious injuries were 323 higher than the target. If the target of a 5 percent annual reduction is achieved in the future, the five-year rolling averages will drop to nearly 1,700 for fatalities and below 14,300 for serious injuries by 2020.

Figure 2: Annual Reduction in 5-Year Rolling Averages of Fatalities and Serious Injuries (Target: 5%)



KEY STRATEGIES TO REDUCE FATALITIES AND SERIOUS INJURIES

The recent downward trend in fatalities and serious injuries is attributed to several safety programs and initiatives, many of which are detailed in the SHSP. The SHSP establishes emphasis areas and key strategies that fall within one of the following four areas:

- Identify engineering initiatives to improve safety of the built environment
- Increase training opportunities and educational awareness of good transportation safety practices
- Improve enforcement of driving, bicycling and walking behaviors that can improve safety
- Improve the ability of emergency responders to reduce the severity of traffic crashes

SUPPORTING MEASURES AND INFORMATION

In addition to the core measures, FDOT has identified several supporting measures and other indicators of progress that provide further detail and context about the performance of Florida's transportation system. For safety and security, the supporting measures are:

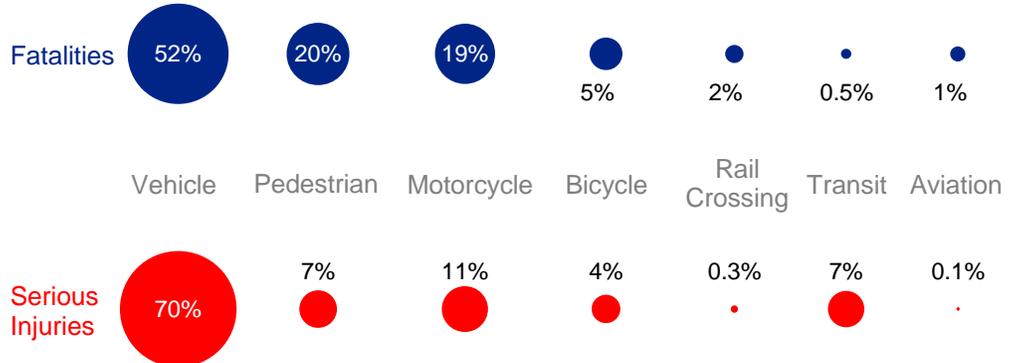
- Fatality Rate
- Fatalities involving:
 - Lane Departures
 - Intersections
 - Construction Work Zones
 - Impaired Driving
 - Aggressive Driving
 - Distracted Driving
 - Drivers 65 and Over
 - Teen Drivers
 - Pedestrians
 - Bicyclists
 - Motorcyclists
 - Rail Crossings
 - Public Transit
 - Aviation
- Seat Belt Usage
- Commercial Vehicle Crash Rate
- Railroad Derailments
- Transit Miles Between Safety Incidents

As previously noted, due to changes in the crash reporting form, some of the data is not available back far enough to calculate five-year rolling averages. In some cases, three-year rolling averages are used, or annual numbers are reported. For the future, it is expected that all of these measures will become five-year rolling averages.

Fatalities and Injuries by Mode

Most 2013 fatalities and serious injuries on Florida’s transportation system took place where the majority of travel occurs: on roadways and in personal vehicles. As **Figure 3** shows, fatalities and serious injuries involving pedestrians and motorcycles were also prevalent compared with other modes of transportation.

Figure 3: Florida Transportation Fatalities and Injuries by Mode, 2013



Fatality Rate

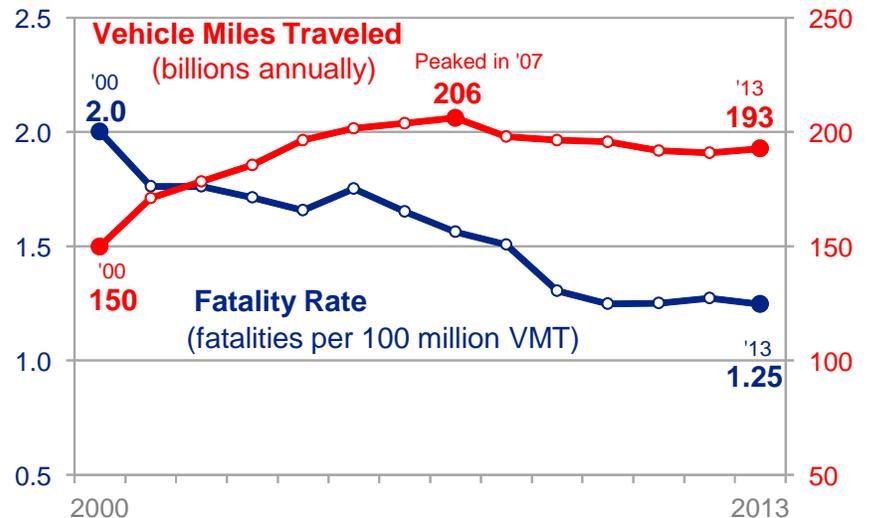


To help account for the relationship between fatalities and miles driven, highway safety experts often calculate a “fatality rate” by measuring fatalities per 100 million vehicle miles traveled (VMT). The fatality rate includes motor vehicle and motorcyclist fatalities as well as bicyclist and pedestrian fatalities involving motor vehicles.

As shown in **Figure 4**, Florida’s highway fatality rate per 100 million VMT dropped to 1.25 in 2013 and remains far below the fatality rates of the early 2000s.

The Fatality Rate – the number of fatalities per 100 million VMT – has remained fairly flat over the last five years.

Figure 4: Fatality Rate vs. Vehicle Miles Traveled

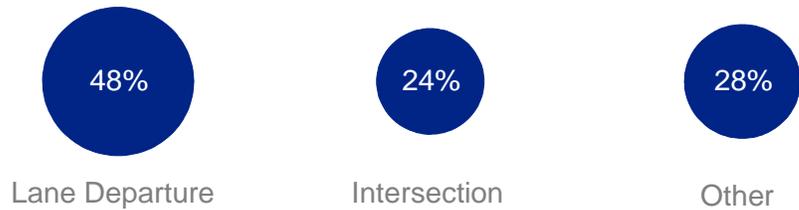


Fatalities Involving Lane Departures and Intersections



The majority of roadway crashes occur either at intersections or vehicles departing their lane, as shown in **Figure 5**. These crash types are of particular interest because FDOT strives to ensure that the design, construction, maintenance, and operation of facilities on the State Highway System meet safety standards.

Figure 5: Florida Fatalities by Crash Type, 2013



Nearly half of all fatalities on Florida roadways involve a lane departure.

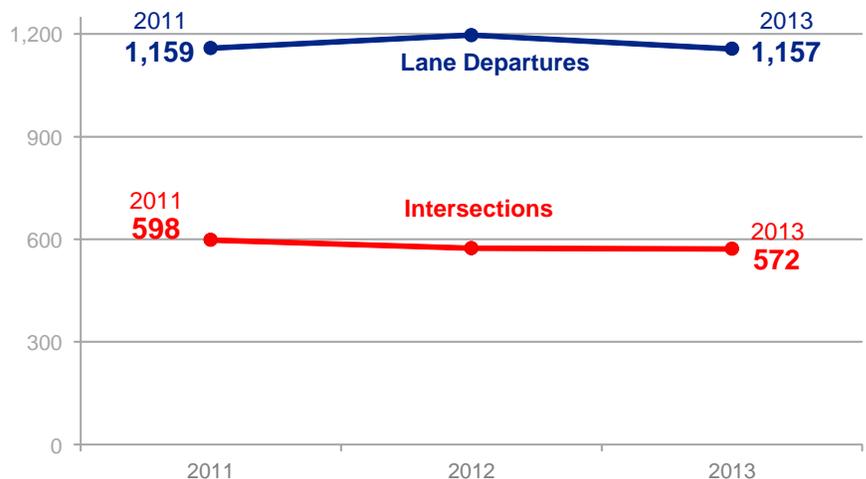
Approximately 48 percent of all traffic fatalities in 2013 involved lane departures. Lane departures include running off the road, crossing the center median into oncoming traffic and sideswipe crashes. Lane departure crashes may also involve a vehicular rollover or hitting a fixed object such as a utility pole.

Traffic fatalities at intersections comprised 24 percent of statewide traffic fatalities in 2013. Identified as an emphasis area in the 2006 and 2012 Strategic Highway Safety Plans (SHSP), Florida improved intersection design and operation standards by implementing the 2006 Intersection Safety Implementation Plan.

As shown in **Figure 6**, 1,157 lane departure fatalities and 572 intersection fatalities occurred in 2013, both slight declines since 2011.

Overall, lane departure and intersection fatalities have declined slightly over the past few years.

Figure 6: Lane Departure and Intersection Fatalities



Efforts must be made to keep vehicles from leaving the road or crossing the center median to reduce the likelihood of vehicles overturning or crashing into roadside objects. The number and severity of lane departure crashes may be reduced by installing guardrail or cable barrier, dividing highways, adding paved shoulders, using break-away sign posts, placing crash cushions at the end of roadside obstacles, highlighting the edge of pavement on rural highways, improving roadway curve design, and improving roadway lighting at intersections.

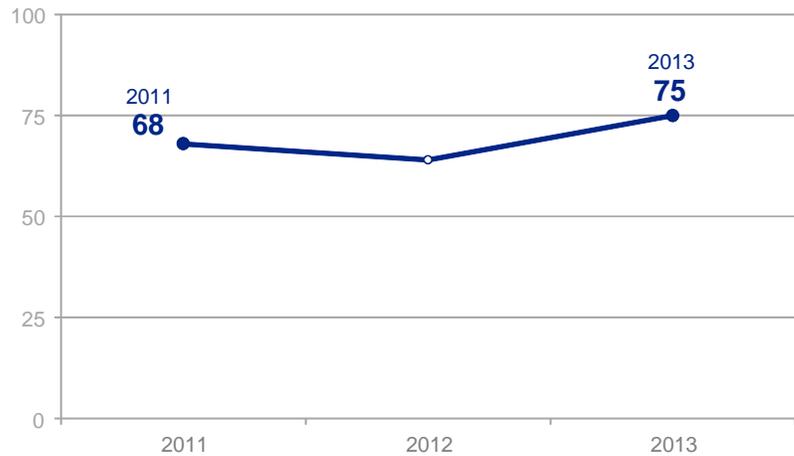
Fatalities in Construction Work Zones



The safe and efficient flow of traffic through work zones is an ongoing FDOT priority. Reducing work zone crashes not only decreases the number of fatalities and injuries of road users, it also improves safety for FDOT employees and private contractors working in construction zones. **Figure 7** shows that fatalities in work zones increased to 75 in 2013, up from 64 in 2012 and 68 in 2011.

Fatalities in work zones increased in 2013.

Figure 7: Fatalities Involving Work Zones



Demographic and Behavioral Factors

Despite FDOT’s efforts to ensure that roadways meet or exceed safety standards, many crashes still occur due to driver related behaviors, choices, and skills. **Figure 8** shows 2013 fatalities by the various demographic and behavioral factors.

Figure 8: Fatalities Involving Demographic and Behavioral Factors, 2013



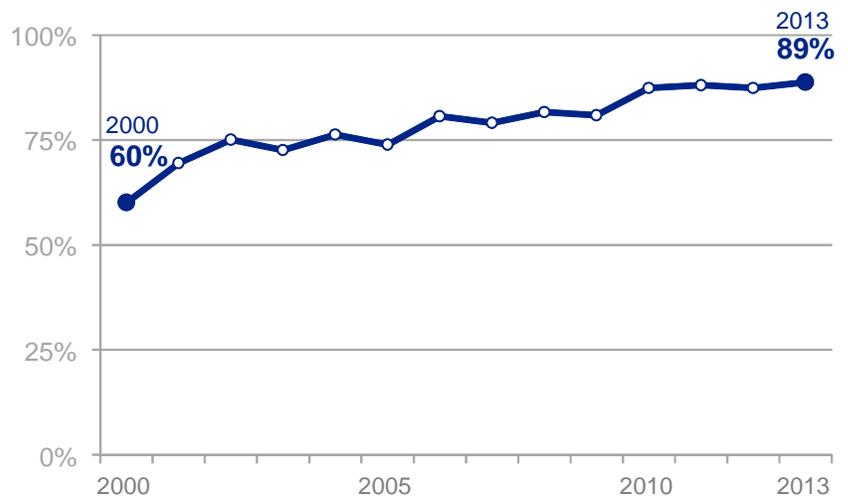
Seat Belt Usage



Wearing a safety belt is one of the most important measures drivers can take for crash protection. As shown in **Figure 9**, Florida motorists are increasingly wearing safety belts over the past decade. The increase is likely due in part to the passage of a primary enforcement law in 2009 – the usage rate jumped from 81 percent to 87 percent the following year. In 2013 the statewide safety belt usage rate was 89 percent, which is slightly higher than the national average of 87 percent.

Florida’s statewide safety belt usage rate of 89 percent is two points higher than the national average.

Figure 9: Statewide Seat Belt Usage Rate

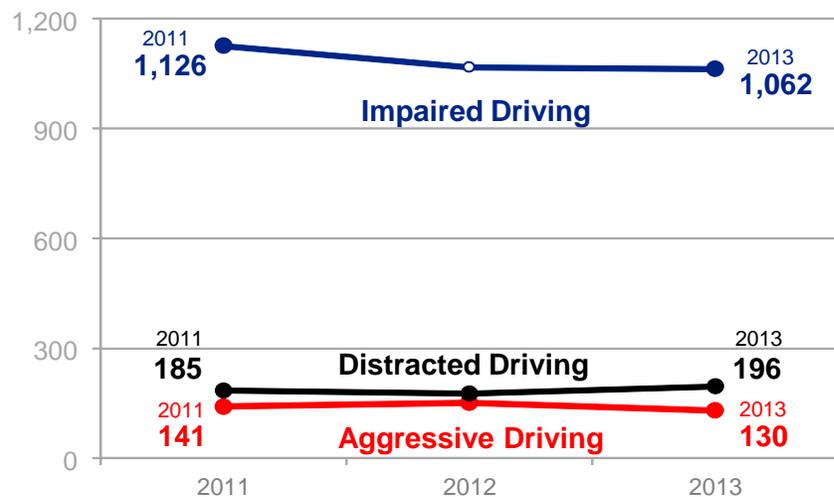


Fatalities Involving Impaired Drivers, Aggressive and Distracted Driving



Impaired, aggressive, or distracted driving often plays a role in the frequency and severity of traffic crashes. **Figure 10** shows the number of fatalities involving impaired, aggressive, and distracted drivers. Due to a change to the crash reporting form in 2011, historical comparisons prior to 2011 are difficult to evaluate.

Figure 10: Fatalities Involving Impaired Drivers, Aggressive Driving and Distracted Driving



Impaired driving continues to be a leading contributing factor for traffic fatalities. In 2013, 1,062 alcohol-related traffic fatalities occurred, accounting for over 37 percent of statewide traffic deaths.

Aggressive driving, as defined by state statute, requires inclusion of at least two of the following contributing causes: speeding, unsafe or improper lane change, following too closely, failure to yield the right-of-way, improper passing, and failure to obey traffic control devices. Aggressive driving is not presently an enforceable offense in Florida. In 2013, 130 fatalities were related to aggressive driving.

Distracted driving occurs when a driver allows a mental or physical activity to shift his or her focus from the task of driving. Fatalities involving distracted driving have increased slightly since 2011, to 196 in 2013. There are three main types of distraction: manual (taking hands off the wheel), visual (taking eyes off the road), and cognitive (taking mind off driving). Not only are drivers distracted because of activities such as adjusting the radio, eating, reading, and grooming; new technologies have introduced global positioning system (GPS) navigation, direction way-finding, telephone use, mobile web surfing, and texting as additional driver distractions. Additionally, passengers can be especially distracting to young inexperienced drivers.

The revised 2011 crash reporting form improved the manner in which incidents can be measured.

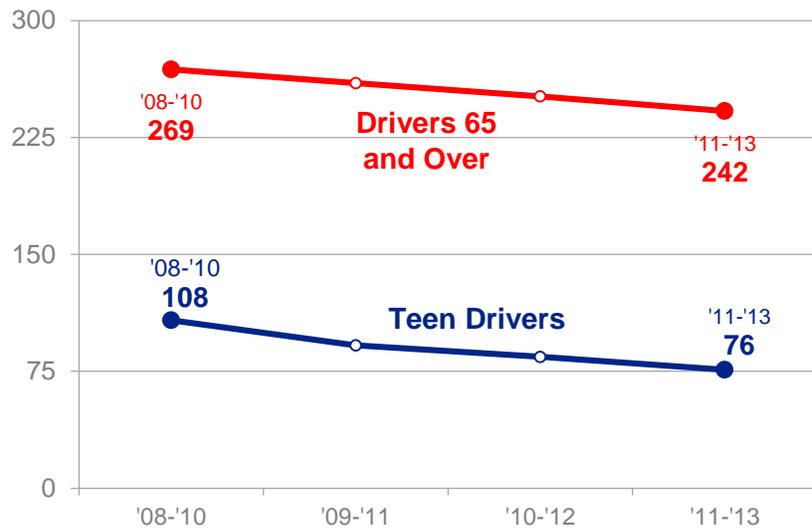
Fatalities Involving At-Risk Drivers



Fatalities involving teen drivers and drivers over 65 have declined in recent years.

Historically, fatalities involving drivers 65 and over and teen drivers (ages 15 to 19) typically account for around one quarter of all Florida traffic fatalities. **Figure 11** shows that the historical number of fatalities involving these at-risk drivers has declined in recent years. In 2013, fatalities involving at-risk drivers accounted for about 15 percent of all fatalities.

Figure 11: Fatalities Involving At-Risk Drivers
(3-year rolling averages)



Today’s older drivers are driving longer and are driving more miles per year. This trend is especially important considering that Florida currently leads the nation with 18 percent of its population 65 years of age and older. According to the Florida Office of Economic and Demographic Research, by 2030, over 24 percent of Floridians will be over 65, and more than half of those will be over 75, making this a particularly pressing safety issue.

The other end of the age spectrum involves the least experienced drivers—ages 15 to 19. Motor vehicle crashes are the number one killer of teens, with more teens dying in crashes than the next three leading causes of death (homicide, suicide, and disease) combined. Motor vehicle crashes involving teen drivers kill an average of 11 teens per day in the United States.

Fatalities Involving Vulnerable Road Users

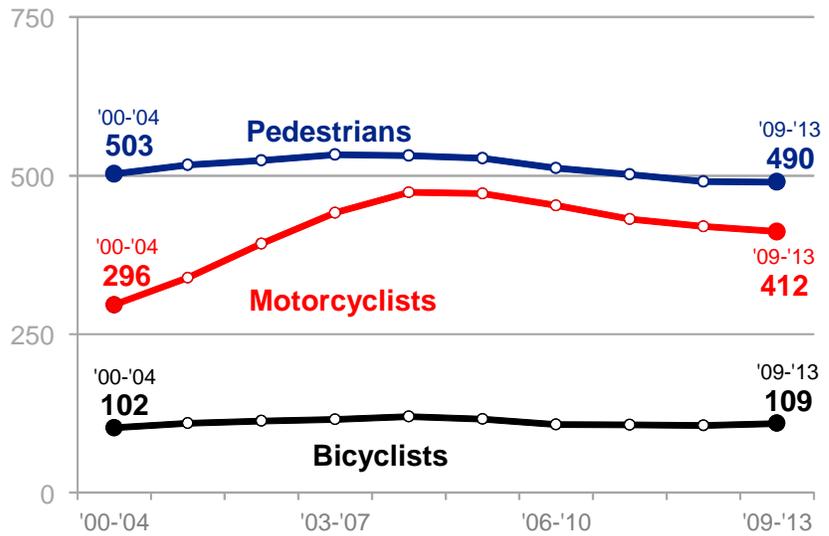


Vulnerable road user groups have not experienced the recent dramatic decreases in fatalities that have been common in other modes.

Vulnerable road users include pedestrians, bicyclists, and motorcyclists. As shown in **Figure 12**, vulnerable road user groups have not experienced the recent dramatic decreases in fatalities that have been common in other modes. Florida’s climate, conducive to year-round walking, bicycling and motorcycling, is a factor in the relatively high fatality rates among these road user groups.

FDOT has elevated pedestrian and bicycle safety to a department initiative. A state bicycle/pedestrian safety program manager was appointed in 2011 and bicycle/pedestrian coordinators were hired in each FDOT District in 2013.

Figure 12: Fatalities Involving Vulnerable Road Users
(5-year rolling averages)



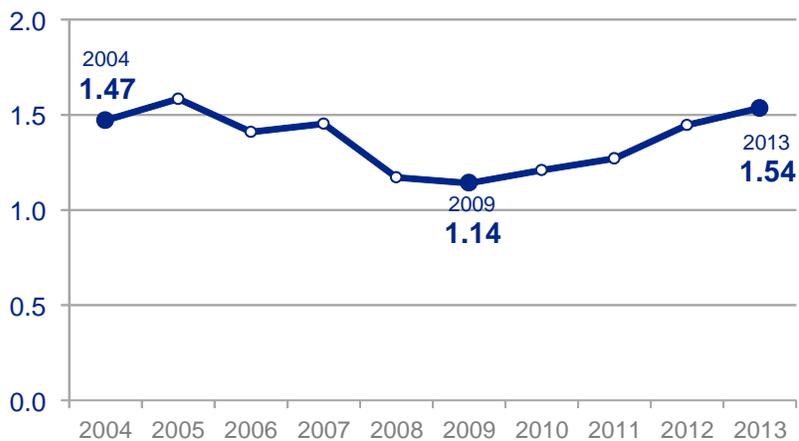
Commercial Vehicle Crash Rate



As the economy has rebounded from the recession, the commercial vehicle crash rate has increased.

Crashes involving commercial vehicles can be especially severe. FDOT strives to improve commercial motor vehicle safety by coordinating with Florida Highway Patrol's (FHP) Commercial Vehicle Enforcement (CVE) Office to conduct safety inspections and enforcement of safety requirements. **Figure 13** illustrates the commercial vehicle crash rate since 2004.

Figure 13: Commercial Vehicle Crash Rate
(Crashes per million vehicle-miles of truck travel)



Rail Crossing Fatalities and Railroad Derailments



Approximately 80 percent of Florida's public at-grade rail crossings are equipped with active warning devices compared to approximately 50 percent nationally.

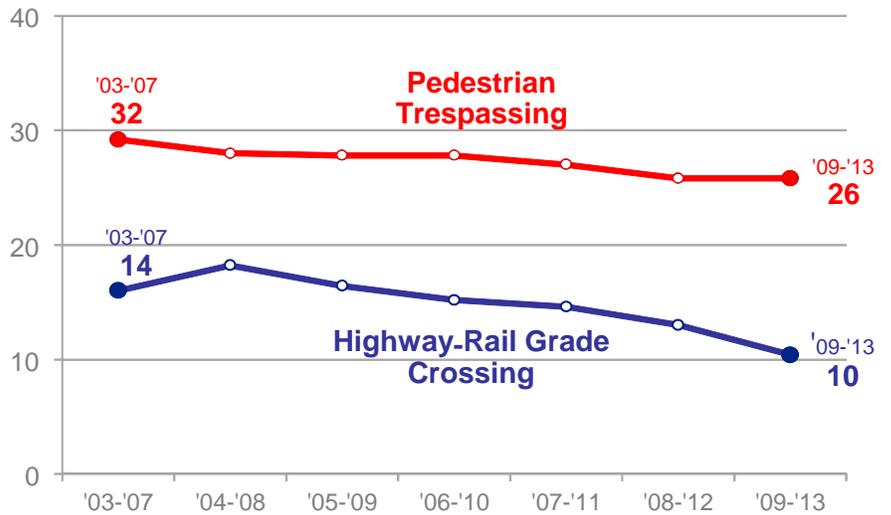
As of January 2014, Florida has 3,784 public at-grade rail crossings with approximately 80 percent equipped with active warning devices compared to approximately 50 percent nationally. Both crashes and fatalities at rail crossings have declined in recent decades. This is especially noteworthy given increased highway traffic and operational changes that have resulted in more trains on fewer rail lines.

Pedestrian trespassing on railroad tracks also is a problem FDOT works to curb. This includes installing no trespassing signs, installing and repairing fencing, and working with local police departments to issue warnings and citations.

Figure 14 shows the number of fatalities since 2003, including highway-rail grade rail crossings and pedestrian trespassing.

Rail crossing fatalities have been decreasing over the past decade.

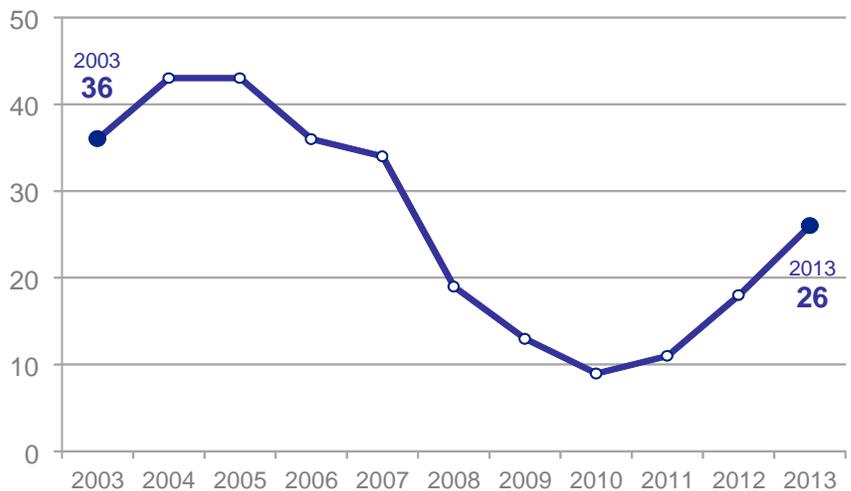
Figure 14: Rail Crossing Fatalities - Highway-Rail Grade Crossings & Pedestrian Trespassing (5-year rolling averages)



In 1977, the year before FDOT began its railroad safety inspection program, there were 259 train derailments. As **Figure 15** illustrates, derailments have increased in recent years but are still far below pre-1977 levels. The 2009-2013 five-year annual average is 15 derailments. Most derailments occur on tracks within industrial yards and result in little damage. FDOT performs annual safety inspections on over 5,000 miles of track, 3,000 turnouts, 14,000 freight cars, and 500 locomotives, observing in excess of 1,000 rail operating practices in the process. These inspections and practices supplement and support the safety operations conducted by individual privately owned railroad companies.

Railroad derailments have risen in recent years. Most of today's derailments occur within industrial yards and result in little damage.

Figure 15: Railroad Derailments



Fatalities Involving Public Transit and Revenue Miles between Safety Incidents



SUPPORTING MEASURES

The majority of Florida’s public transit systems operate on the roadway system. As such, the performance and safety of the roadway system can affect public transit safety and on-time performance. Similarly, incidents involving public transit vehicles can affect the flow of automobile traffic.

Safety is a priority for every transit agency, and preventing injuries and fatalities is an ongoing effort. **Figure 16** illustrates the number of Florida transit related fatalities and serious injuries reported to the National Transit Database (NTD). NTD only reports major injuries that require immediate medical attention away from the scene of an accident. Between 2008 and 2013, Florida transit agencies have experienced a small increase in serious injuries and fatalities. Due to significant changes in reporting thresholds and limited data availability, data for transit related fatalities and injuries is only available from 2008 forward.

Between 2008 and 2013, Florida transit agencies have experienced a small increase in serious injuries and fatalities.

Figure 16: Transit Fatalities and Serious Injuries
(3-year rolling averages)

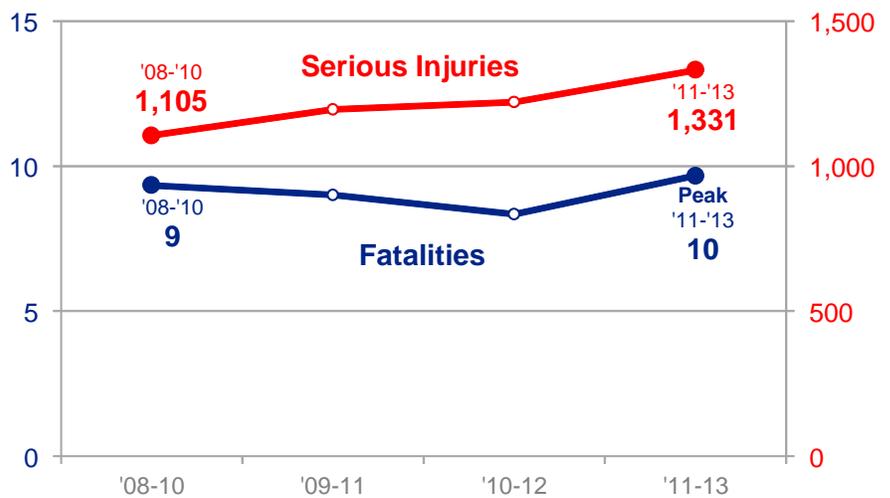
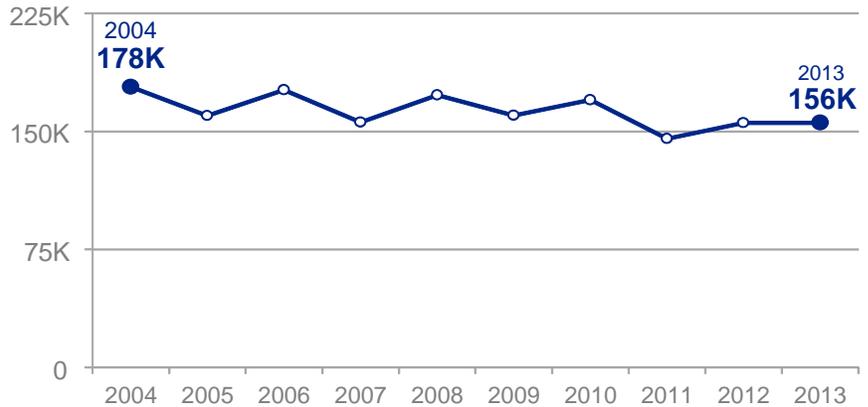


Figure 17 illustrates the revenue miles between safety incidents for transit. This measure of transit safety provides insight into the frequency of such incidents. As Florida transit agencies consistently increase the number of service miles each year, ideally the revenue miles between incidents should also increase as the frequency of incidents decreases. Since 2004, Florida has seen a slight reduction in revenue miles between incidents, which is directly related to the slight increase in incidents and accidents. Between 2012 and 2013, the revenue miles between incidents decreased by less than 900 miles.

Since 2004, Florida has seen a slight reduction in revenue miles between incidents.

Figure 17: Revenue Miles between Safety Incidents (thousands)



Aviation Fatalities



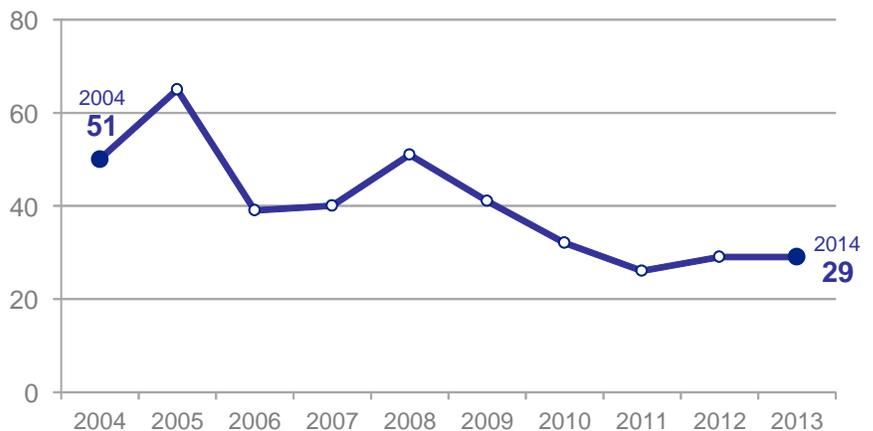
Florida has 19 commercial service airports that served 70.5 million passengers in 2013. Statewide there are 775 (public, private and military) aviation facilities. More than half (63 percent) are airports and another third (37 percent) are heliports. Of these, Florida has 110 general aviation public-use facilities and one joint-use facility (military and civilian) meeting general aviation needs and providing critical service to local communities.

FDOT regulates Florida’s public-use aviation facilities through permitting, safety inspection and licensing. All private-use facilities are registered with FDOT.

Between 2003 and 2013, Florida experienced 239 fatal aircraft accidents, with a high of 31 in 2005 and a low of 13 in 2013. The average number of fatal incidents was 24 per year over that period. In 2013, 79 accidents (13 fatal) occurred in Florida, resulting in 29 fatalities. **Figure 18** shows the downward trend in aviation related fatalities.

In 2013, 79 accidents occurred in Florida, resulting in 29 fatalities.

Figure 18: Aviation Fatalities



TRANSPORTATION SECURITY

Security involves comprehensive emergency preparedness efforts and vigilant oversight. Emergency management and transportation security require collaboration among many entities outside the transportation field and close coordination at many levels.

Emergency management, including preparedness planning, response and recovery activities, is primarily the responsibility of the Florida Division of Emergency Management within the Executive Office of the Governor. The division works as a team with emergency responders and agencies at federal, state, regional, and local levels as well as private sector and volunteer organizations. By state statute (252.38, F.S.), each county must have an emergency management plan – all 67 Florida counties are currently in compliance. FDOT participates in this process by preparing for and addressing the aftermath of severe storms.

The security of the transportation system also involves organizations typically not associated with FDOT's operation and management. Security system partners include:

- U.S. Department of Homeland Security/Transportation Security Administration (TSA)
- Other designated federal agencies
- Florida Department of Law Enforcement
- Florida Highway Patrol's (FHP) Commercial Vehicle Enforcement (CVE) Office

The FHP/CVE law enforcement activities, such as hazardous vehicle inspections, are a crucial element in domestic security.

Since September 11, 2001, cargo and passenger safety and security have become increasingly important issues to local governments and port authorities that own and operate Florida's seaports. For example, security costs for Florida's 15 deep-water seaports were \$12.3 million annually pre-9/11 and grew to \$46.8 million by 2005. Seaports develop, design, and deploy enhanced security systems to control and protect both land-side and water-side access to meet state and federal security requirements. Seaports work directly with the Florida Department of Law Enforcement and federal agencies such as the Coast Guard to ensure compliance with these requirements.

FDOT's Aviation and Spaceports Office also supports security planning efforts and operations through several programs. For example, FDOT provides support for the Airport Watch Program, which partners with the Aircraft Owners and Pilots Association and the TSA to coordinate a nationwide program that uses the eyes and ears of approximately 50,000 Florida pilots for observing and reporting suspicious activities. Other activities include FDOT's review of the security plans for all general aviation airports, support of compliance with TSA's rules for commercial service airport security, and administration of security project funding as authorized through revenues generated by "United We Stand" Florida license plate sales.



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FLORIDA DEPARTMENT OF TRANSPORTATION



MAINTENANCE & OPERATIONS

2014 PERFORMANCE REPORT

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MAINTENANCE and OPERATIONS

This report is part of the Performance-Based Planning and Programming Process used by the Florida Department of Transportation (FDOT). For a description of that process, updates to this report and other transportation performance reporting initiatives of FDOT, go to FDOTPerforms.org.

INTRODUCTION

Regular maintenance improvements keep assets operating efficiently, extending their useful life and can delay the substantial cost of reconstruction or replacement.

Florida has invested billions of dollars in roads, bridges, rail networks, airports, public transportation, seaports and other elements of the transportation system. Regular maintenance and improvements keep these assets operating efficiently, extend their useful life and can delay the substantial cost of reconstruction or replacement.

The Florida Department of Transportation (FDOT) will continue to make substantial investments to meet established standards for routine maintenance, highway pavement, and bridges to keep the portion of the system it owns in acceptable condition. Roadways owned by local governments and other transportation facilities such as transit systems, airports, seaports and railroads are maintained by their respective public and private owners and operators. FDOT helps fund some of these facilities, but does not directly build, operate or maintain them.

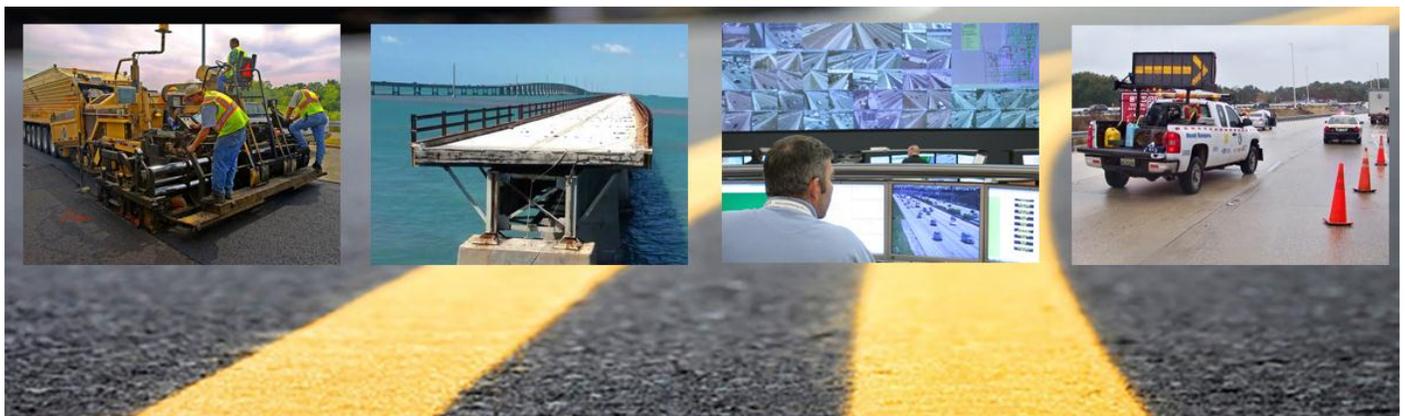
Managing the transportation system also means ensuring that the system efficiently carries people and goods to meet the demands of population growth, an expanding economy, and ever-increasing travel. FDOT will increase the use of Intelligent Transportation Systems, transportation demand management, access management, incident management and other techniques to maximize the operational efficiency and safety of the system.

FDOT has primary jurisdiction over the State Highway System. Although this system consists of 12,099 (10 percent) of the 122,088 public road centerline miles in Florida, it carries over half (54.5 percent) of all traffic. FDOT resurfaces roads, repairs or replaces bridges and conducts routine maintenance activities such as mowing, litter removal, guardrail repair, and sign replacement.

2014 PERFORMANCE HIGHLIGHTS

The effective and efficient maintenance and operation of Florida's state roads and bridges and other modes protects the State's substantial infrastructure investment and helps to ensure the performance of the transportation system. Key performance highlights include:

- State Highway System pavements are in excellent condition, with 92.7 percent currently meeting FDOT standards
- FDOT maintained bridges are also in excellent condition, with 95 percent currently meeting FDOT standards
- FDOT has met or exceeded its roadway maintenance standard target each year since 1994—a generation of maintenance excellence
- Over the past decade Florida transit agencies have kept bus and rail breakdowns at a level better than one per 4,000 revenue miles—fewer breakdowns means better transit performance
- The number of miles managed by Intelligent Transportation System technologies has dramatically increased from 170 miles in 2005 to 1,296 miles in 2014
- Over 14 million messages, calls, visits, and alerts were made to Florida's 511 program in 2014
- Road Ranger services were provided to over 382,000 stranded motorists in 2014
- FDOT consistently meets its 90-minute target for clearing roadways after incidents (46.5 minutes on average for the State Highway System and 70 minutes on average for severe incidents handled by Rapid Incident Scene Clearance activations)



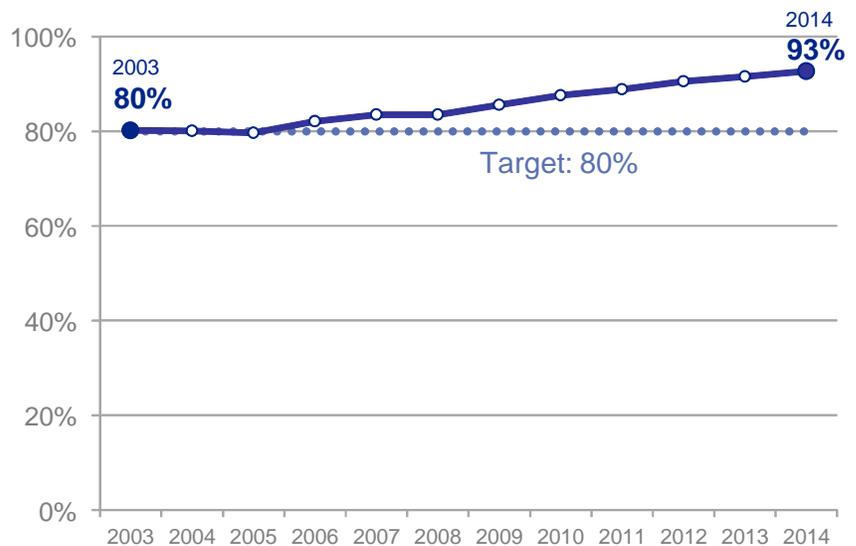
PAVEMENT CONDITION



FDOT has identified a series of core measures related to the maintenance and operation of the transportation system. FDOT has a long-standing commitment to keep pavement on state highways in an acceptable condition. The State Highway System has remained at or above the target of 80 percent non-deficient throughout the past decade. As shown in **Figure 1**, pavement on the State Highway System is in excellent condition, with 93 percent of the pavement currently meeting FDOT standards. This percentage is expected to remain above the 80 percent target threshold.

Pavement on the State Highway System is in excellent condition, with 93 percent of the pavement currently meeting FDOT standards.

Figure 1: Percent Pavement on the State Highway System Meeting Department Standards



The 7 percent of roadway miles not meeting the target equates to 3,174 lane-miles of pavement needing rehabilitation. While FDOT has continued to find sufficient funds to meet the pavement condition objectives, the amount of funding needed for pavement rehabilitation is re-evaluated annually.

State roads needing resurfacing are identified through FDOT’s annual pavement condition survey. This survey evaluates pavement conditions using three factors: ride quality, crack severity and average depth of wheel-path ruts.

“Ride quality” is what the motorist experiences (i.e., smoothness of the ride). Crack severity, or “cracking,” refers to the structural deterioration of the pavement, which leads to loss of smoothness and deterioration of the road base by water seepage, if not corrected. Wheel-path ruts, or “rutting,” are depressions in the pavement caused by heavy use. These depressions can collect water, creating a safety hazard.

Truck traffic contributes to wear on roadways, because of the force exerted on the pavement and the way pavement reacts. A five-axle, 80,000 pound semi-trailer truck causes pavement distress equivalent to that caused by an estimated 9,600 cars. FDOT establishes weight limits, while FDOT’s Motor Carrier Size and Weight Office and the Florida Highway Patrol’s Office of Commercial Vehicle Enforcement enforces legal weight limits, because increases in weight have enormous impacts on pavement wear.

KEY STRATEGIES TO REDUCE PAVEMENT CONDITION

FDOT will help ensure that its target related to the core measure of pavement condition is achieved through these actions:

- Resurface at least 4 percent of the State Highway System annually
- Coordinate with FDOT’s Motor Carrier Size and Weight Office and the Florida Highway Patrol’s Office of Commercial Vehicle Enforcement to eliminate the illegal operation of commercial motor vehicles exceeding weight limits on Florida’s public roads and bridges
- Facilitate training and technical assistance, and maintain current data systems to assist local governments in conducting pavement condition surveys and ratings
- Continue to identify and implement practices which reduce the time and cost of preserving the State Highway System



SUPPORTING MEASURES AND INFORMATION

In addition to its core pavement condition measure, FDOT has identified a supporting measure that provides further detail and context about the performance of Florida’s transportation system. For pavement condition, the supporting measure is:

- Lane Mile Resurfacing Projects

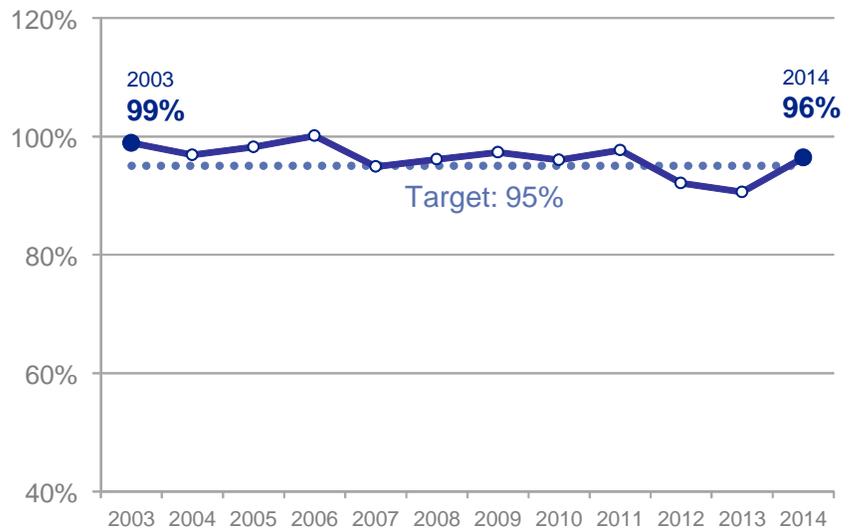
Lane Mile Resurfacing Projects



The percent of lane mile resurfacing projects on the State Highway System provides a gauge of FDOT’s commitment to improving roadways. FDOT has set a target of letting at least 95 percent of its planned contracts for resurfacing during the year. As **Figure 2** shows, FDOT achieved 96 percent in 2014, having resurfaced 2,176 of the 2,403 lane miles planned.

FDOT achieved 96 percent of its planned resurfacing contract lettings in 2014.

Figure 2: Percent Lane Mile Resurfacing Projects on the State Highway System



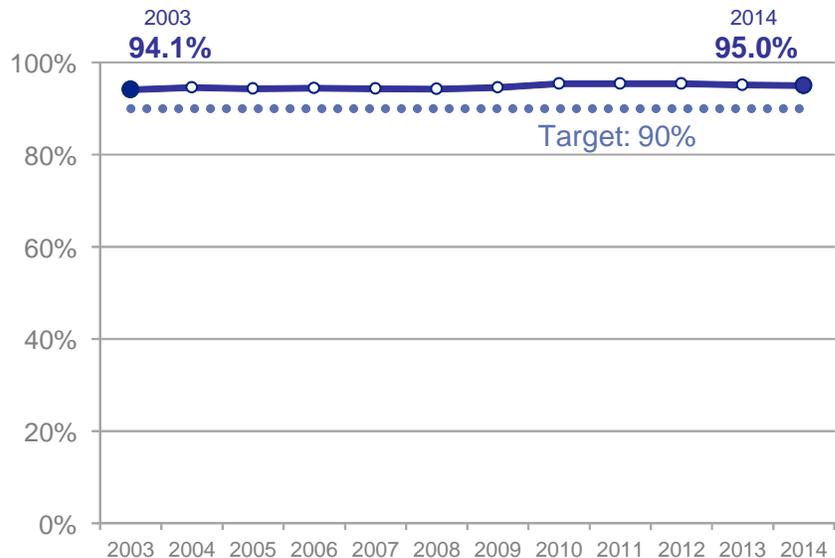
BRIDGE CONDITION



FDOT’s primary bridge measure is to have 90 percent of its bridges achieve a National Bridge Inventory (NBI) rating of 6 or higher. The NBI is a Federal Highway Administration requirement used to evaluate the condition of bridges, based on a 0 to 9 scale with 0 being a failed condition and 9 excellent condition. An NBI rating of 6 or 7 means a bridge is in good condition.

As shown in **Figure 3**, 95 percent of all FDOT-maintained bridges meet standards, exceeding FDOT’s target of 90 percent, which means Florida bridges do not show evidence of structural deterioration and are not limited by weight restrictions. FDOT takes a proactive approach to bridge maintenance, which has proven to be cost-effective. Preventative maintenance and repairs are performed prior to bridges deteriorating to a level that would require a much higher repair cost. This helps to ensure that FDOT-maintained bridges meet or exceed their life expectancy, resulting in a lower frequency of replacements due to bridge condition. All bridges maintained by FDOT that are open to the public are safe.

Figure 3: Percent Bridges on the State Highway System Meeting Department Standards



Ninety percent or more of the bridges on the State Highway System have met FDOT’s standard since 1996.

In 2013 and 2014, FDOT maintained 6,783 bridges and inspected 3,248 other bridges owned by other state and local government jurisdictions. Each bridge’s current condition is compared with the condition from its prior inspection. If the structural capacity has been affected, the bridge is reevaluated through load rating tests to determine its current structural capacity. Every bridge is inspected at least once every two years to assess

its condition and to identify structures that require further maintenance, rehabilitation, or replacement. Special inspections are conducted after major weather events, such as floods and hurricanes.

Since FDOT's bridge inspection program began in 1970, there has been a steady improvement in bridge conditions on the State Highway System due to an aggressive maintenance and construction program. FDOT also administers federal programs which help fund repairs and replacements of locally maintained bridges.

Bridges are designed to tolerate a certain amount of structural deterioration and still support legal weight loads. If a bridge is unable to support all legal loads, weight limits are posted or the bridge is closed to traffic until the deficiency can be corrected. Like roadways, heavy trucks contribute to wear-and-tear on bridges. Bridges are designed to accommodate the estimated number of trucks during their design lives.

KEY STRATEGIES TO IMPROVE BRIDGE CONDITION

FDOT will strive to achieve its bridge condition performance target through these actions:

- Include all FDOT-maintained bridge projects that need repair in the Work Program within 12 months of deficiency identification
- Replace or repair all structurally deficient FDOT-maintained bridges and those bridges posted for weight restriction within six years of the deficiency identification
- Replace all other FDOT-maintained bridges designated for replacement within nine years of the deficiency identification
- Coordinate with FDOT's Motor Carrier Size and Weight Office and Florida Highway Patrol's Office of Commercial Vehicle Enforcement to reduce the illegal operation of commercial motor vehicles exceeding weight limits on Florida's public roads and bridges
- Continue to monitor bridges scheduled to be replaced and make interim repairs, as necessary, to safeguard the traveling public

SUPPORTING MEASURES AND INFORMATION

In addition to its core measure for bridges, FDOT has identified several supporting measures and other indicators of progress that provide further detail and context about the performance of Florida’s transportation system. For bridge condition, the supporting measures are:

- Bridges with Weight Restrictions
- Bridge Repair Projects
- Bridge Replacement Projects

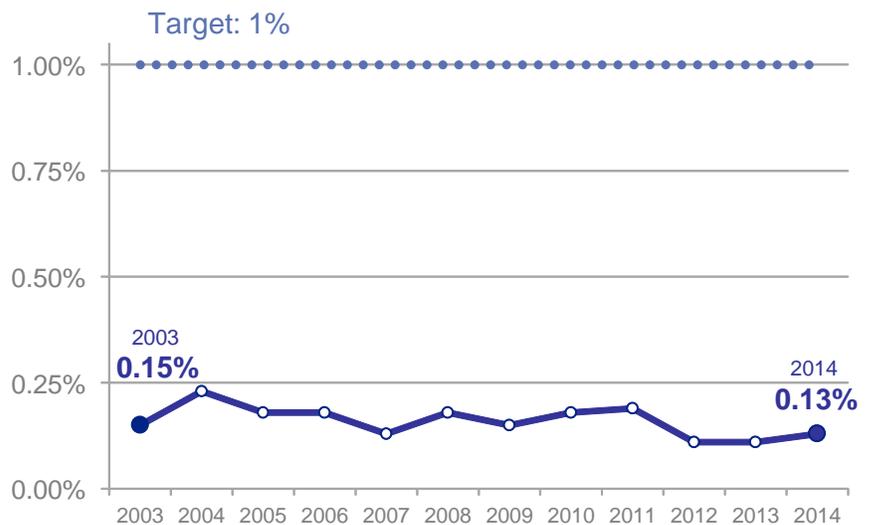
Bridges with Weight Restrictions



The supporting measure Percent Bridges with Posted Weight Restrictions on the State Highway System is one way FDOT can assess its performance related to the commitment to achieve its bridge condition core measure. FDOT has set a target that no more than 1 percent of all State Highway System bridges should have a posted weight restriction. In 2014, only 8 (2 open and 6 closed to the public) out of 6,370 state maintained bridges had a posted weight restriction. As shown in **Figure 4**, this equates to 0.13 percent of bridges, which is far better than the established target of 1 percent.

In 2014, only 8 out of 6,370 state maintained bridges had a posted weight restriction.

Figure 4: Percent Bridges on the State Highway System with Posted Weight Restrictions



Bridge Repair Projects



The supporting measure Percent Bridge Repair Projects is another way FDOT can assess its commitment to improving its core measure on bridge condition. FDOT has set a target of letting at least 95 percent of its planned contracts for bridge repair during the year. As shown in **Figure 5**, FDOT achieved over 117 percent of its planned project lettings in 2014, reflecting its commitment to allocate resources to the greatest extent feasible to bridge improvement. Achieving greater than 100 percent is possible through the letting of unplanned and/or additional projects. This far exceeds the 95 percent target threshold and demonstrates FDOT’s ability to stretch resources.

FDOT achieved over 117 percent of its planned project lettings in 2014.

Figure 5: Percent Bridge Repair Projects



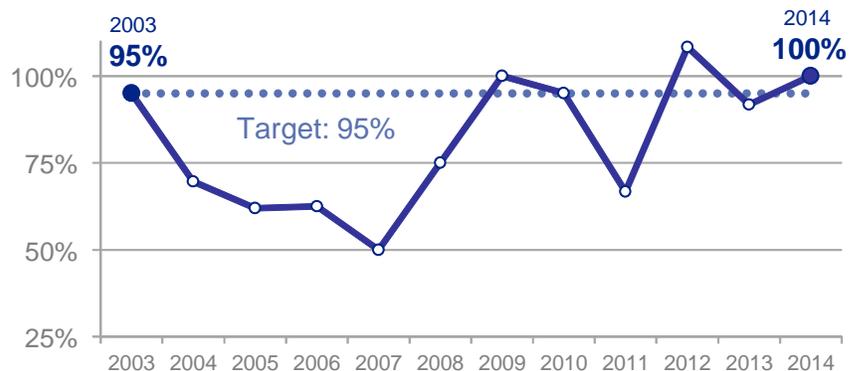
Bridge Replacement Projects



The supporting measure Percent Bridge Replacement Projects is another way FDOT can quantify its commitment to improving bridge conditions. FDOT has set a target of letting at least 95 percent of its annual planned contracts for bridge replacements. As **Figure 6** shows, FDOT achieved 100 percent of its project lettings in 2014, exceeding the 95 percent target threshold.

FDOT achieved 100 percent of its planned project lettings in 2014.

Figure 6: Percent Bridge Replacement Projects



MAINTENANCE

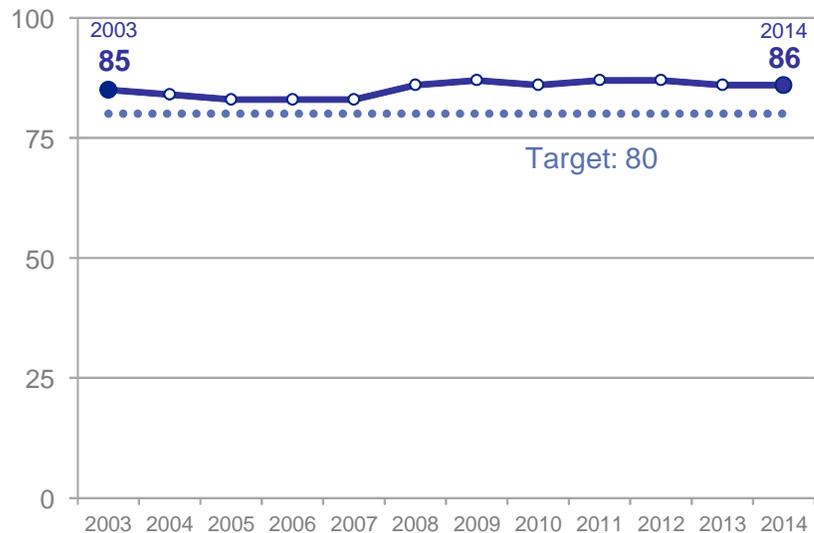


FDOT has identified a series of core measures related to the maintenance and operation of the transportation system, which is a primary goal of FDOT. As an integral part of preserving the State Highway System, FDOT has reconfirmed its long-standing commitment to surpass its maintenance standard on the State Highway System. FDOT is responsible for scheduling and performing routine maintenance on the State Highway System to help preserve its condition.

FDOT’s primary measure is to achieve an overall Maintenance Rating Program score of at least 80 for the State Highway System. FDOT has met or exceeded its roadway maintenance target every year since 1994. **Figure 7** highlights this accomplishment over the past decade.

The FDOT has met or exceeded its roadway maintenance standard every year since 1994 – a generation of maintenance excellence.

Figure 7: Maintenance Rating of the State Highway System



Field conditions are evaluated with each highway feature rated and the overall maintenance condition is then calculated. Conditions are compared to FDOT standards and a composite state score is calculated. The maintenance condition rating system evaluates five highway components:

- Roadway - potholes, pavement joints, paved shoulders, and pavement distress
- Roadside - unpaved shoulders, slopes, sidewalks, and fences
- Traffic services - signs, lighting, guardrails, striping, attenuators, handrail, and pavement markers
- Drainage - storm drains, ditches, roadway sweeping, inlets, and pavement edge drain outlets
- Vegetation/aesthetics – landscaping, mowing, litter removal, turf condition, and tree trimming

It is important to maintain roads at an optimal level for driver safety and comfort as well as to allow the responsible agency or local government to plan a stable program of roadway repair or resurfacing.

Through routine maintenance, highway rest stops are kept clean and attractive, wildflowers are planted along roadsides, roadway striping is kept reflective for safe nighttime travel, guardrails are repaired, signs are kept clean and visible and potholes are filled. FDOT staff and contractors also mow grass, remove litter, perform bridge inspections, make bridge repairs, clean out ditches and storm drains and do many other jobs needed to make highway travel easier and safer.

KEY STRATEGIES TO IMPROVE MAINTENANCE

FDOT strives to meet or exceed its roadway maintenance performance target through these actions:

- Continue to identify and implement practices which reduce the time and cost of preserving the State Highway System
- Emphasize use of state-of-the-art technologies and innovative contracting methods to increase the efficiency of system maintenance
- Continue to monitor and adjust maintenance standards to preserve the state's investment and provide safe roadways for Florida motorists, including special population groups

SUPPORTING MEASURES AND INFORMATION

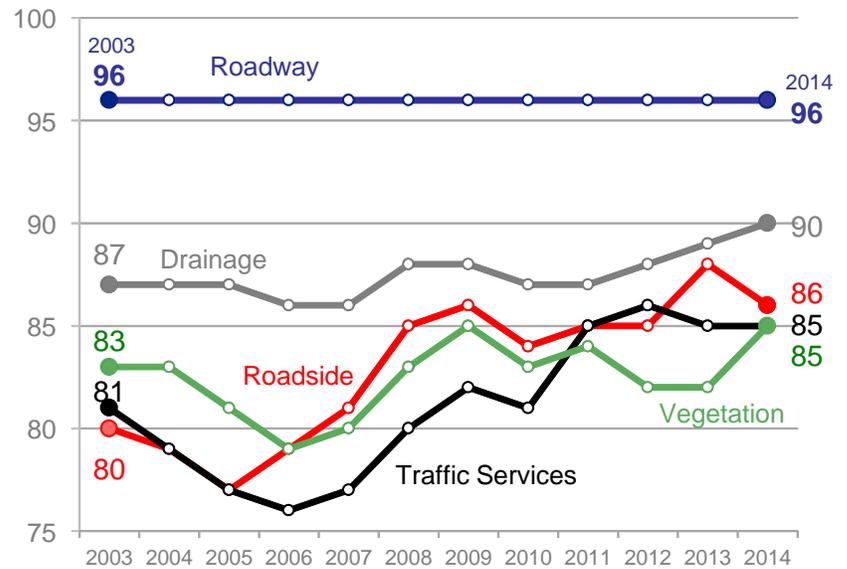
In addition to its core measure on maintenance, FDOT has identified several supporting measures and other indicators of progress that provide further detail and context about the performance of Florida’s transportation system. For maintenance, the supporting measures are:

- Roadway Maintenance
- Roadside Maintenance
- Traffic Services Maintenance
- Drainage Maintenance
- Vegetation Aesthetics Maintenance

Each of the five maintenance components is illustrated in **Figure 8** over the past decade, followed by an explanation of each component (i.e., its supporting measures).

All five maintenance supporting measures have remained constant or improved over the past decade – contributing to FDOT’s improved maintenance core measure score.

Figure 8: Maintenance Components



Roadway Maintenance



SUPPORTING
MEASURE

The Roadway Maintenance score has remained at 96 since 2002.

The supporting measure Roadway Maintenance is a way FDOT can assess its progress relative to its commitment to maintenance. Roadway Maintenance evaluates multiple components of the roadway:

- Flexible pothole
- Flexible edge raveling
- Flexible shoving
- Flexible depression/bump
- Flexible paved shoulder/turnout
- Rigid pothole
- Rigid depression/bump
- Rigid joint/cracking
- Rigid paved shoulder/turnout

Conditions are compared to FDOT standards and a composite score is calculated between 0 and 100. The Roadway Maintenance score has remained at 96 since 2002. This is a significant measure as it represents the composite of the varied items listed above. As such, FDOT's performance in this area is particularly notable.

Roadside Maintenance



SUPPORTING
MEASURE

The Roadside Maintenance score has hovered around the mid-80s since 2008.

The supporting measure Roadside Maintenance is a way FDOT can assess its commitment to improving maintenance. Roadside Maintenance evaluates five components of the roadway:

- Unpaved shoulder
- Front slope
- Slope pavement
- Sidewalk
- Fence

Conditions are compared to FDOT standards and a composite score is calculated between 0 and 100. The Roadside Maintenance score has hovered around the mid-80s since 2008.

Traffic Services Maintenance



The Traffic Services Maintenance score has leveled-out around the mid-80s since 2011.

The supporting measure Traffic Services Maintenance is a way FDOT can assess its commitment to improving maintenance. Traffic Services Maintenance evaluates nine components of the roadway:

- Raised pavement markers
- Striping
- Pavement symbols
- Guardrail
- Attenuator
- Signs less than or equal to 30 sq. ft.
- Signs greater than 30 sq. ft.
- Object markers and delineators
- Lighting

Conditions are compared to FDOT standards and a composite score is calculated between 0 and 100. The Traffic Services Maintenance score has leveled-out around the mid-80s since 2011.

Drainage Maintenance



The Drainage Maintenance score has hovered between the mid to high-80s since 2000, reaching 90 in 2014.

The supporting measure Drainage Maintenance is a way FDOT can assess its commitment to improving maintenance. The ability to quickly drain water from roadways is key to preservation. The 2014 Drainage Maintenance rating is the first time that an overall rating of 90 has been achieved. Drainage Maintenance evaluates six components of the roadway:

- Side/cross drain
- Roadside/median ditch
- Outfall ditches
- Inlets
- Miscellaneous drainage structure
- Roadway sweeping

Conditions are compared to FDOT standards and a composite score is calculated between 0 and 100. The Drainage Maintenance score has hovered between the mid to high-80s since 2000, reaching 90 in 2014.

Vegetation Aesthetics Maintenance



The Vegetation Aesthetics Maintenance score improved to 85 in 2014.

The supporting measure Vegetation Aesthetics Maintenance is a way FDOT can assess its commitment to improving maintenance. Vegetation Aesthetics Maintenance evaluates seven components of the roadway:

- Roadside mowing
- Slope mowing
- Landscaping
- Tree trimming
- Curb/sidewalk edge
- Litter removal
- Turf condition

Conditions are compared to FDOT standards and a composite score is calculated between 0 and 100. The Vegetation Aesthetics Maintenance score had remained between the low to mid 80s since 2007, and then improved to 85 in 2014. Effective maintenance in this area also can contribute indirectly to safer conditions for motorists, cyclists, and pedestrians.



TRANSIT STATE OF GOOD REPAIR



Underinvestment in public transportation infrastructure can have significant consequences.

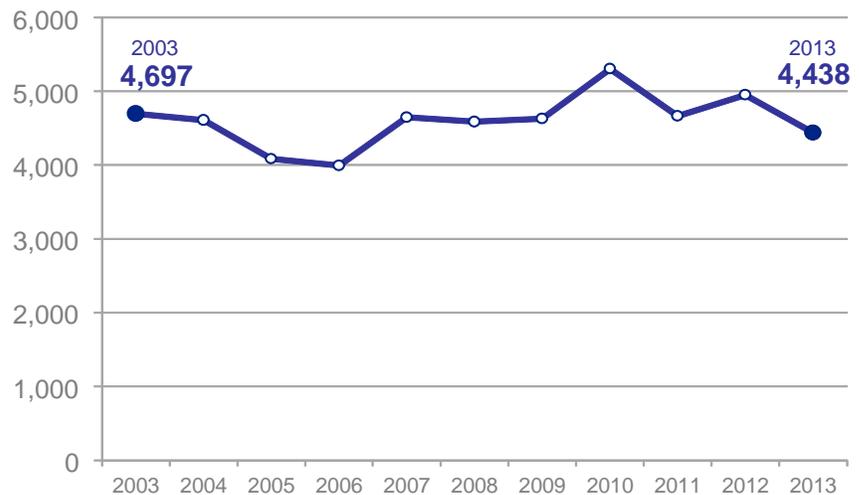
Over the past decade Florida transit agencies have kept breakdowns at a level better than one per 4,000 revenue miles.

FDOT has identified a series of core measures related to the maintenance and operation of the transportation system, which is a primary goal of FDOT. FDOT has a long-standing commitment in assisting Florida's transit agencies in the area of asset management, including training, technical guidance, and vehicle procurement and inspections. Recently, the Federal Transit Administration emphasized a need to improve the safety and condition of the nation's transit systems, focusing on transit assets that need to be rebuilt or replaced. Underinvestment in public transportation infrastructure can have significant consequences, such as increased incidents, compromised passenger safety, and higher operating costs due to increased costs of maintaining assets that are being used beyond their useful lives.

A core measure that represents Florida's transit agencies investment in, and maintenance of, infrastructure is the number of revenue miles between bus and rail failures (i.e. breakdowns). This measure is calculated by dividing the total annual number of revenue miles by the total annual number of revenue vehicle system failures statewide. It is an indicator of the average frequency of delays due to vehicle problems or failures. A failure is classified as the breakdown of either a major or minor element of the vehicle's mechanical system. Failures are tabulated regardless of whether they result in a vehicle completing or not completing its trip. As shown in **Figure 9**, data from the National Transit Database (NTD) shows that in 2013 Florida's fixed route transit agencies, on average, experienced a breakdown every 4,438 revenue miles. Over the past decade this number has moved up and down, reflecting transit agency varying levels of investment in maintaining fixed route transit vehicles. This measure is representative of the state of good repair of Florida's transit systems.

The Federal Transit Administration's focus on asset management is reflected in the federal Moving Ahead for Progress in the 21st Century Act (MAP-21) surface transportation funding legislation. All transit agencies receiving federal funds are required to develop transit asset management plans and use performance measures to track agency progress in meeting the goals and objectives established in their asset management plans. FDOT has historically monitored and managed transit state of good repair and will update state requirements and measures to reflect the Federal Transit Administration requirements when they become available. Currently, most of Florida's transit agencies have implemented asset management plans based on federal requirements. Additionally, FDOT monitors state of good repair through established statewide performance measures.

Figure 9: Transit Revenue Miles Between Failures



KEY STRATEGIES TO IMPROVE TRANSIT STATE OF GOOD REPAIR

FDOT will help ensure that continued progress is made to improve its core measure of transit state of good repair through these actions:

- Coordinate with urban transit agencies and metropolitan planning organizations in establishing statewide performance measures in accordance with MAP-21
- Provide guidance to transit agencies in the development of transit asset management plans and programs
- Provide technical assistance, training and guidance to transit agencies in the field of vehicle maintenance and asset management

In support of these key strategies, FDOT's Transit Office has, for a number of years, conducted several programs pertaining to transit vehicle procurement and maintenance. These programs include:

Transit Research, Inspection and Procurement Services (TRIPS) - This program protects the investment of both federal and state dollars, ensuring that the state's vehicle fleets remain in good repair.

Transit Maintenance Analysis and Resource Center (TMAARC) - This program delivers training and technical assistance for state maintenance fleets and aids in keeping vehicles and facilities in a state of good repair.

Preventative Maintenance Planning and Training Program (PrMPT) - This program provides transit agencies tools and resources to establish maintenance programs. It also includes maintenance compliance inspections through vehicle file audits, bus inspections, and policy and procedure review, ensuring that deficiencies in preventative maintenance practices are identified and corrected.

Intelligent Transportation Systems (ITS)



SUPPORTING MEASURE

SUPPORTING MEASURES AND INFORMATION

In addition to its core measures, FDOT has identified several supporting measures and other indicators of progress that provide further detail and context about the performance of Florida’s transportation system. For operational Intelligent Transportation Systems (ITS), the supporting measures are:

- ITS Miles Managed by FDOT
- Florida 511 Program (FL511) Calls, Visits, Messages & Alerts

Intelligent Transportation Systems represent the application of real-time information systems and advanced technologies such as transportation management tools to improve the movement of people, goods and services. ITS uses advanced technologies to remedy mobility and safety problems, which may delay or possibly eliminate having to build new roads or expanding existing roads. As ITS evolves throughout Florida, the development and reporting of operational performance measures are a priority for FDOT to demonstrate and document their benefits.

A number of ITS performance measures have been identified: miles managed by ITS; 511 calls, messages, visits and alerts; Road Ranger service stops; incident duration (roadway clearance times); and customer satisfaction.

ITS Miles Managed by FDOT

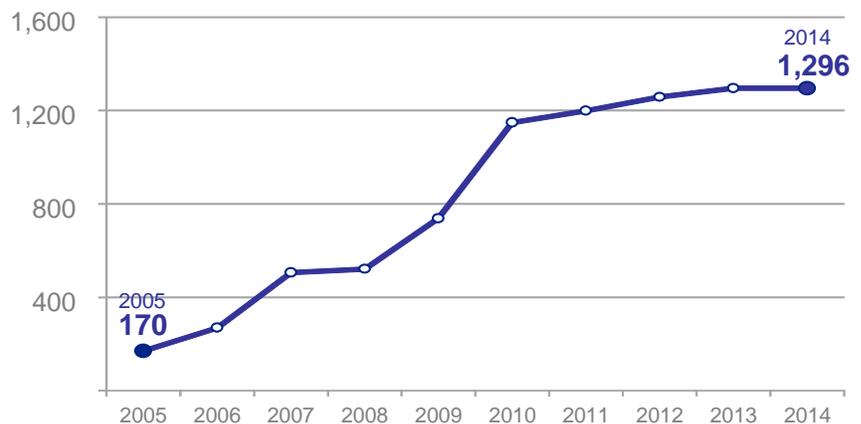


SUPPORTING MEASURE

By 2014, 1,296 ITS miles were managed by FDOT. This represents nearly 11 percent of the State Highway System and 30 percent of the Strategic Intermodal System.

As shown in **Figure 10**, by June 2014, 1,296 centerline miles were managed by FDOT through ITS. This represents nearly 11 percent ITS coverage of the State Highway System and 30 percent ITS coverage of the Strategic Intermodal System. Extensive ITS deployments have taken place during the past decade throughout the state.

Figure 10: ITS Miles Managed by FDOT



FL511 Calls, Visits, Messages & Alerts

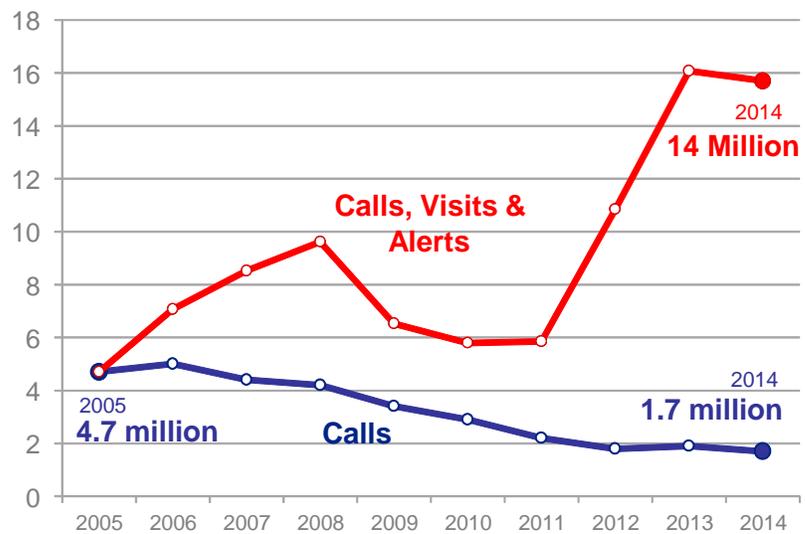


Florida’s 511 program, dubbed FL511, provides accurate real-time information to travelers on traffic and road conditions, alternate route information (during incidents), construction information, weather-related problems and public transportation information/options.

Approximately 1.7 million FL511 calls were made during the 12-month period from July 2013 to June 2014. Tracking phone calls to FL511 is no longer the sole indicator of system usage as more travelers use automated and mobile applications. As shown in **Figure 11**, over 14 million calls, web/app visits, and e-mail/text/phone message alerts were made in 2014, keeping travelers on Florida’s highways informed. The slight decrease in 2014 may reflect the greater choice of information sources associated with increasing use of smart phones and a wider range of apps.

Over 14 million calls, web/app visits, and e-mail/text/phone message alerts were made in 2014, keeping travelers on Florida’s highways informed.

Figure 11: FL511 Calls, Visits, Messages & Alerts



INCIDENT MANAGEMENT

In addition to its core measures, FDOT has identified several supporting measures and other indicators of progress that provide further detail and context about the performance of Florida's transportation system. For operational incident management, the supporting measures are:

- Road Rangers Service Assists
- State Average Roadway Clearance Times
- State Average Rapid Incident Scene Clearance (RISC) Times

Vehicle crashes on highways typically affect far more travelers and businesses than those directly involved in the crash. It is critical that crash victims be attended to as soon as possible to reduce the possibility of death or serious injury. It is not unusual for major highways to be partially or fully closed while vehicles and debris are removed, which creates or compounds traffic congestion and causes delay for users in the vicinity of the crash. Occasionally, hazardous materials—some of which can be life-threatening—and other commodities are spilled as a result of these crashes or as a result of crashes on other transportation modes such as rail. Quickly responding to and clearing an incident allows the highway to return to normal capacity and traffic flow sooner. Moreover, the faster incidents can be cleared the greater the reduction of secondary crashes.

SUPPORTING MEASURES AND INFORMATION

In order to improve incident management, Florida developed a statewide Traffic Incident Management Program, which is comprised of four major components:

- Road Ranger Service
- State Average Roadway Clearance
- Rapid Incident Scene Clearance (RISC)
- Traffic Incident Management (TIM) Teams

Road Ranger Service

Assists

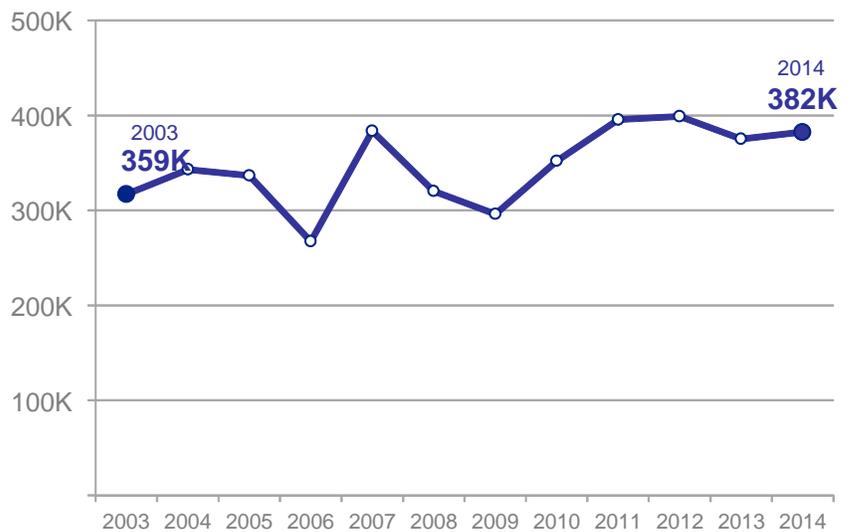


The Road Rangers service is provided by FDOT and its partners, at no charge, to motorists. It consists of roving vehicles which patrol congested areas and high incident locations along urban freeways. Services can include providing a limited amount of fuel, assisting with tire changes, and other types of minor emergency repairs. The United States Department of Transportation estimates service patrols, such as Road Rangers, can reduce travel delays by up to 45 percent.

All seven FDOT Districts and the Turnpike Enterprise provide Road Ranger services covering almost 2,000 miles of state roads. Other than in 2008 when the legislature instituted a 50 percent reduction in Road Ranger funding, which it re-instated the following year, Road Rangers have consistently assisted over 350,000 motorists annually. As shown in **Figure 12**, in 2014 Road Rangers services were provided to 382,403 motorists.

Service patrols, such as Road Rangers, can reduce travel delays by up to 45 percent.

Figure 12: Road Ranger Service Assists



State Roadway Clearance Times



The average clearance time is 46.5 minutes, which is far below the 90-minute target of the “Open Roads Policy.”

In an effort to provide the traveling public a cost-effective and high quality transportation system, FDOT and the Florida Highway Patrol have implemented the “Open Roads Policy.” The goal of this policy is to clear damaged vehicles, spilled cargo and debris from roadways as soon as it is safe to do so. A combined target of all agencies is for all incidents to be cleared within 90 minutes of the arrival of the first responding officer with the understanding that this target may not be feasible in more complex scenarios, which may require additional time. As shown in **Figure 13**, the average clearance time is 46.5 minutes, which is far below the 90-minute target of the “Open Roads Policy.” It is recognized that at some point it might be appropriate to reevaluate and reset this target.

Figure 13: State Average Roadway Clearance Times (minutes)



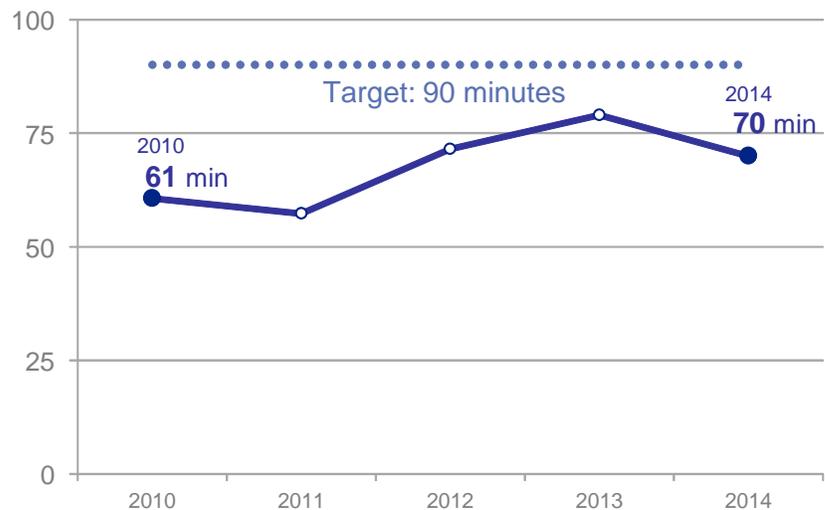
Rapid Incident Scene Clearance (RISC) Times



The Rapid Incident Scene Clearance (RISC) Program is an 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. Incident Response Teams have been formed in all seven FDOT Districts and the Turnpike Enterprise. The teams include local emergency response services, the Florida Highway Patrol and local law enforcement officers, state and local traffic engineers, state and local maintenance personnel, and the staff and resources of other partners which may be needed. These teams work together to reduce the severity of injuries resulting from crashes and to restore highways to normal operating conditions as soon as possible. FDOT is an active participant, providing traffic engineering, and maintenance personnel and resources to work with other team members. Communication among team members is a critical component. Roadway clearance times for crashes on major highways can also vary. As shown in **Figure 14**, the average clearance time increased in 2012 and 2013, but decreased to 70 minutes in 2014. Although the average falls within the 90-minute target, FDOT reviews all events that do not meet the 90-minute target to ensure that responders are aware of the RISC activation criteria.

The average clearance time increased in 2012 and 2013, but decreased to 70 minutes in 2014.

Figure 14: State Average RISC Clearance Times (minutes)



FDOT now requires specialized equipment and trained operators to quickly remove heavy trucks hauling larger loads after an incident. Consistent with the “Open Roads Policy,” several FDOT Districts have adopted an innovative clearance strategy by implementing the RISC Program to significantly reduce the time to clear major accidents and incidents. This program utilizes vendors who can provide specialized heavy-duty wreckers and equipment to rapidly clear the roadway on limited access facilities.

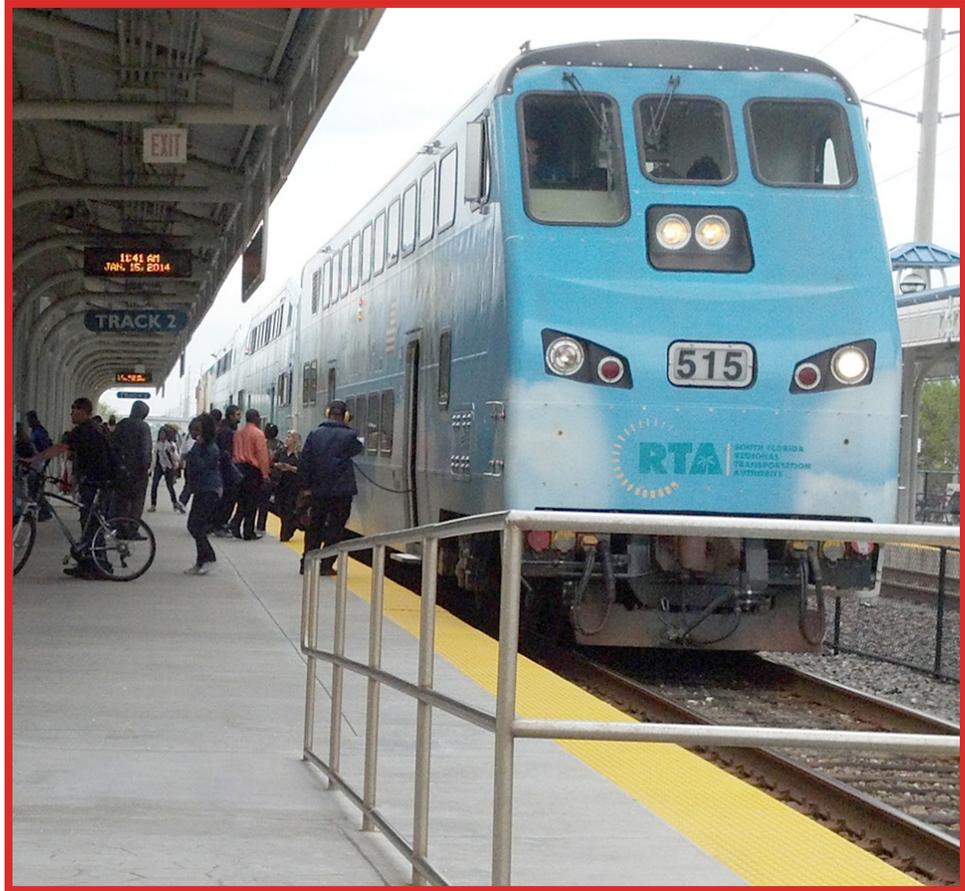
Florida also has a State Emergency Response Team composed of staff from key state agencies to ensure the state is prepared to respond to emergencies, recover from them and mitigate their impacts. The State Emergency Operations Center (SEOC) provides direction and coordination of emergency response and recovery efforts before, during and after serious emergencies or disasters. When the magnitude of an emergency or disaster exhausts local response capabilities, the SEOC may be activated to respond.

Traffic Incident Management (TIM) Teams

Traffic Incident Management (TIM) Teams bring together all of the agencies involved in clearing an accident, including Florida Highway Patrol (FHP), local law enforcement, fire departments, emergency medical personnel, towing companies, and spill response firms, along with FDOT Traffic Management Center (TMC) operators, Road Rangers, and maintenance crews. TIM 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. TIM Teams are currently active in most of FDOT’s Districts and Florida’s Turnpike Enterprise.



FLORIDA DEPARTMENT OF TRANSPORTATION



MOBILITY & ECONOMIC COMPETITIVENESS

2014 PERFORMANCE REPORT

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MOBILITY and ECONOMIC COMPETITIVENESS

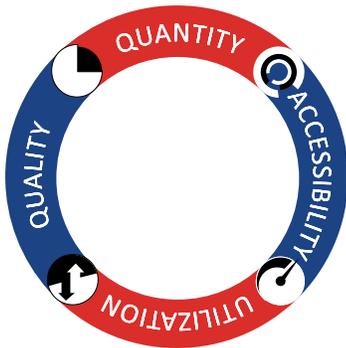
This report is part of the Performance-Based Planning and Programming Process used by the Florida Department of Transportation (FDOT). For a description of that process, updates to this report and other transportation performance reporting initiatives of FDOT, go to FDOTPerforms.org.

INTRODUCTION

Mobility, the movement of people and goods, is transportation's most essential function. Moving people and goods efficiently, affordably, and reliably is vital to economic prosperity. Florida's economy does not stand still. As travel demand increases and changes, Florida continues to improve the planning and management of our multimodal transportation system. By providing mobility, FDOT and other transportation system operators make a strategic and significant contribution to Florida's economic competitiveness. Investments in Florida's transportation assets are investments in the backbone of the state's economy.

Florida travel is diverse. People use all modes of transportation for job commuting, international business, pursuing education, and accessing health care. Raw materials, finished products and packages comprise a robust freight movement system that relies on air cargo, trucking, seaports, and freight railroads—and the connections between these modes.

FDOT's core measures for mobility includes travel quantity, travel quality, accessibility, and system utilization. Together they provide a broad picture of the extent to which our transportation system is being used, the quality of travel, ensuring good access, and the capacity of the system. Our mobility measurement core focus areas impact economic competitiveness. Our core measures of economic competitiveness include the return on investment (ROI) of transportation investments, how much benefit for every dollar spent and the degree to which our major projects get completed on-time and on-budget.



Core Measures cover 4 dimensions that describe mobility

2014 PERFORMANCE HIGHLIGHTS

Mobility and economic competitiveness are strategic FDOT priorities. Key performance highlights include:

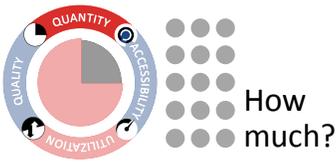
- Vehicle miles traveled (VMT) began decreasing in 2008—since then VMT has leveled-off at 2009 levels for both the State Highway System (SHS) and the Strategic Intermodal System (SIS)
- Public transit ridership continues to grow as the economy improves—ridership growth exceeded the rate of population growth in 2011, 2012, and 2013
- Florida is experiencing an increase in rail passengers with 1.1 million trips on Amtrak in 2013—ridership has increased 22.7 percent since 2004
- Freight tonnage by truck has been uneven over the past decade, but generally has trended upwards over the past two years—Air cargo tonnage has remained flat but could increase as a result of lower fuel costs—Sea freight tonnage saw a slight increase in 2013
- Vehicle hours of delay during the peak hour on the SHS decreased slightly from 2009 to 2013—on the other hand, delay on the SIS increased from 40.9 million to 43.5 million hours over the same period
- Travel time reliability on freeways during the peak hour in 2013 for all vehicles and for freight related trucks was 72.2 percent and 69.9 percent respectively
- On-time rail and airport departure reliability decreased appreciably by 6.1 and 8.1 percent respectively from 2012 to 2013
- Between 2011 and 2013 sidewalk mileage on the SHS in urban areas increased from 59.4 percent to 64.1 percent; over the same short period bike lane and shoulder mileage increased from 57.6 percent to 60.4 percent on the same system
- In 2013, 2.7 percent of miles on the SHS and 3.1 percent of miles on the SIS were severely congested—this had been as high as 4.5 percent and 4.2 percent respectively in 2004
- The impact of transportation investments is a robust \$4.40 in economic benefits for every dollar spent on transportation improvements—in addition to construction jobs, transportation improvements support thousands of long-term jobs

TRAVEL QUANTITY



FDOT has identified a series of core measures related to the mobility and economic competitiveness of the transportation system. Travel quantity reflects the magnitude of travel on the system, or a particular facility or transportation service; how many people are served and how much freight is moved. In addition, FDOT has identified several supporting measures that provide further detail and context about the performance of Florida's transportation system. The supporting measures for travel quantity are:

- Vehicle Miles Traveled (VMT)
- Combination Truck Miles Traveled
- Transit Passenger Trips
- Aviation, Seaport, and Rail Passenger Trips
- TEU (20-foot equivalent unit) Containers
- Freight (Seaport, Rail, Aviation) Tonnage



Vehicle Miles of Travel

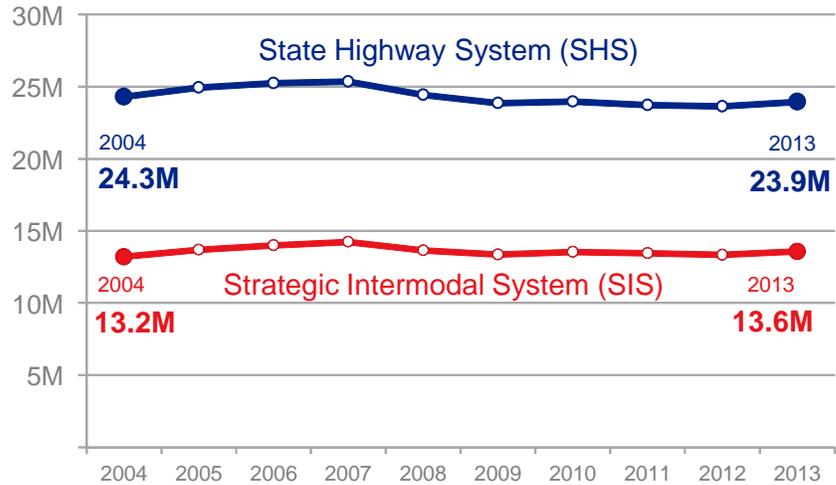


Figure 1 shows State Highway System (SHS) and Strategic Intermodal System (SIS) vehicle miles traveled (VMT) in millions of miles during the peak hour of traffic over a ten year period. VMT during the peak hour is an indicator of system demand at the time of greatest need/use. VMT began decreasing in 2008 around the time the recession was at its deepest. VMT has leveled-off at 2009 levels for both the SHS and the SIS.

Florida's diverse economy is more resilient to economic downturns than economies of other states. Florida VMT declined for only two years during a much longer economic downturn. As the economy improves, VMT can be expected to increase. Growing—or even steady—VMT underscores the importance of continued investment in maintenance, capacity improvements, and improved operations for greater efficiency and throughput. Asset management and performance management/measurement are closely connected.

Figure 1: Vehicle Miles Traveled During Peak Hour (millions)

Vehicle miles traveled (VMT) during the peak hour is an indicator of system demand at the time of greatest need/use. VMT has leveled-off at 2009 levels for both the SHS and SIS.



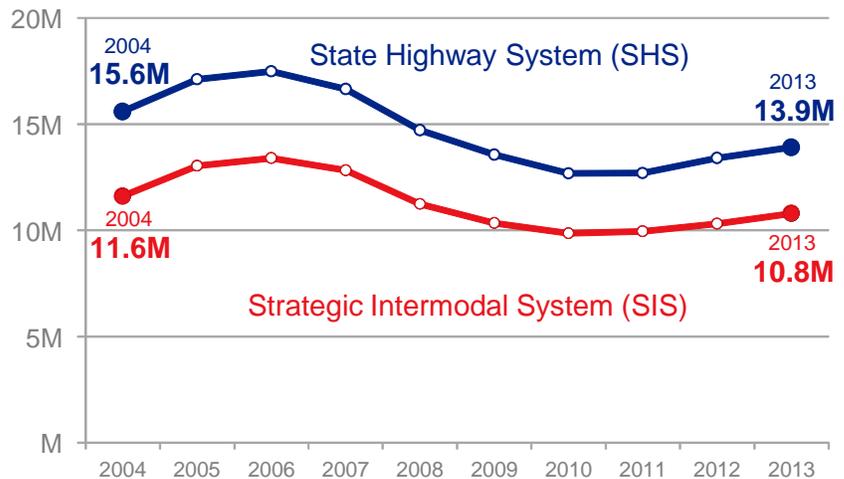
Combination Truck Miles Traveled



Combination vehicles typically consist of a tractor and a trailer. Combination truck miles traveled is a measure of system usage to move the vast quantity of goods and materials needed by consumers and producers. As shown in **Figure 2** combination truck miles traveled is trending upward on the SHS and the SIS. While miles traveled have been trending upward for three consecutive years, they are still below 2004 to 2006 levels. This upward trend reflects improvements in the economy. Truck travel also translates into system maintenance and repair costs, and as travel increases it can also increase the need for adding system capacity.

Figure 2: Combination Truck Miles Traveled (millions)

Combination truck miles traveled is a measure of system usage to move the vast quantity of goods and materials. While miles traveled have been trending upward for three years, they are still below 2004 to 2006 levels.



Transit Passenger Trips



Transit options and access can improve local and regional mobility and livability for many Florida communities. FDOT’s target is to increase transit ridership at twice the rate of population growth.

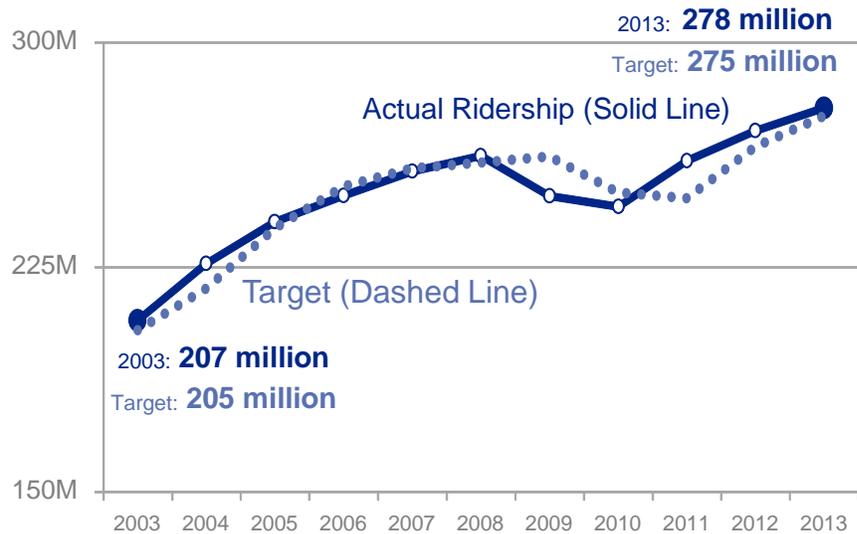
FDOT is committed to assisting its partners to increase transit ridership. Approximately 91 percent of Floridians live in urban areas and 80 percent live in transit-served areas. Increased reliance on transit, particularly when combined with less reliance on auto travel, helps to reduce greenhouse gas emissions while providing a sustainable transportation system.

Figure 3 shows that passenger trips served by transit throughout Florida’s 29 fixed-route urban transit systems¹ have been steadily increasing over the past decade, albeit with a slight dip during the economic downturn in 2009 and 2010. In 2013 there were over 278 million transit trips in Florida, an increase of nearly 3 percent over 2012. Transit ridership grew due to population growth, high gas prices, automobile affordability challenges, and improved transit service and infrastructure.

As noted above, FDOT uses the ratio of transit growth to population growth as a measure to evaluate transit ridership performance. For most of the past decade Florida’s transit ridership growth was near to, or more than, twice the state’s population growth rate.

In 2013 there were over 278 million transit trips in Florida, an increase of nearly 3 percent over 2012.

Figure 3: Annual Transit Passenger Trips



Note: Population data used to assess the ridership target came from the Office of Economic and Demographic Research.

¹ In 2013 Florida had 30 fixed route agencies: 1 rural and 29 urban systems. Only the urban systems are reported in these ridership numbers. SunRail began operations in 2014 and so is not included.

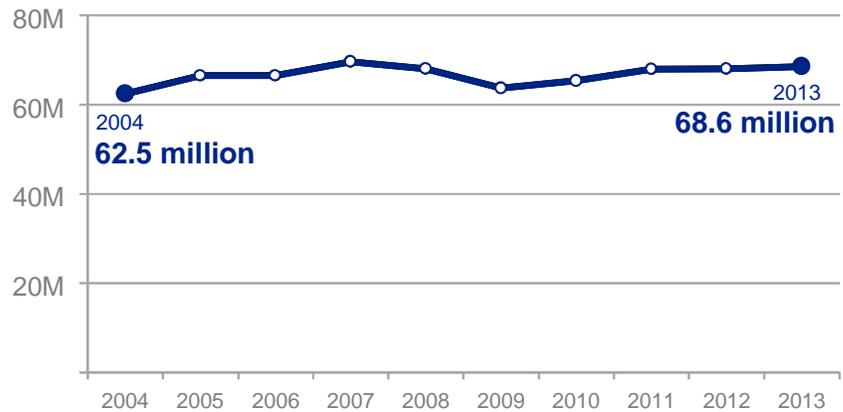
Aviation Passenger Trips



Aviation trips peaked in 2007 at 69.7 million, with slight decreases in 2008 and 2009, with increases occurring thereafter to 68.6 million in 2013.

Figure 4 illustrates Florida’s overall growth in aviation passenger trips over the ten year period between 2004 and 2013. The number of trips peaked in 2007 at 69.7 million, with slight decreases in 2008 and 2009, with increases occurring thereafter to 68.6 million in 2013. The five-year upward trend since 2010 underscores Florida’s special attraction as both a tourist and a business origin/destination—bolstering the state’s competitive position.

Figure 4: Annual Aviation Passenger Trips



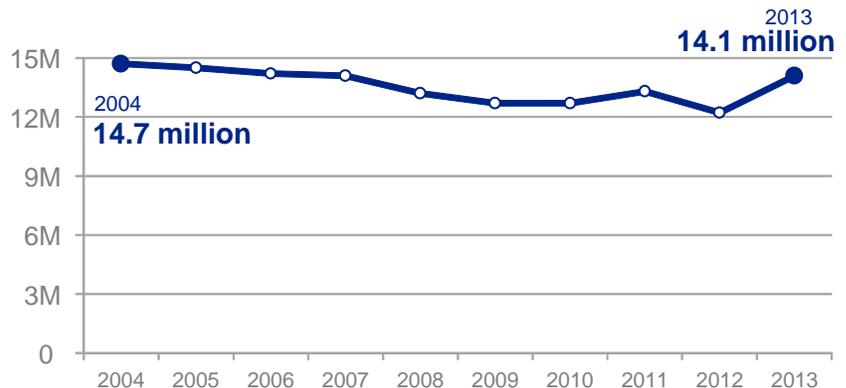
Seaport Passenger Trips



60 percent of all U.S. cruise passengers embark from Florida ports.

Figure 5 shows Florida’s slight decrease in seaport passenger (cruise) trips over the ten-year period between 2004 and 2013. The number of trips was greatest in 2004 with 14.7 million, with slight decreases thereafter to 12.2 million in 2012. However, 2013 saw a sharp 15.4 percent increase over 2012 levels to 14.1 million. Significantly, 60 percent of all U.S. cruise passengers embark from Florida ports. If last year’s trend continues it will have a marked impact on the state’s economy.

Figure 5: Annual Seaport Passenger Trips



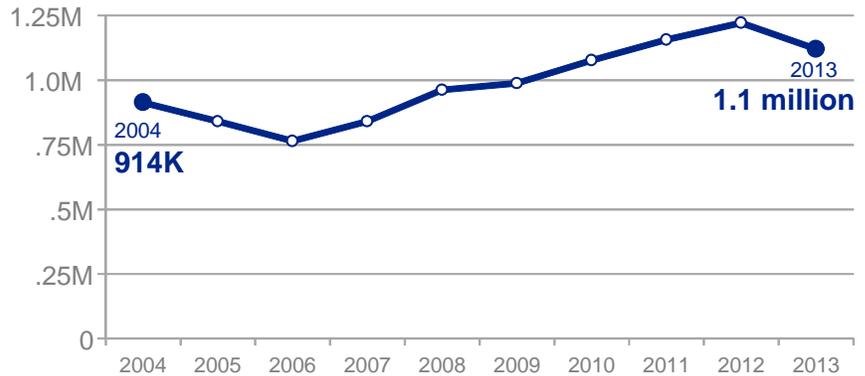
Rail Passenger Trips



Rail ridership has been trending upward since 2005, with 1.1 million trips in 2013.

The rail passenger measure is the annual number of revenue paying Amtrak passengers (inter-city rail). As **Figure 6** shows, ridership generally has been trending upward since 2005, with 1.1 million trips in 2013.

Figure 6: Annual Rail Passenger Trips on Amtrak



TEU (20-foot equivalent unit) Containers

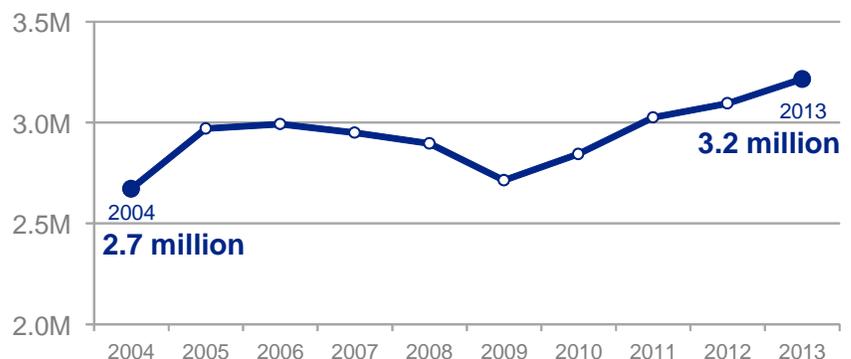


Since 2004 Florida has experienced about a 19 percent increase in TEUs moved through Florida ports.

The safe, effective and efficient movement of goods is key to Florida’s economic strength and growth. The 20-foot equivalent unit (TEU) container provides an approximate gauge of intermodal container movements. The TEU is based on the volume of a 20-foot-long intermodal container, a standard-sized metal box which can be easily transferred between different modes of transportation, such as ships, trains and trucks.

Figure 7 shows that since 2004 Florida has experienced about a 19 percent increase in TEUs moved through Florida ports reflecting a number of positive trends including expanded economic activity, trade, and use of intermodal transportation. If this rate of growth continues over the next decade and beyond, the state’s investments in system capacity, intermodal connectivity, and improved transportation operations will become even more important. Facilities for truck parking will likely be a steadily growing associated need.

Figure 7: TEU Containers Moved Through Florida Ports



Freight Tonnage



Freight tonnage indicates the extent to which freight is moving on Florida's transportation system. Products and raw materials increasingly are moving between origins and destinations using more than one mode of transportation.

This measure indicates the extent to which freight is moving on Florida's transportation system across the various modes of transportation. It is useful in terms of identifying any overall trends such as the increase in truck tonnage that occurred in 2013 (see below).

Figures 8(a) and 8(b) provide a ten year trend of Florida freight tonnage by mode. Products and raw materials increasingly are moving between origins and destinations using more than one transportation mode—making connectivity with the SIS of particular significance.

Figure 8(a): Freight Tonnage by Truck

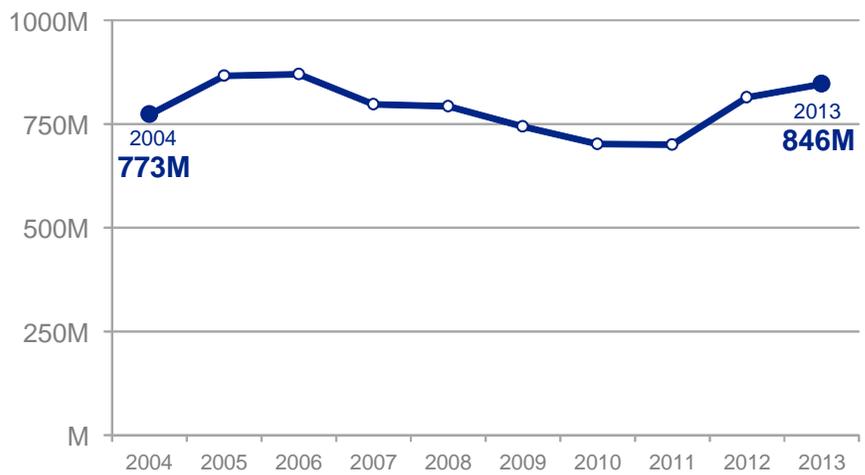
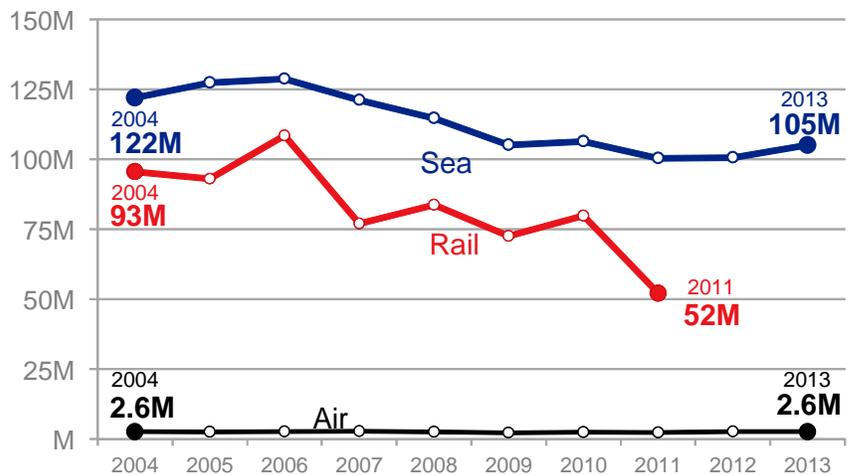


Figure 8(b): Freight Tonnage by Sea, Rail, and Air



- Tonnage by truck was uneven from 2004 to 2013, but generally has been trending upward, particularly over the past two years—as the economy has improved and intermodal movements have increased.
- Warehousing and distribution rely heavily on trucking, and some of this growth likely reflects the advantages of improved logistics favoring surface movement of goods and materials.
- An increase in truck tonnage also translates generally into greater wear and tear on roads and bridges and can impact congestion as well.
- Air cargo tonnage has remained flat over the ten-year period. Typically air cargo is low weight/high value, so measuring it in terms of tonnage underestimates its economic importance.
- Tonnage by sea decreased steadily between 2006 and 2009, then leveled off before an up-tick in 2013 (the first increase in Florida sea tonnage since 2006). Multiple, diverse seaports are a strategic advantage for Florida.
- Rail freight tonnage trended significantly downward through 2011—the year of the most recent available data—the trend line has been up and down and likely will move upward under favorable economic conditions.
- Investments made in Florida’s seaports will likely have a positive impact on rail and truck tonnage over time.

KEY STRATEGIES TO IMPROVE TRAVEL QUANTITY

FDOT will help ensure continued progress to improve its core measure of travel quantity through these actions:

- Promote multi-modal options (including non-motorized travel) within existing and future corridors
- Introduce new modal options or develop new transportation hubs or corridors when existing facilities cannot meet mobility or connectivity needs
- Enhance Florida’s role as a global hub that provides efficient and reliable connectivity for trade and visitors
- Ensure connectivity between the SIS and regional and local transportation facilities to support complete end-to-end trips
- Promote options that increase vehicle occupancy
- Implement FDOT’s new Complete Streets Policy to improve access and mobility for public transit riders, pedestrians and bicyclists

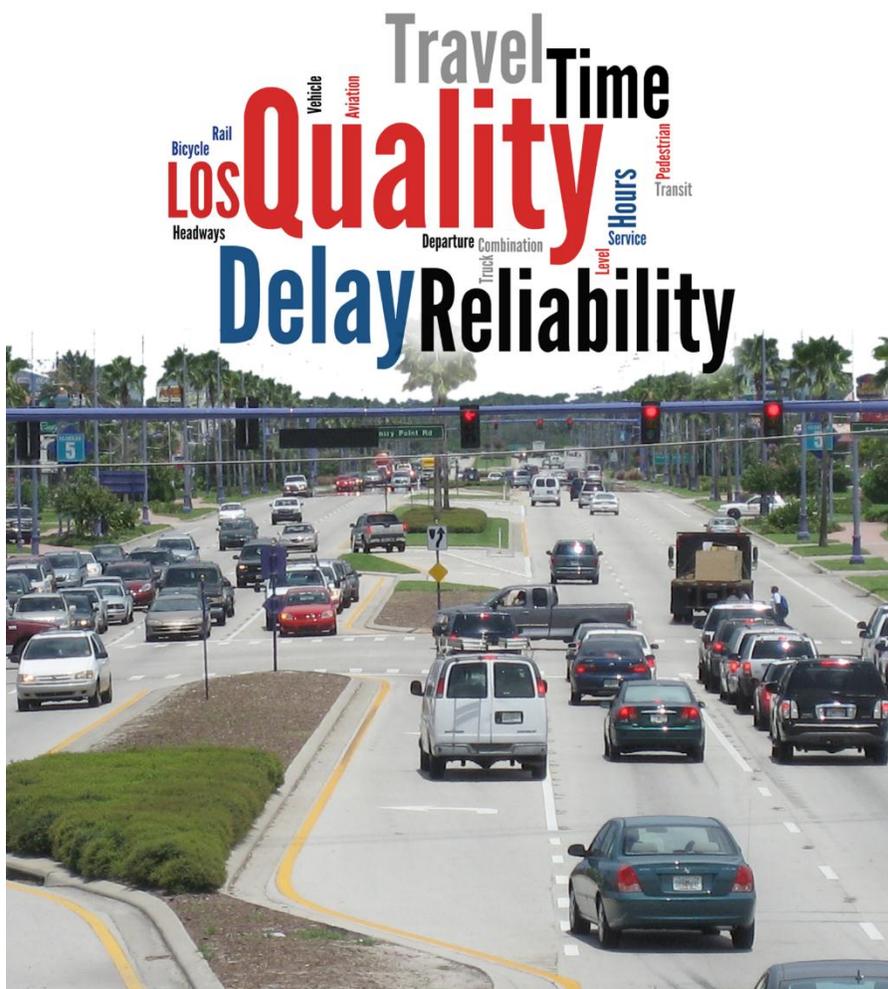
TRAVEL QUALITY



How good or bad?

The travel quality core measure helps to assess how good or bad the travel experience is using a range of supporting measures:

- Level of Service (LOS)
- Pedestrian and Bicycle LOS
- Vehicle Hours of Delay
- Combination Truck Hours of Delay
- Travel Time Reliability
- Aviation and Rail Departure Reliability
- Transit Headways



Level of Service (LOS)



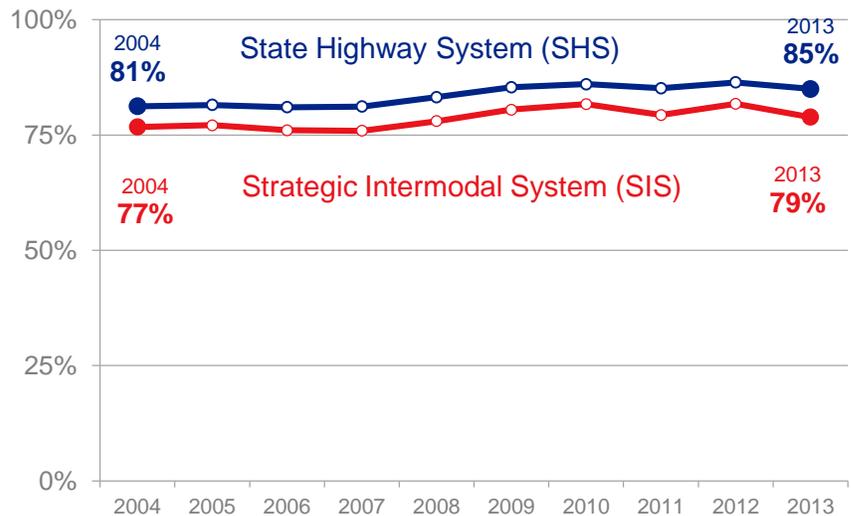
During 2013, approximately 85 percent of the State Highway System (SHS) and 79 percent of the Strategic Intermodal System (SIS) during the peak hour of traffic met or exceeded acceptable level of service (LOS) criteria—a decrease of 1.4 percent and 2.9 percent respectively over the prior year (as shown in **Figure 9**).

FDOT’s policy is to plan and operate the SHS at acceptable operating conditions. LOS provides a measure for evaluating roadway performance by relating travel demand to roadway capacity. Various LOS grades are established along with thresholds that provide a basic standard of acceptability.

The overall LOS trend since 2004 is one of generally steady travel improvement, but a decrease occurred on both the SHS and the SIS in 2013. Maintaining the current LOS performance is important for Florida to support the effective and efficient movement of people and goods.

The overall LOS trend since 2004 is one of general improvement, but a decrease occurred on both the SHS and SIS in 2013.

Figure 9: Travel Meeting Acceptable LOS During Peak Hour



Bicycle & Pedestrian LOS



84 percent of SHS roads in urban areas had a bicycle LOS of “C” or better

45 percent of SHS roads in urban areas had a pedestrian LOS of “C” or better.

Bicycle LOS is a measure of the quality of service a roadway provides to bicyclists. Unlike auto LOS which is largely affected by the number of motorized vehicles on the road, bicycle LOS is based on factors and conditions that are particularly important to bicyclists:

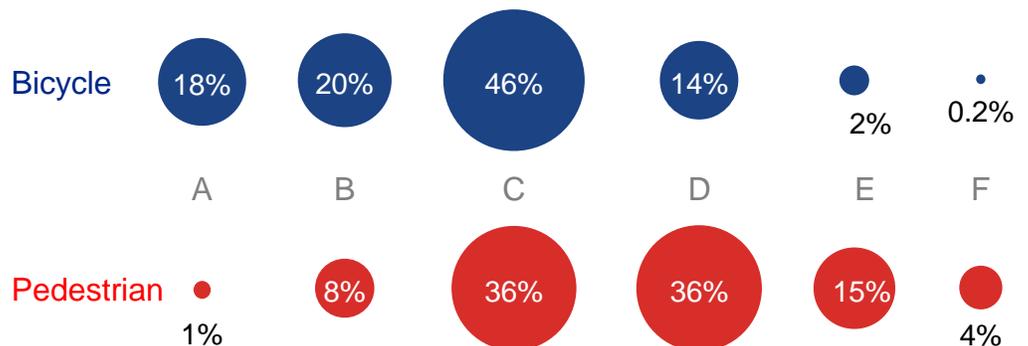
- Presence of bike lanes/shoulders and other outside travel lane considerations
- Motorized vehicle volumes (less being better)
- Motorized vehicle speeds (lower being better)
- Heavy vehicle (truck) volumes (less being better)
- Pavement conditions

Pedestrian LOS is a measure of the quality of service a roadway provides to pedestrians. Similar to bicycle LOS, pedestrian LOS is based on factors and conditions that are important to pedestrians:

- Existence of a sidewalk
- Lateral separation of pedestrians from motorized vehicles
- Motorized vehicle volumes (less being better)
- Motorized vehicle speeds (lower being better)

Figure 10 highlights that 84 percent of SHS roads in urban areas had a bicycle LOS of “C” or better in 2013, while only 45 percent of SHS roads in urban areas had a pedestrian LOS of “C” or better.

Figure 10: Bicycle and Pedestrian LOS on the State Highway System in Urban Areas



Vehicle Hours of Delay



As shown in **Figure 11**, vehicle hours of delay on the State Highway System (SHS) and the Strategic Intermodal System (SIS) have generally been declining over the past decade. Delay is important because it equates to cost in time and money for individuals and businesses.

Delay is the difference between a relatively uncongested travel time (at a reasonable/realistic speed, including effects of signals, other road conditions, and moderate traffic) and the estimated travel time (using estimated average speed for the traffic and road conditions). By measuring delay on the state’s roadways insight can be gained into questions such as:

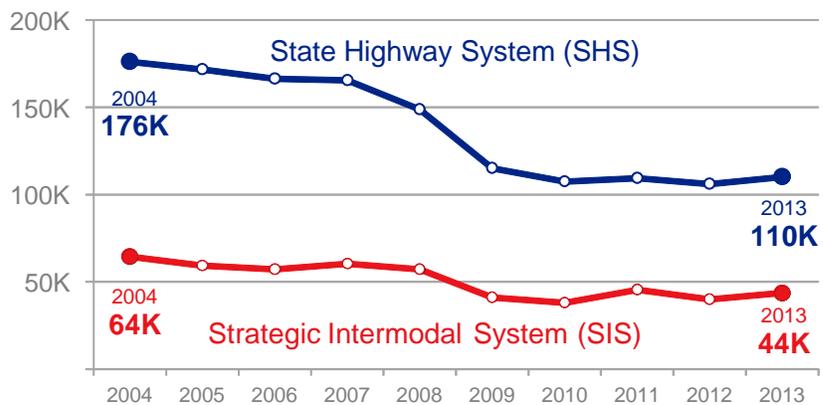
- How can transportation be improved to better serve people and commerce?
- What is the state getting from its investments in transportation (in terms of delay reduction)?
- Is the state investing in transportation as efficiently as possible?
- To what extent is delay or its reduction impacting economic activity?

Delay, however, should not be considered in isolation from other factors. Note, for example, the steep drop in delay between 2007 and 2012. This demonstrates that while delay reduction is desirable from a transportation operations perspective, that reduction is undesirable if it is due to an economic recession (which probably explains much of the drop during that period).

Since 2010, vehicle hours of delay in the seven most populous counties has increased, indicative of the economic recovery and population growth. The hours of delay, however, are still well below the levels of the early 2000’s. As such, Florida’s transportation system appears to be accommodating the economic recovery with capacity for supporting further economic growth.

Vehicle hours of delay on the SHS and SIS have generally been declining over the past decade.

Figure 11: Vehicle Hours of Delay During Peak Hour



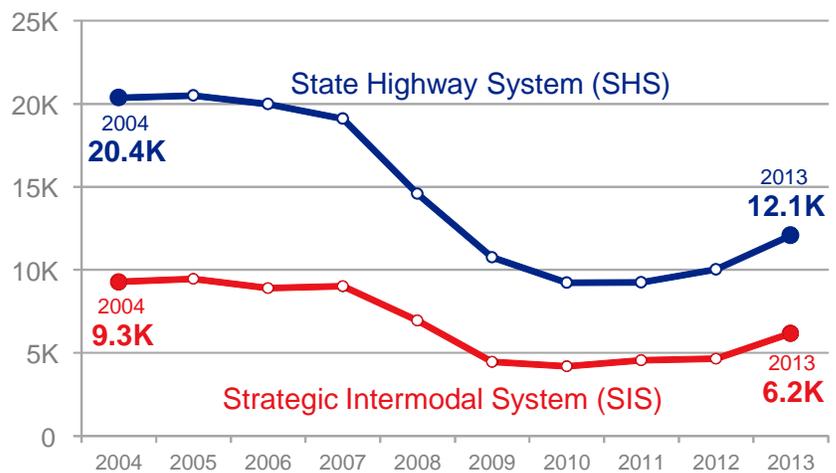
Combination Truck Hours of Delay



Truck hours of delay has generally been trending downward on Florida roads over the past decade. This is particularly important for efficient goods movement where time does translate into money—additional cost to shippers, carriers, and consumers, or cost savings for each. For the State Highway System (SHS), the decrease in truck hours of delay was particularly significant although it began trending upward the past two years—see **Figure 12**. Truck hours of delay on the Strategic Intermodal System (SIS) also trended downward over the past decade but at a lesser rate than on the SHS. Although the highway component of the SIS is primarily a sub-set of the SHS, it accounts for 70 percent of SHS’s truck traffic.

Truck hours of delay has generally been trending downward on Florida roads over the past decade.

Figure 12: Combination Truck Hours of Delay



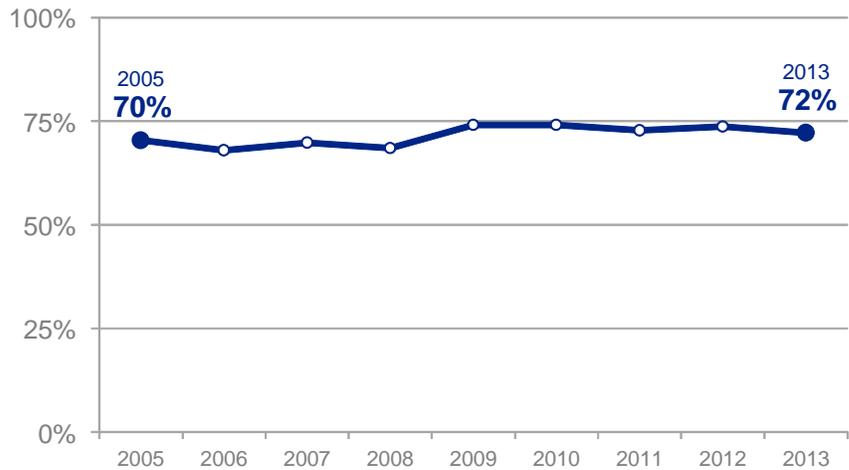
Travel Time Reliability



Travel time reliability is especially important to transportation system users for the movement of people and freight. FDOT began tracking this measure for freeways in 2005 as shown in **Figure 13**. Travel time reliability is the percentage of travel occurring at the posted speed limit (or higher) on freeways. Travel time reliability on freeways during the peak hour of traffic improved from 70 percent in 2005 to 72 percent in 2013, translating to time and cost savings for shippers and carriers that rely on the timely movement of finished goods and raw materials / commodities. This measure is particularly important as trucks move approximately 83 percent of all Florida manufactured tonnage.

Travel Time Reliability on freeways improved—translating to time and cost savings for shippers and carriers.

Figure 13: Travel Time Reliability on Freeways During Peak Hour



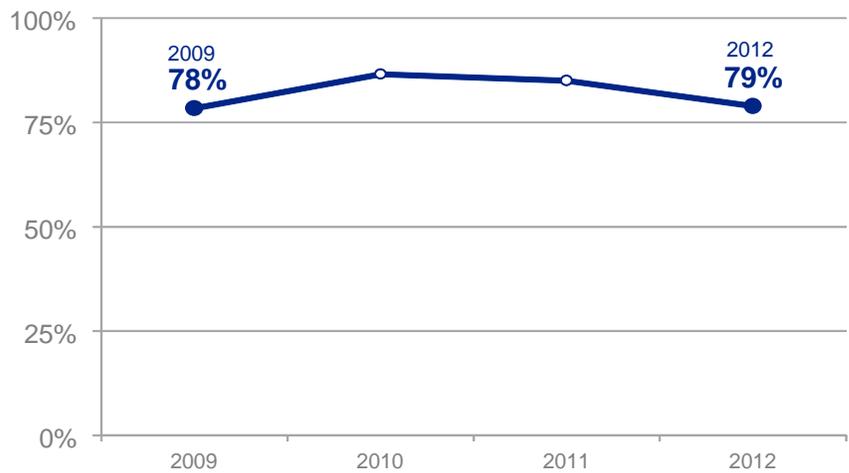
Rail Departure Reliability



Rail departure reliability captures the average on-time performance of three passenger rail systems: Amtrak, Miami-Dade Metrorail, and South Florida Regional Transportation Authority Tri-Rail. As shown in **Figure 14**, on-time rail departures generally hover near 80 percent, with four out of five departures being on-time. It is difficult to determine the extent of late departures that exceed a five or ten minute delay. Clearly, however, the public expects reliable departure times and the extent to which they will make this mode choice relies considerably on this important measure.

On-time rail departures generally hover near 80 percent, with four out of five departures being on-time.

Figure 14: Rail Departures On-Time



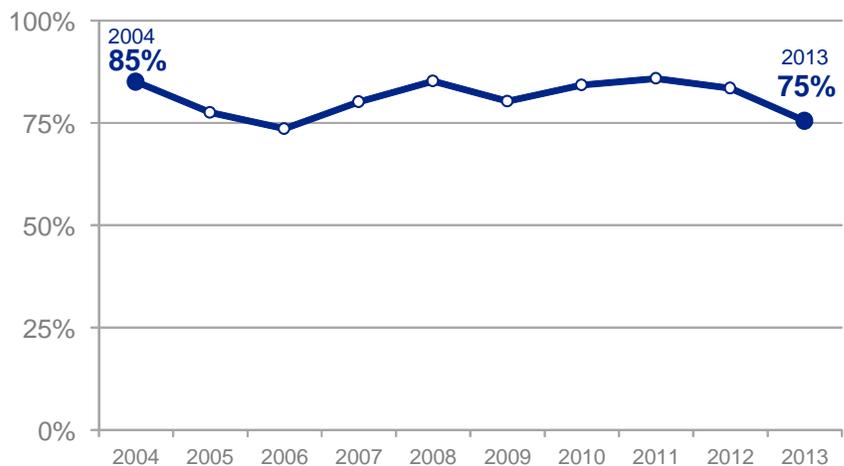
Airport Departure Reliability



Florida airport users expect reliable travel with minimal delay. Departure reliability at Florida airports is defined as "on time" if a flight departs less than 15 minutes after the scheduled time in the airlines' Computerized Reservations Systems. As shown in **Figure 15**, this measure generally has been improving since 2006 (73.5 percent). By 2012, on-time departures stood at 83.5 percent, while in 2013 they dipped down to 75 percent—the lowest percent since 2006. Aviation is critical to Florida's economy. While FDOT does not have control over the performance associated with this measure, it recognizes that on-time aviation performance is important to the business community, residents and millions of visitors. Continued federal and state investment in expanding and modernizing airport infrastructure and technology (e.g., air traffic control modernization) will be keys to long term improvements in airport departure reliability.

Figure 15: Airport Departures On-Time

By 2012, on-time departures stood at 83.5 percent, while in 2013 they dipped down to 75 percent—the lowest since 2006.



Transit Headways

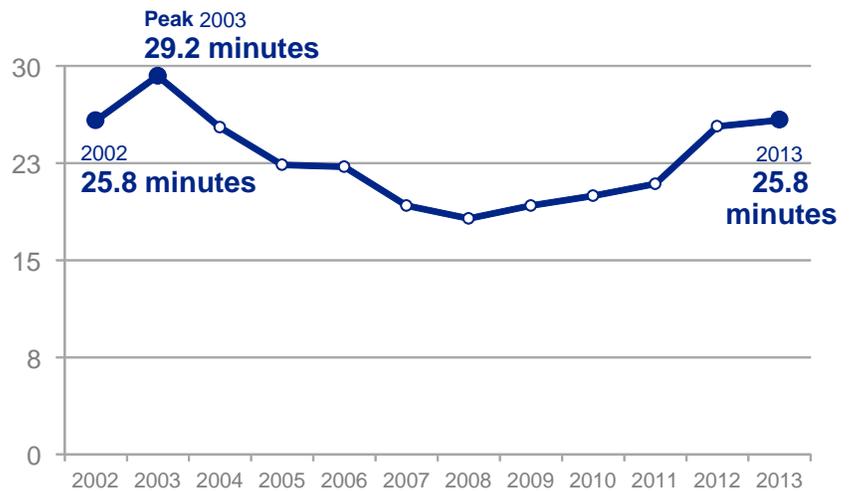


Average transit headway is a performance measure of the average duration (or time) between operating transit vehicles arriving at a certain stop. The average headway is measured for the transit system as a whole using: directional route miles, revenue miles, revenue hours, and the number of vehicles operated in maximum service (peak vehicles). Anyone who has missed a bus is eager for the next bus to arrive as soon as possible, making short headways an important measure.

Public transportation’s value is largely dependent upon service frequency. As shown in **Figure 16**, the estimated average headway for all transit systems in the state has increased over the past few years—but at 25.8 minutes in 2013 still remains lower than the high of 29.2 minutes in 2003. Technology such as transit signal priority is also helpful in reducing travel time for buses traveling in congested traffic—even if headway time remains unchanged. Better transit performance also positively impacts other road users.

The average headway for transit systems in Florida increased over the past few years—but at 25.8 minutes in 2013 still remains lower than the high of 29.2 minutes in 2003.

Figure 16: Average Transit Headways (minutes)



KEY STRATEGIES TO IMPROVE TRAVEL QUALITY

DOT will help ensure that continued progress is made to improve its core measure of travel quality through these actions:

- Implement FDOT's Freight Plan
- Support Goods Movement Task Forces and Advisory Committees in planning activities at the state and metropolitan/regional levels
- Add capacity to existing SIS facilities to support growth and relieve congestion, or consider new SIS facilities when needed to fill major gaps in connectivity
- Incorporate travel time reliability into planning and programming processes to enable analysis and programming of operations improvements that improve travel time reliability
- Continue Transportation System Management and Operations (TSM&O) initiatives to ensure that operations improvements are implemented in all FDOT processes
- Implement FDOT's new Complete Streets Policy to improve access and mobility for public transit riders, pedestrians and bicyclists



ACCESSIBILITY



FDOT has identified a series of core measures related to mobility and the economic competitiveness of the transportation system. The core measure of accessibility deals with the ease in engaging in activities from a transportation standpoint. In addition, FDOT has identified supporting measures that provide further detail and context about the performance of Florida’s transportation system. The supporting measures for the accessibility core measure are:

- Bicycle and Pedestrian Facilities
- Aviation, Rail, and Seaport Highway Adequacy

Bicycle and Pedestrian Facilities



Many Florida regions and communities place a premium on quality of life and have improved bicycle and pedestrian accommodation as a part of their visions. These measures and associated improvements demonstrate FDOT’s commitment to non-motorized modes of transportation, including the role they play in providing access to transit. **Figure 17** highlights the percentage of state roads that have sidewalks, bike lanes, shoulders, or shared pathways².

- In 2011 FDOT began measuring the percent of sidewalk coverage on SHS facilities in urban areas and similarly for bike lanes and shared pathways
- Between 2011 and 2013 pedestrian facilities increased from 59 percent to 64 percent on SHS roads in urban areas
- Over the same period the percentage of bike lane, shoulders, and shared path coverage increased from 58 percent to 60 percent

Between 2011 and 2013 pedestrian facilities increased from 59 to 64 percent, while bicycle accommodations increased from 58 to 60 percent.

Figure 17: Bicycle and Pedestrian Facility Coverage on the State Highway System in Urban Areas



² Shared pathways are included in both bicycle and pedestrian facility calculations.

Aviation, Rail, and Seaport Highway Adequacy

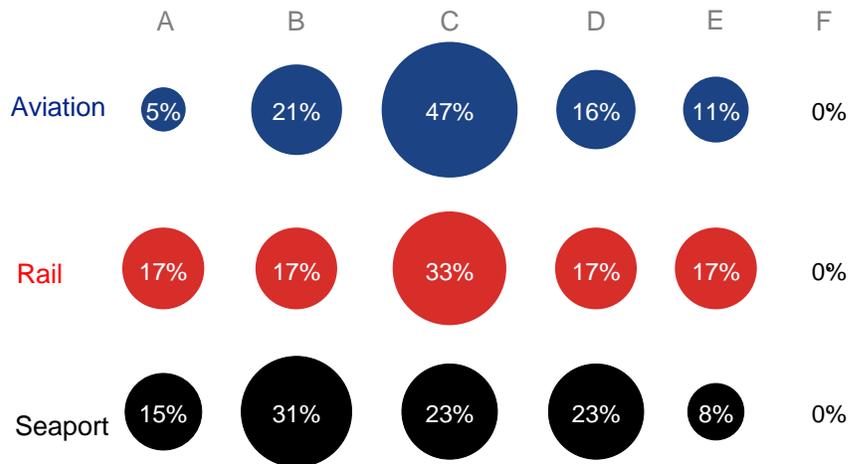


SUPPORTING MEASURE

Intermodal connectivity is important to moving people and goods. This measure addresses the adequacy of highways that provide connections to SIS hubs including airports, passenger and rail terminals, and seaports. Level of service (LOS) planning software was used to calculate average highway speed – highways were aggregated to calculate overall connector travel time and speed. This supporting measure covers LOS for those highways that provide connection to airports, rail terminals and water ports. As shown in **Figure 18**, the vast majority of SIS intermodal connectors are performing at an acceptable level of service.

Figure 18: Aviation/Rail/Seaport Highway LOS Adequacy

The vast majority of SIS intermodal connectors are performing at an acceptable level of service.



KEY STRATEGIES TO IMPROVE ACCESSIBILITY

FDOT will help ensure that continued progress is made to improve its core measure of accessibility through these actions:

- Maximize the use of existing SIS facilities, including improving the efficiency of these facilities through the use of technology and operational decisions
- Add capacity to existing SIS facilities where needed to support growth in demand and relieve congestion, or consider new SIS facilities when needed to fill major gaps in connectivity
- Ensure connectivity between the SIS and regional and local transportation facilities to support complete end-to-end trips
- Continue to routinely look for ways to improve pedestrian and bicycling access as part of FDOT’s project development and maintenance activities

UTILIZATION



How much is used?

FDOT has identified a series of core measures related to the mobility and economic competitiveness of the transportation system. The core measure of utilization describes how much of the transportation system is used and conversely what capacity or availability remains. This relates to user perceptions of the degree to which transportation facilities or services are congested. FDOT has identified supporting measures that provide further detail and context about utilization performance:

- Miles Severely Congested
- Travel Severely Congested

Miles Severely Congested

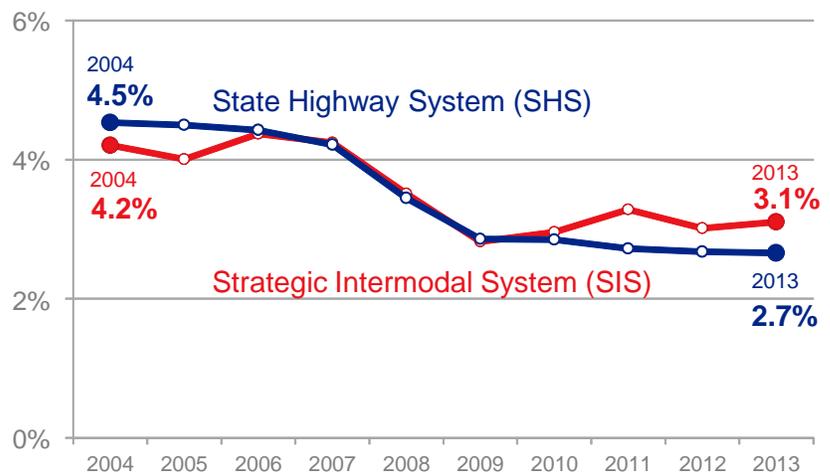


Florida has experienced a notable reduction in the number of miles that are severely congested³ during the peak hour on the State Highway System (SHS) and on the Strategic Intermodal System (SIS) as shown in **Figure 19**. This reduction began in 2006.

- 2.7 percent of SHS miles were severely congested during the peak hour in 2013—this had been as high as 4.5 percent in 2004
- By comparison, 3.1 percent of SIS miles were severely congested in 2013 as compared to 4.2 percent in 2004

Florida has experienced a notable reduction in the number of miles that are severely congested during the peak hour on the SHS and SIS.

Figure 19: Miles of Severely Congested Roads During Peak Hour



³ Severe congestion is travel on roadways operating at a level-of-service (LOS) F.

Travel Severely Congested

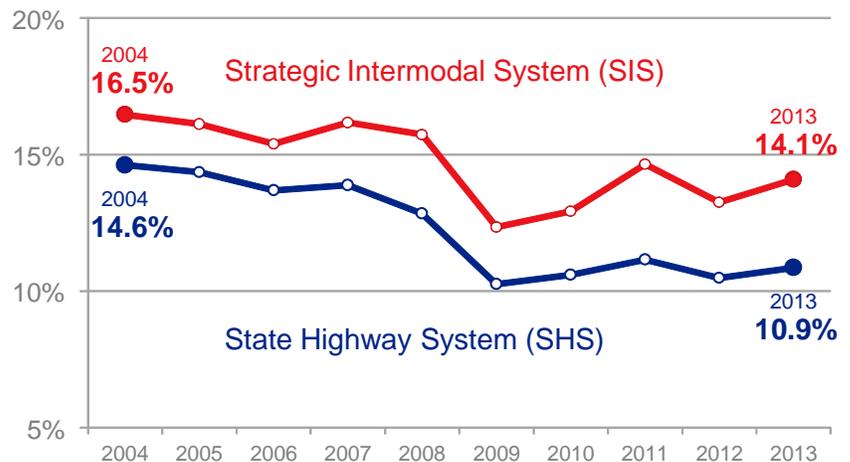


Florida has experienced a marked reduction in severe peak hour travel congestion on the State Highway System (SHS) and on the Strategic Intermodal System (SIS) as seen in **Figure 20**. Whereas the measure of miles severely congested is based on roadway mileage, travel severely congested is based on vehicle miles of travel (VMT). The reduction in travel severely congested began in 2008.

- In 2013 10.9 percent of the SHS was severely congested during the peak hour—this had been as high as 14.6 percent in 2004
- By comparison, in 2014, 14.1 percent of SIS highway corridors were severely congested as compared to 16.5 percent in 2004
- Severe congestion on the SHS and on the SIS in Florida’s non-urbanized areas is negligible, with well under 1 percent being severely congested

Severe congestion on the SHS and SIS in Florida’s non-urbanized areas is negligible, with well under 1 percent being severely congested.

Figure 20: Travel on Severely Congested Roads During Peak Hour



KEY STRATEGIES TO IMPROVE UTILIZATION

FDOT will help ensure that continued progress is made to improve its core measure of utilization through these actions:

- Identify and invest in “last-mile projects” (e.g., small improvements such as turn lanes and intersection geometry to improve truck movement, etc.)
- Implement managed lanes to manage congestion
- Coordinate with local governments to promote land uses that are consistent with and supportive of transportation infrastructure
- Continue to advance ITS/access management investments that improve system performance
- Maximize the use of existing SIS facilities, including improving the efficiency of these facilities through the use of technology and operational decisions
- Focus on new and emerging technologies that have potential for improving transportation operating efficiency
- Promote and/or support efforts of MPOs and others that encourage ride sharing, expanded transit use, flexible work times, and telecommuting

Additional Mobility Performance Measures

The Multimodal Mobility Performance Measures (MMPM) program measures and reports on the performance of mobility, to enable a better understanding of how to improve mobility. The four core measures are shown in **Figure 21**, arranged by people/freight and mode of travel.

Mobility performance measures are used in systems planning and metropolitan planning to identify the location, scale, and nature of transportation problems and needs to identify possible solutions to these problems. The measures may be applied statewide, in an area-wide analysis (e.g., the seven largest counties together), or by functional system. Metropolitan planning organizations address many of the same issues at a metropolitan level.

More information can be found at FDOTperforms.org or floridampms.com.

Figure 21: Multimodal Mobility Performance Measures Matrix

	MODE	QUANTITY	QUALITY	ACCESSIBILITY	UTILIZATION
People	Auto/Truck	Vehicle Miles Traveled Person Miles Traveled	% Travel Meeting LOS Criteria % Miles Meeting LOS Criteria Travel Time Reliability Travel Time Variability Vehicle Hours of Delay Person Hours of Delay Average Travel Speed		% Miles Severely Congested % Travel Severely Congested Hours Severely Congested Vehicles Per Lane Mile
	Transit	Passenger Miles Traveled Passenger Trips	Average Headway		
	Pedestrian		Level of Service (LOS)	% Sidewalk Coverage	
	Bicycle		Level of Service (LOS)	% Bike Lane/Shoulder Coverage	
	Aviation	Passengers	Departure Reliability	Highway Adequacy (LOS)	Demand to Capacity Ratios
	Rail	Passengers	Departure Reliability		
	Seaports	Passengers		Highway Adequacy (LOS)	
Freight	Truck	Combination Truck Miles Traveled Truck Miles Traveled Combination Truck Tonnage Combination Truck Ton Miles Traveled	Travel Time Reliability Travel Time Variability Combination Truck Hours of Delay Combination Truck Average Travel Speed		% Miles Severely Congested Vehicles Per Lane Mile Combination Truck Backhaul Tonnage
	Aviation	Tonnage		Highway Adequacy (LOS)	
	Rail	Tonnage		Highway Adequacy (LOS) Active Rail Access	
	Seaports	Tonnage Twenty-foot Equivalent Units		Highway Adequacy (LOS) Active Rail Access	

Reporting Periods: = Peak Hour = Peak Period = Daily = Yearly

Bold = FDOT MAP-21 Recommended Measure *Italicized Text* = Measures added 2014

ECONOMY

FDOT has identified a series of core measures related to the mobility and economic competitiveness of the transportation system. Economy, as a broad measure, encompasses several non-transportation measures that are important to transportation such as Florida’s share of U.S. trade. FDOT also uses several measures that are transportation specific that demonstrate our contribution to economic well-being. FDOT and other transportation system operators primarily support economic competitiveness by providing access and mobility. In addition to mobility measures we also focus on transportation and the economy in terms of these useful indicators:

Context Measures	Transportation Specific Measures
<ul style="list-style-type: none"> • Florida-Originating Exports • Florida Share of U.S. Trade • Jobs by Transportation-Intensive Sector 	<ul style="list-style-type: none"> • Return on Investment (ROI) • Capacity Funds for the SIS • Projects Completed On-Time • Projects Completed Within Budget

Return on Investment



FDOT’s macroeconomic model evaluates the long-term economic benefits of its investment in capital projects through the FDOT Work Program. The model quantifies the benefits of investments in highway, transit, seaports, and rail projects. These benefits translate into cost savings for Florida’s businesses and time savings for Florida’s workers and consumers.

Every \$1 invested in FDOT’s Work Program generates \$4.40 in economic benefits (**Figure 22**). FDOT is also improving its ability to estimate return on investment for individual transportation projects. This will provide useful economic findings for FDOT’s Executive Board and other decision makers.

Figure 22: Benefit-Cost Summary of FDOT Work Program (in present value)

BENEFITS	
Personal Income Benefits	\$76.00
Non-Business User Benefits	\$65.70
Total Benefits	\$141.70
COSTS	
Total Costs	\$32.10
Benefit-Cost Ratio	4.40

Every \$1 invested in FDOT’s Work Program generates \$4.40 in economic benefits.

Capacity Funds for the SIS



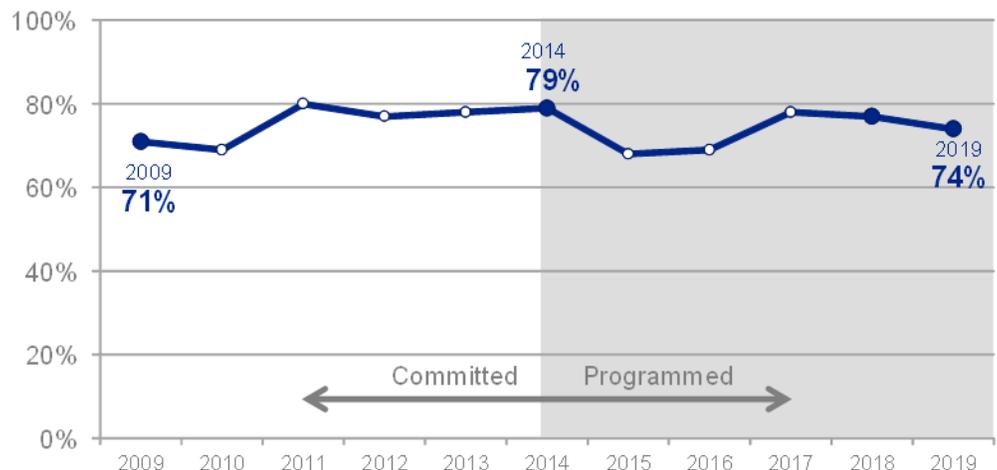
The Strategic Intermodal System (SIS) is the primary focus for ensuring a strong link between economic competitiveness and transportation. The SIS is a statewide network of high-priority transportation facilities, including the largest and most significant commercial service airports, spaceports, deep-water seaports, freight rail terminals, passenger rail and intercity bus terminals, rail corridors, urban-fixed guideway transit corridors, waterways and high-volume highways.

SIS facilities carry more than 99 percent of all commercial air passengers and cargo, virtually all waterborne freight and cruise passengers, all rail freight, and 89 percent of all interregional passengers. The SIS also accounts for more than 70 percent of truck traffic and 54 percent of total traffic on the State Highway System. SIS improvements also receive extensive private and local investment—showing the importance of these facilities to communities and business.

State statute (s. 339.135) directs FDOT to allocate at least 50 percent of new discretionary highway capacity funds to the SIS. In addition, FDOT has set a target to allocate up to 75 percent of new discretionary capacity funds to the SIS. As shown in **Figure 23**, this policy assists the State in committing about 75 percent of all capacity funds to the SIS from year to year.

Of the \$13.6 billion programmed for SIS capacity funding in the current Work Program covering 2015 to 2019, \$12.1 billion has been programmed for highway improvements, \$691 million for aviation and spaceports, \$312 million for seaports, \$129 million for rail, \$216 million for Transit New Starts, and \$154 million for intermodal capacity improvements.

Figure 23: Capacity Funds for Strategic Intermodal System Projects – FY 2009 to 2019



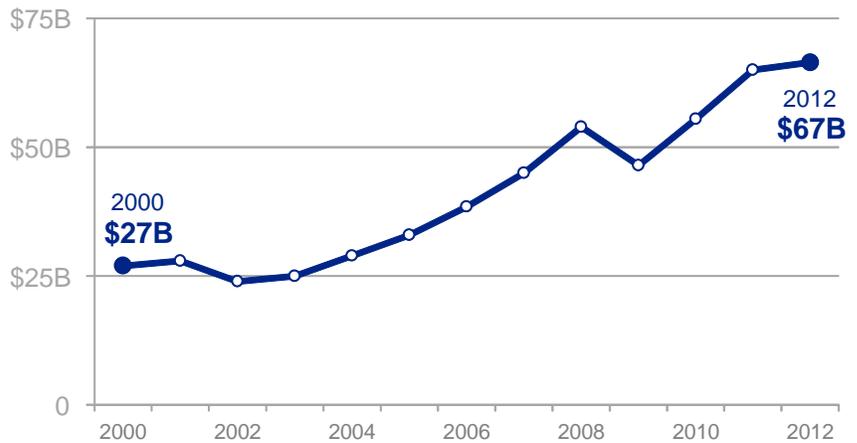
Florida-Originating Exports



Florida is a key player in the global economy as a gateway to the Caribbean and South America. As **Figure 24** shows there was a major increase in exports from Florida as measured by dollar value between 2000 and 2012. This positive finding underscores the importance of the state’s surface transportation system connecting goods with water ports, airports and the Interstate Highway System. Continued growth in exports and the jobs associated with them relies on a good, reliable transportation system.

There has been a major increase in exports from Florida—nearly 150 percent since 2000.

Figure 24: Florida-Originating Exports



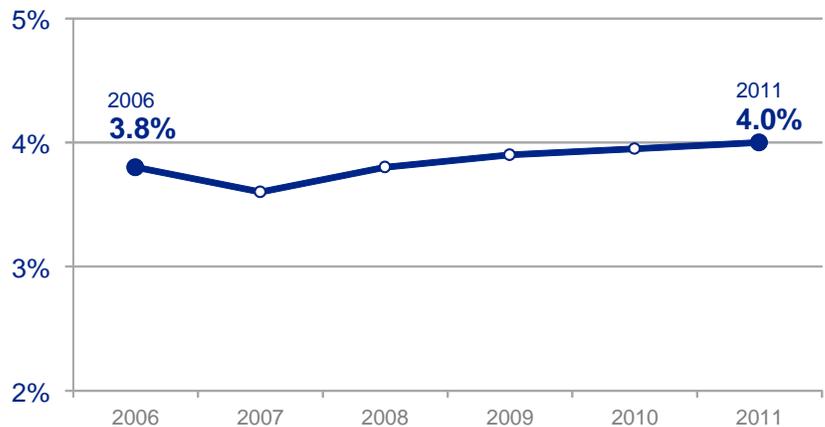
Florida Share of US Trade Flow



Figure 25 shows that Florida’s share of overall U.S. trade continues to trend upward. As Florida’s economic performance continues to improve transportation facilities must keep pace to provide the access and mobility necessary for long-term growth.

Florida’s share of overall U.S. trade continues to trend upward.

Figure 25: Florida Share of U.S. Trade

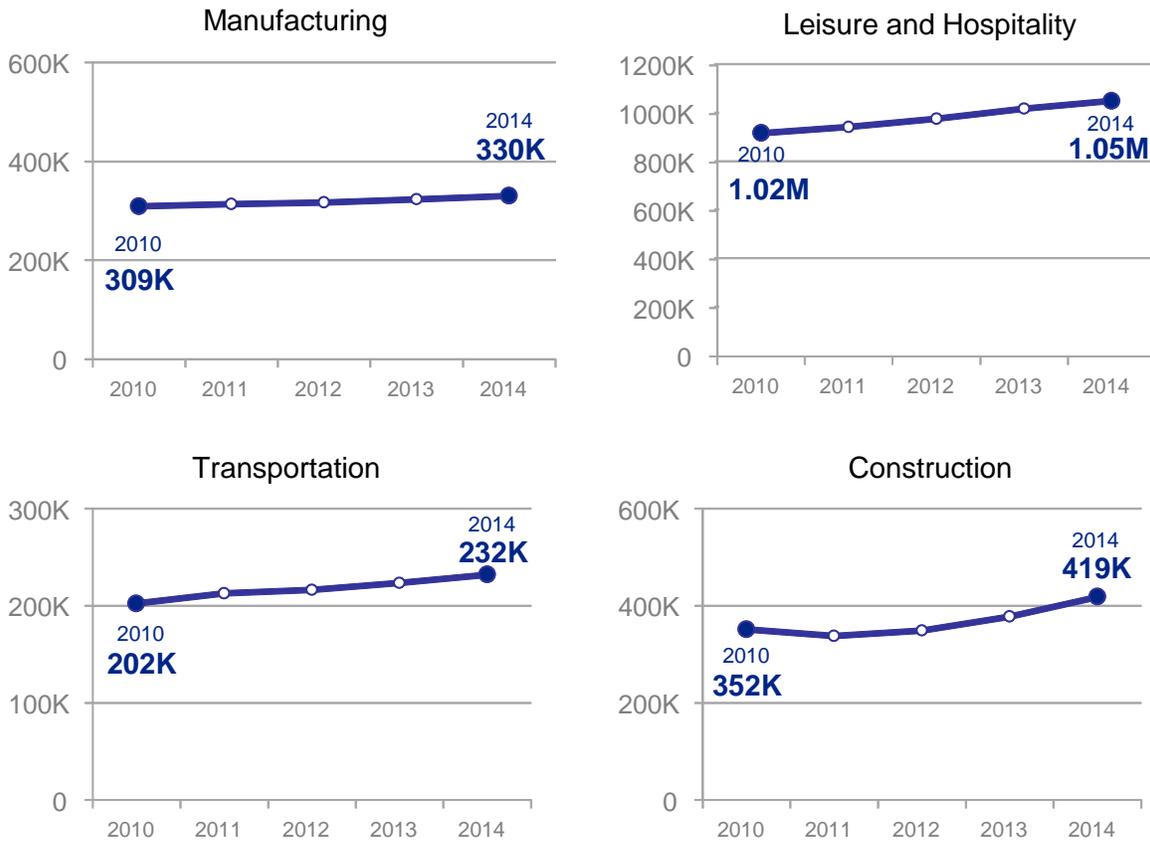


Jobs by Transportation-Intensive Sector



Figure 26 shows job growth in four sectors that are highly dependent on access and mobility to support further long-term growth. FDOT and others need to pay attention to the transportation needs of these and other economic sectors. This, in turn, has implications for transportation demand and access. All four sectors shown are experiencing healthy growth and provide jobs to many Floridians.

Figure 26: Jobs by Sector



Construction Projects Completed On-Time

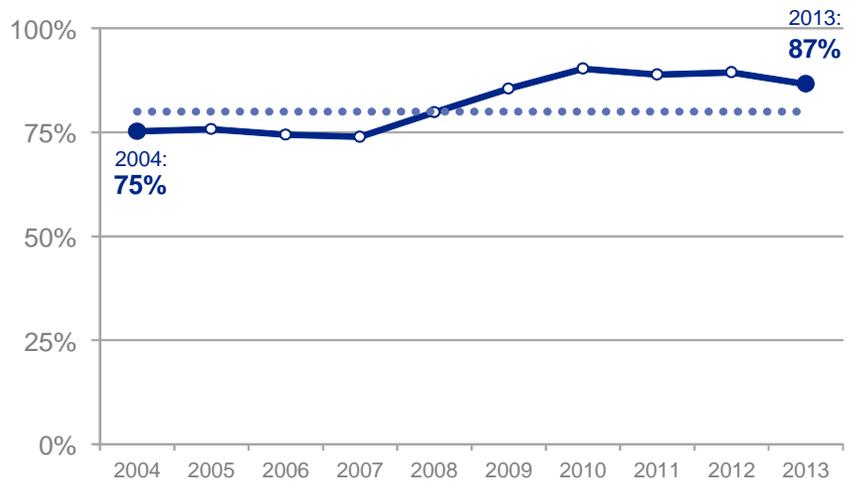


This measure addresses the percent of highway and bridge construction contracts completed by FDOT within 20 percent of the original contract schedule. As shown in **Figure 27**, of the 350 construction contracts completed in 2013, 87 percent were completed within 20 percent of the original contract time, which surpassed FDOT’s 80 percent target.

By completing projects on-time FDOT supports the economy by delivering improvements and often capacity expansions in a timely manner. This translates into time savings and improved access for Florida’s economy—saving time and money for shippers, carriers, and for passenger transportation as well. It also helps reduce the length of time delays related to construction work zones. FDOT strives to pay attention to our customers in this area.

87 percent of FDOT’s construction projects in 2013 were completed on-time.

Figure 27: Construction Projects Completed On-Time



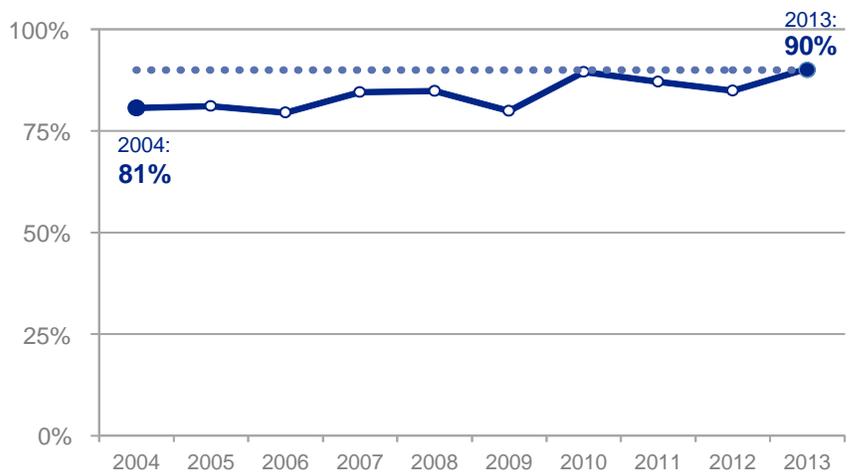
Construction Projects Completed within Budget



This measure addresses the percent of construction contracts completed by FDOT at a cost within 10 percent above the original contract amount. As shown in **Figure 28**, of the 350 construction contracts completed during 2013, 90 percent were completed within 10 percent above the original contract amount, which aligns with FDOT’s 90 percent target. The ability to complete most projects within budget helps to ensure that FDOT can deliver more transportation projects overall, getting more “bang” out of every transportation dollar expended.

Figure 28: Construction Projects Completed within Budget

90 percent of FDOT’s construction projects in 2013 were completed within budget.



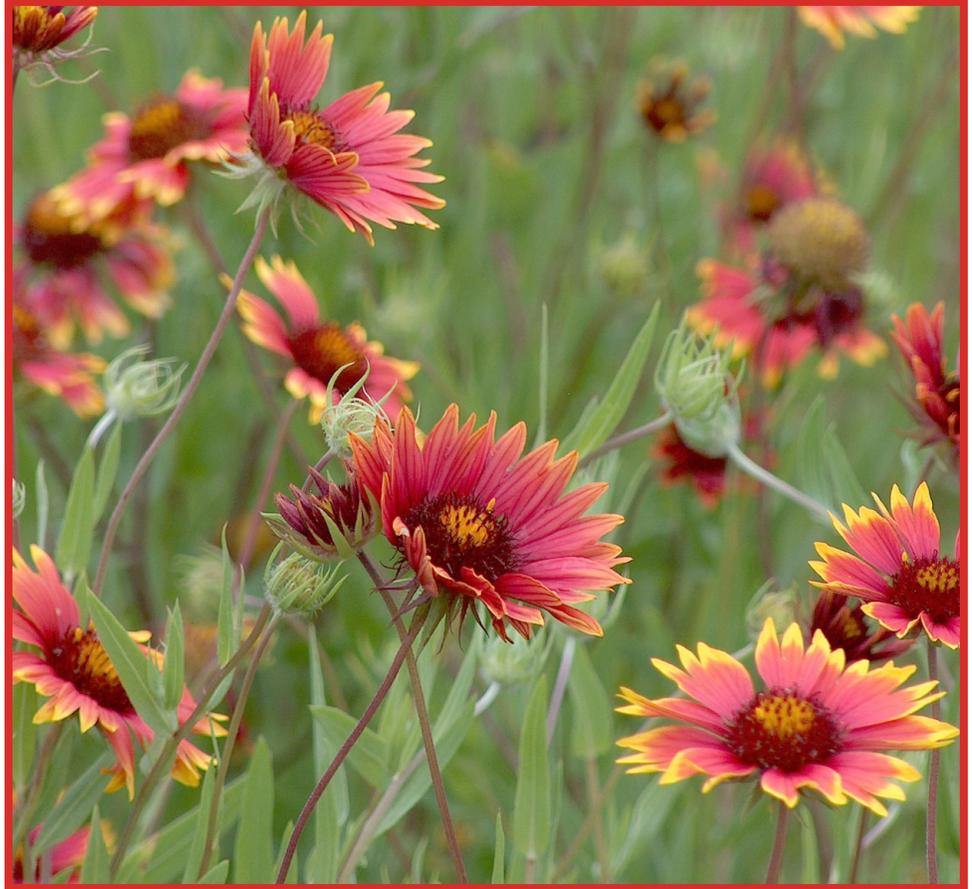
KEY STRATEGIES TO IMPROVE FLORIDA'S ECONOMY

FDOT will help ensure that continued progress is made to improve its core measure of economy through these actions:

- Update and coordinate economic analysis tools to identify projects that will have a high return on investment
- Include economic development opportunities in setting priorities for transportation investment on the SIS and regionally significant transportation facilities
- Continue to prioritize investment in SIS corridors, including identifying opportunities to transform existing SIS facilities and create new SIS facilities
- Develop and streamline mechanisms for expedited funding and implementation of projects that meet economic growth criteria
- Create institutional structures which support statewide, regional and local mobility needs, building upon closer coordination between transportation, land use and economic development decisions
- Support the development of Florida as a major international trade hub with targeted investments in the capacity of and connectivity among SIS hubs and corridors
- Focus investment on the Strategic Intermodal System (SIS) to produce the greatest impact for commerce and economic growth
- Provide options for raising sustainable local, regional, and state transportation resources and investing those resources in projects that have the greatest need and benefit
- Promote funding flexibility to respond quickly to economic opportunities
- Identify transportation needs, revenues, and shortfalls across all modes — maintain this information on a regular basis and communicate it broadly to bolster a greater understanding of transportation challenges and needs
- Maximize the return of federal transportation funds to Florida and the flexibility to use those funds consistent with state, regional, and local priorities
- Improve the efficiency and connectivity of the supply chain serving Florida's businesses

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FLORIDA DEPARTMENT OF TRANSPORTATION



QUALITY OF LIFE &
ENVIRONMENTAL STEWARDSHIP

2014 PERFORMANCE REPORT

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QUALITY OF LIFE and ENVIRONMENTAL STEWARDSHIP

This report is part of the Performance-Based Planning and Programming Process used by the Florida Department of Transportation (FDOT). For a description of that process, updates to this report and other transportation performance reporting initiatives of FDOT, go to FDOTPerforms.org.

INTRODUCTION

The Florida Department of Transportation's (FDOT) decision-making process considers the varied impacts of alternative transportation investments. Transportation and environmental professionals use data and analytical tools to evaluate the environmental effects of transportation project alternatives.

FDOT's environmental review process considers the physical, social, cultural, natural, and human issues associated with each transportation project. This results in avoided or mitigated impacts, public input, and ultimately project advancement with environmental permits.

For maximum effectiveness, transportation planning should mesh with land use, development, and environmental resource planning. Transportation decisions should be made with attention to enriching quality of life while ensuring responsible stewardship of the natural, physical, and human environment.

2014 PERFORMANCE HIGHLIGHTS

FDOT delivers capital investments in transportation through the Work Program as stewards of financial resources and of our state's many environmental and community assets. Key performance highlights include:

- Between 2002 and 2013, air quality in Florida continued to improve. Maximum concentrations, measured by the statewide air monitoring network, of carbon monoxide (CO) decreased by 65 percent, nitrogen dioxide (NO₂) by 25 percent, ozone (O₃) by 15 percent, and fine particles (PM_{2.5}) by 32 percent.
- Between 2003 and 2014, 617 transportation projects were screened through the Efficient Transportation Decision Making (ETDM) process which identifies and evaluates potential environmental impacts and opportunities to avoid or mitigate such impacts.

- FDOT increased the tonnage of recycled pavement from about 570 thousand tons in 2005 to over 940 thousand tons in 2013—an approximately 65 percent increase in less than a decade.
- By 2014, FDOT had 1,023 alternative fuel vehicles in its vehicle fleet. Ten years earlier FDOT's fleet had only 335 alternative fuel vehicles. This three-fold increase translates into fuel savings and improved air quality.
- FDOT takes seriously its leadership platform for environmental stewardship. Through 2014 FDOT installed 515 noise barriers with an equivalent mileage length of 165 miles. This is a significant financial investment in noise mitigation and community quality of life.
- Over the past 15 years, Florida advanced more than 1,400 transportation alternative / transportation enhancement projects such as trails, bicycle, and pedestrian facilities.
- Six of Florida's 24 Scenic Highways (1,499 miles), have been designated National Scenic Byways and one (the Florida Keys Scenic Highway) has been awarded the special All-American Road designation. In 2004 Florida had 485 miles of designated Scenic Highways—the three-fold increase by 2014 underscores the state's natural beauty.
- In 2013 nearly 50 million trips were provided to transportation disadvantaged people across Florida. These trips provide vital access to medical services, employment, and education. They also helped by providing access to job training, day care facilities, and nutritional and other life sustaining activities.
- An Aging Road User Survey is conducted every year (with 2011 as the baseline). Based on the survey, more aging road users have heard of the Safe Mobility for Life Coalition (11 percent in 2013 as compared to 10 percent in 2012). Fifteen percent of survey respondents are preparing for when they can no longer safely drive.

AIR QUALITY



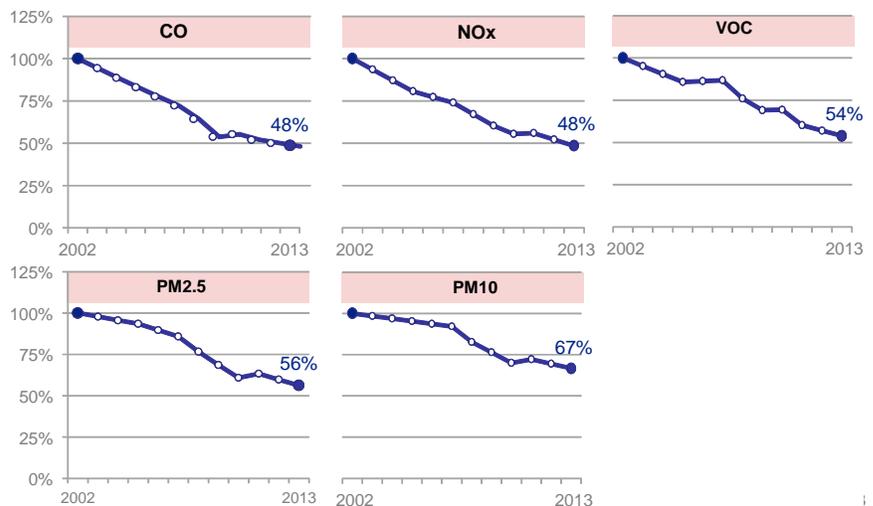
FDOT has identified a core measure related to the quality of life and environmental stewardship of the transportation system, which is a primary goal of FDOT. FDOT has a long-standing commitment to maintaining air quality attainment levels.

Air quality is FDOT’s core measure for quality of life and environmental stewardship. How we move people and goods can impact air quality. Fortunately, vehicles are now far less polluting than in the past. Technology has played a major role in the reduction of transportation-related air pollution. Public transportation, bicycle/pedestrian transportation, intermodal freight movement, transportation system and demand management, and congestion reduction also help to improve air quality. Because of its leadership role for Florida’s transportation system, FDOT is committed to doing what it can to ensure clean air.

Motor vehicle pollutant emissions from the combustion of fuel have long been tied to air quality. The primary air pollutants associated with highway motor vehicles are carbon monoxide (CO), nitrogen oxides (NO_x), and volatile organic compounds (VOC), and to a lesser degree particulate matter (PM₁₀ and PM_{2.5}). Emissions of NO_x and VOC also contribute to the formation of ozone, the primary component of what is commonly referred to as smog. As shown in **Figure 1**, vehicle emission standards and continued improvement in traffic flow have reduced fleet-wide pollutant emissions over the past several decades. Further reductions are expected with the implementation of the U.S. Environmental Protection Agency’s Tier 3 Standards for passenger cars and trucks, even as the number of vehicles on the road increases.

Florida is in compliance with the CO, NO₂, O₃, PM_{2.5}, and PM₁₀ National Ambient Air Quality Standards.

Figure 1: Emissions Trends for Highway Vehicles (Relative to 2002)



KEY STRATEGIES TO IMPROVE AIR QUALITY

FDOT will pursue its targets related to the core measure of air quality through these actions:

- Congestion reduction and mitigation
- Improved and expanded public transportation and increased use of bicycle and pedestrian modes

SUPPORTING MEASURES AND INFORMATION

In addition to its air quality core measure, FDOT has identified a supporting measure:

- Carbon Dioxide – CO₂

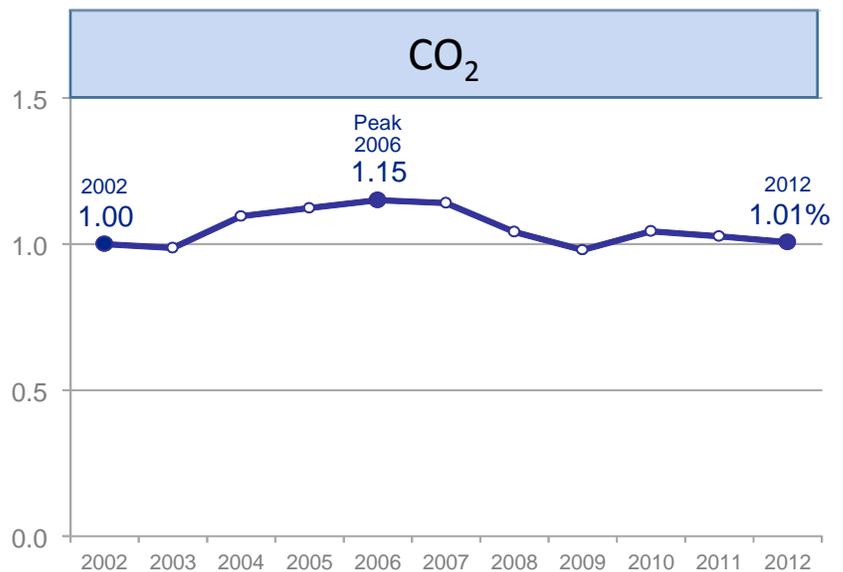
Carbon Dioxide (CO₂)



The combustion of fuel in motor vehicles results in the release of carbon dioxide (CO₂). Given the large number of motor vehicles on the road, a significant portion of the total statewide CO₂ emissions are from this source. Figure 2 shows transportation related CO₂ emissions in Florida from 2002 through 2012. CO₂ emissions from motor vehicles can be reduced through vehicle fuel efficiency improvements, increased use of public transportation, and traffic flow improvements.

CO₂ emissions from motor vehicles can be reduced through vehicle fuel efficiency improvements, increased use of public transportation, and traffic flow improvements.

Figure 2: CO₂ Emissions from Florida Transportation Sector
(Relative to 2002)



ENVIRONMENTAL INITIATIVES

FDOT has identified additional supporting measures and indicators of progress that provide further detail and context about the performance of Florida's transportation system. For environmental initiatives, the supporting measures are:

- Project Screenings
- Recycled Pavement
- Alternative Fuel Vehicles

SUPPORTING MEASURES AND INFORMATION

As a leading Florida employer, FDOT strives to be resource efficient in terms of finances, processes, materials usage, and environmental stewardship responsibilities. The following sections highlight three varied initiatives that reflect environmental stewardship by FDOT relating to transportation project delivery, resource recycling, and fleet management.

Project Screenings



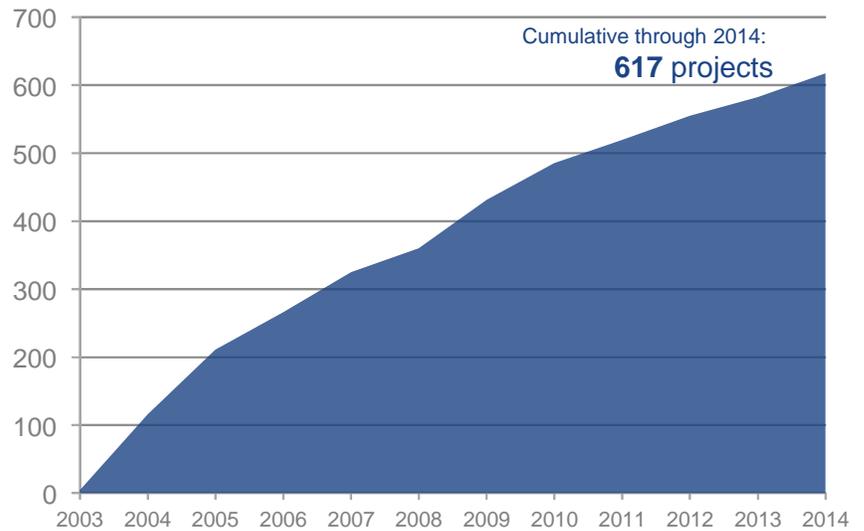
FDOT strives to reconcile transportation improvements with surrounding environmental assets as effectively and efficiently as possible. FDOT has made significant progress through our Efficient Transportation Decision-Making Process (ETDM) project screening. ETDM occurs in planning and Project Development & Environment (PD&E) process as an integral part of project delivery. Collaborating with environmental resource agencies these processes help to avoid, minimize, and mitigate potential environmental effects of proposed transportation projects. It also helps preserve and enhance Florida's natural, physical, cultural, and social environment as FDOT develops, implements, and maintains transportation facilities as cost-effectively as possible.

Process improvements have also translated into project improvements. Such improvements range from early identification of environmental concerns (leading to avoidance or minimization of potential impacts to resources that preserve important historic assets) to adding project features such as roadway lighting schemes that minimize impacts to protected wildlife species. Mobility that respects the environment will enhance and protect Florida's unique quality of life for the long-term.

FDOT works with environmental resource agencies to create linkages between land use, transportation, cultural, and environmental planning initiatives. Along with agency-specific data, comments from the agencies and the public are used to augment identification of and subsequently avoid or minimize potential impacts to natural and cultural resources. As shown in **Figure 3**, between 2003 and 2014, 617 transportation project screenings occurred through the ETDM process.

Between 2003 and 2014, 617 projects have been screened through FDOT's ETDM process.

Figure 3: Projects Screened Through ETDM



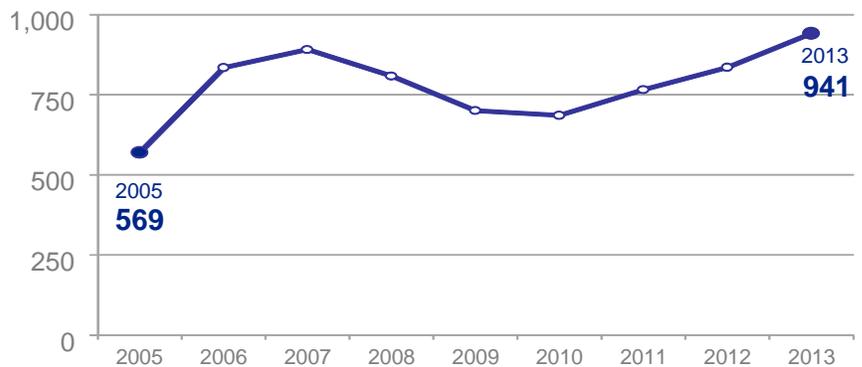
Recycled Pavement



Recycled asphalt pavement has increased over 65 percent since 2005.

Roadway construction and reconstruction are increasingly using recycled materials for cost savings and environmental benefits. The estimated annual amount of recycled asphalt pavement has increased over 65 percent since 2005. As **Figure 4** shows, in 2013 nearly 941 tons of recycled asphalt pavement were applied to Florida highways. This was about a 13 percent increase over the prior year and the highest annual tonnage since FDOT started tracking this measure in 2005. In addition, steel, concrete, fill and other materials are occasionally recycled in construction projects.

Figure 4: Tons of FDOT Recycled Pavement



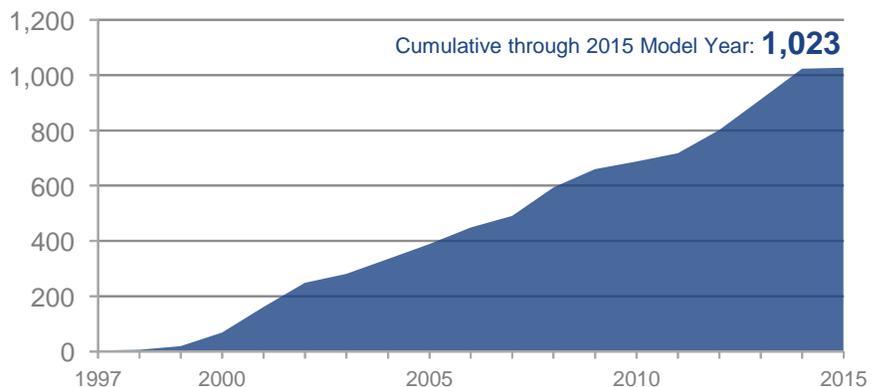
Alternative Fuel Vehicles



FDOT has over 1,000 alternative fuel vehicles in its fleet.

As an environmental steward, FDOT strives to be environmentally responsible in its business practices and operations. As shown in **Figure 5**, by 2014 FDOT had 1,023 alternative fuel vehicles in its fleet. By comparison, ten years earlier the FDOT fleet had 335 alternative fuel vehicles. This three-fold increase translates into fuel savings and demonstrates FDOT's active leadership as a major Florida employer for improving air quality. The vast majority of FDOT's alternative fuel vehicles can be powered by either gasoline or ethanol.

Figure 5: Alternative Fuel Vehicles in FDOT Fleet



ENVIRONMENTAL AND WILDLIFE PROTECTION

FDOT has identified supporting measures and other indicators of progress that provide further detail and context about the performance of the transportation system. For environmental and wildlife protection, they are:

- Miles of Noise Walls
- Wildlife Crossings

SUPPORTING MEASURES AND INFORMATION

FDOT continues to improve the transportation system in ways that demonstrate care for Florida’s unique wildlife resources as well as the needs of people. This section highlights FDOT’s noise wall investments to mitigate highway noise (typically associated with projects that expand capacity) and consideration of wildlife crossings which has resulted in approaches to facilitate the movement of wildlife safely over, under or around transportation facilities.

Miles of Noise Walls



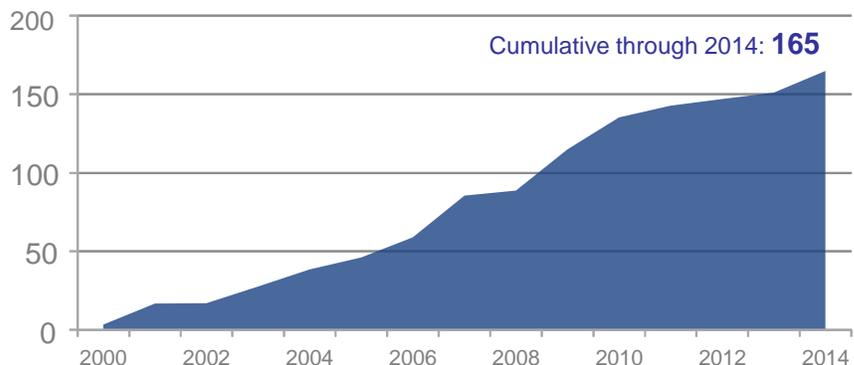
FDOT has made strides mitigating noise impacts where it has been warranted, reasonable, and feasible to do so. All proposed highway capacity improvement projects are evaluated for potential noise impacts. Where noise impacts are predicted, mitigation normally in the form of noise walls, is considered.

As shown in **Figure 6**, through 2014 FDOT installed 515 noise barriers with an equivalent mileage length of 165 miles. Over the past ten years, on average, FDOT installed 12 additional miles of noise walls per year. This is a significant investment in noise mitigation and community quality of life.

Noise walls are not the only strategy for addressing highway noise. The motor vehicle industry, for example, continues to make major advances with noise containment and reduction. Trucking companies have successfully deployed technologies that reduce vehicle idling/fuel consumption and the associated noise and pollutant impacts.

FDOT has installed more than 500 noise barriers totaling 165 miles.

Figure 6: Miles of FDOT Constructed Noise Walls



Wildlife Crossings



SUPPORTING
MEASURE

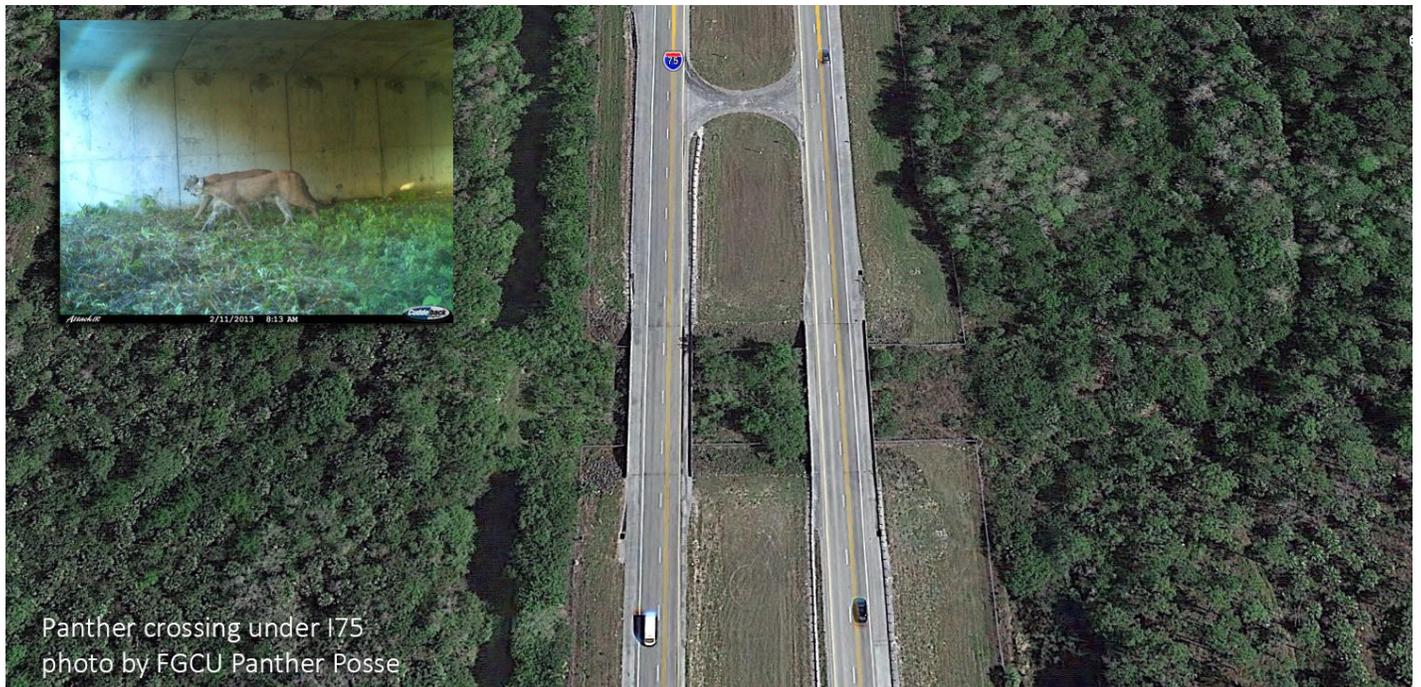
Florida's natural beauty and quality of life have much to do with its vast diversity of wildlife. The state is recognized as a national leader in developing wildlife crossing structures. FDOT has provided safe crossings for a wide range of indigenous Florida wildlife. Its innovative program includes numerous types of crossings including:

- Pipe and culvert systems
- Modified box culverts with ledges for wildlife
- Modification of existing bridges to provide dry passage on wood or earthen shelves along edges
- Other methods to enhance motor vehicle/wildlife safety, such as the installation and ongoing evaluation of a Radio-Activated Detection System on a portion of U.S. 41 to warn motorists of the potential presence of the Florida Panther

FDOT has provided safe crossings for of a wide range of indigenous Florida wildlife.

FDOT routinely seeks out and evaluates innovative approaches to wildlife species protection for potential application to state transportation facilities.

FDOT established guidelines for statewide consistency in determining the appropriateness of wildlife crossings/exclusionary devices. The guidelines also help to provide consistency in the criteria to be considered when designing transportation projects.



Panther crossing under I75
photo by FGCU Panther Posse

VIBRANT AND ATTRACTIVE COMMUNITIES

SUPPORTING MEASURES AND INFORMATION

Highway Beautification

FDOT has identified supporting measures that provide further detail and context about the performance of the transportation system for vibrant and attractive communities, they are:

- Designated Scenic Highways
- Roadside Attractiveness
- Roadsides Kept Litter Free
- Transportation Alternatives/Transportation Enhancements
- Transportation Disadvantaged Trips

This section provides examples of the range of FDOT programs and activities that promote vibrant and attractive communities. We make a consistent effort to keep roadsides litter free as well as pleasing to the eye through various landscaping and beautification efforts. Some of our roadways traverse scenic vistas and have so been designated as scenic highways. Further, FDOT invests in transportation alternative/enhancement projects that provide tremendous community benefits. Finally, our support of transportation disadvantaged trips helps many people connect with their communities who otherwise would have limited or no mobility options.

It is the policy of FDOT to conserve, protect, restore, and enhance Florida's natural resources and scenic beauty. The state strives to have the nation's most beautiful highways with safe roadsides that are durable, and ecologically and economically sustainable.

FDOT is implementing roadside beautification projects using large trees, and few if any shrubs. With thoughtful site specific design, this approach will produce a high visual impact with a distinctive sense of place at a low design, construction, and maintenance cost. Tall trees generously and safely placed at the most highly traveled interchanges and gateways into and through Florida communities (the state's most visible landscapes) create a welcoming and enjoyable experience, a first and lasting impression of the state and individual communities.

As FDOT's highest priority roadside landscapes are completed, beautification can be routinely integrated into the processes used to plan, design, construct, and maintain roadways—roadways that accommodate bold performing landscapes that enhance private enterprise and public health, safety, and welfare. Roadside landscape projects, in addition to being aesthetically pleasing, can mimic natural processes that manage stormwater, filter air, shade pedestrians, conserve energy, and provide wildlife habitat.

Designated Scenic Highways



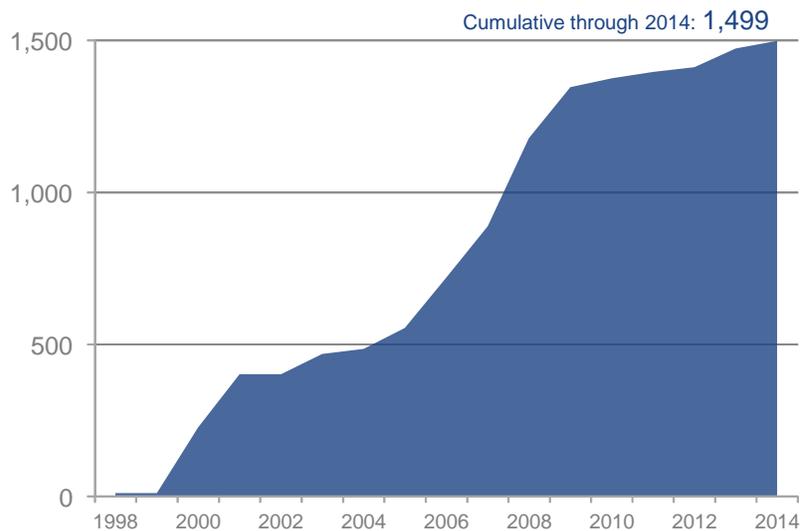
FDOT’s Scenic Highways Program promotes Florida as an attractive destination for travelers, with cultural, historical, archeological, recreational, natural and scenic qualities. As shown in **Figure 7**, among the 24 Florida Scenic Highways (a total of 1,499 miles), six have received National Scenic Byway designation and one (the Florida Keys Scenic Highway) was awarded the special All-American Road designation. For more information go to www.floridascenichighways.com.

Florida’s designated scenic highways promote a heightened awareness of the state’s exceptional resources and unique history through educational and visual experiences. FDOT’s Scenic Highways Program was established to showcase outstanding cultural, historic, archaeological, recreational, natural and scenic resources along the state’s highway system. The program promotes awareness of unique resources valued by Florida residents and visitors. It also focuses on community-based support while seeking to promote regional economic benefits that may result from scenic highway designations.

Scenic highway designation is only awarded to transportation routes with unique assets that enhance the experience of travelers, including scenic vistas and portals to other unique community features. To be considered for designation a community must demonstrate why a route is truly significant, exceptional and distinctive, and how their proposed route will complement the current set of designated scenic highways.

Of Florida’s 24 Scenic Highways, six have received National Scenic Byway designation, while one was awarded the special All-American Road designation.

Figure 7: Miles of Designated Scenic Highways



CUSTOMER SATISFACTION SURVEYS

Since 2000, FDOT has periodically surveyed Florida residents, visitors, commercial drivers, and public officials about our transportation products and services. The survey results help FDOT track its progress in improving customer satisfaction.

FDOT conducted its most recent biennial customer satisfaction surveys in 2014. More than 6,830 FDOT customers responded, including Florida residents (3,189), visitors to Florida (403), public officials (432), and commercial drivers (2,806).

More than 6,830 customers provided feedback through FDOT's most recent customer satisfaction survey.

The following highlights from the customer satisfaction survey provides resident and visitor impressions of the quality of Florida's roadsides. For a complete review of FDOT's customer survey results, please visit the Florida Customer Satisfaction Survey webpage at:

www.dot.state.fl.us/planning/customers. For customer satisfaction, FDOT's supporting measures are:

- Roadside Attractiveness
- Roadside Kept Litter Free



Roadside Attractiveness

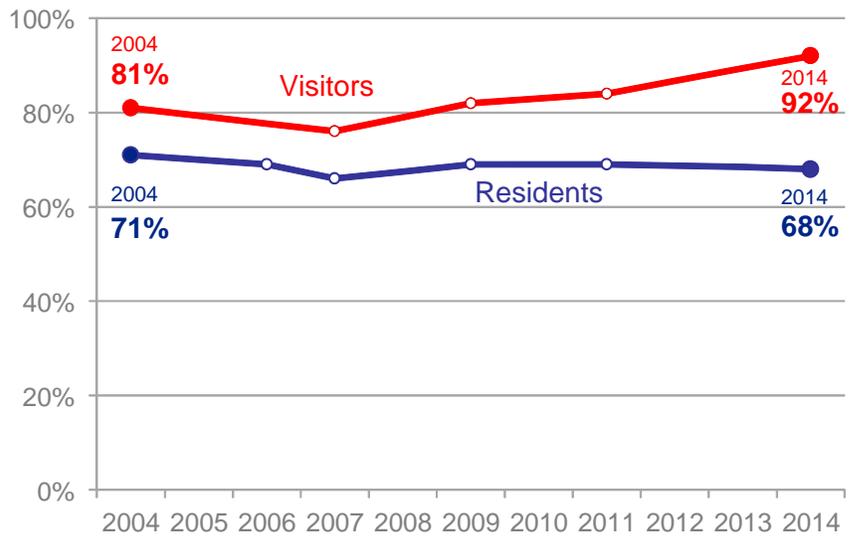


SUPPORTING MEASURE

FDOT realizes that the travel experience itself has significant value for transportation system users, particularly in light of Florida’s great natural beauty. This focus on enhancing the Florida travel experience is opportunity laden and provides an important reminder that performance—at its core—is very much in the eye of the traveler/system user.

As shown in **Figure 8**, the perception of surveyed Florida residents on roadside attractiveness for the State Highway System (SHS) decreased between 2000 and 2014 from 72 percent to 68 percent. Conversely, visitors indicated an improved perception of roadside conditions with 92 percent agreeing that SHS roadsides are attractive. The large difference in perception between residents and visitors suggests that Florida’s roadside conditions are probably better than in many other states.

Figure 8: Percent of Residents and Visitors that Feel the Roadside on the State Highway System are Attractive



92 percent of Florida visitors feel that State Highway System roadsides are attractive.

Roadside Kept Litter Free



SUPPORTING MEASURE

FDOT manages an Adopt-A-Highway program and installs signage to discourage litter. In addition to the Adopt-A-Highway and its volunteer resources, FDOT maintenance crews routinely remove highway litter. Various county-level efforts to discourage litter are also undertaken.

Under the Adopt-A-Highway Program volunteers enter into a two-year agreement with FDOT, agreeing to conduct litter removal at regularly scheduled intervals. Many miles of highway are adopted statewide by various organizations, allowing civic-minded people to make a difference in their communities. This eases the load of FDOT work crews, enabling them to devote more time to other road maintenance and special highway projects.

Volunteers enter into a two-year agreement with FDOT, agreeing to conduct litter removal at regularly scheduled intervals.

Volunteers agree to:

- "Adopt" a two-mile section of a state highway
- Dedicate two years to the program
- Follow specified DOT safety regulations
- Remove litter a minimum of four times each year

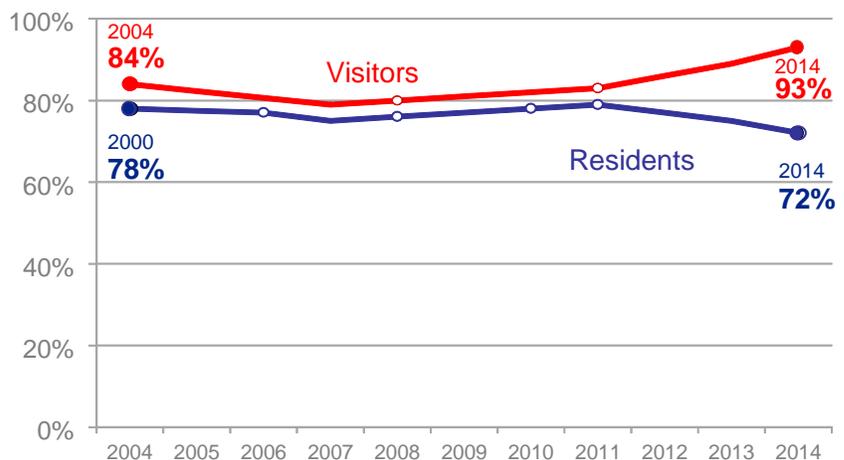
FDOT agrees to:

- Assist with safety meetings
- Provide safety vests and litter bags
- Pick up litter at specified locations
- Post Adopt-A-Highway signs commending organizations at the beginning and end of their sections.

A litter-free roadway is a highly ambitious goal with littering occurring daily. As shown in **Figure 9**, over 93 percent of visitors to Florida perceive SHS roads to be litter free, while 72 percent of Florida residents have a similar perception. This is a high positive rating when considered in light of the aspirational goal of being "litter-free."

Over 93 percent of Florida's visitors feel that State Highway System roads are litter free.

Figure 9: Percent of Residents and Visitors that Feel the Roadside on the State Highway System are Litter Free



FDOT, in partnership with the Federal Highway Administration, has launched a multi-year litter prevention education campaign against roadside litter. The message “DRIVE IT HOME...Keep Our Paradise Litter-Free” is promoted across the state on billboards, TVs, radios, buses and social media. Sports and entertainment celebrities have been tapped to promote the message and challenges have been created to tackle the little problem.



Transportation Alternatives/Enhancements

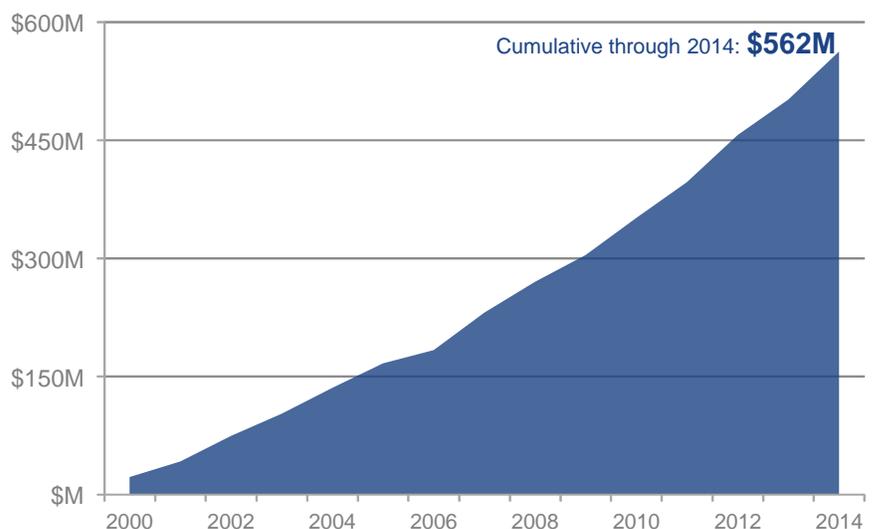


Community visions and values are being supported through implementation of projects under the federally-funded Transportation Alternatives (TA) program (formerly the Transportation Enhancement, Recreational Trails, and Safe Routes to School programs). FDOT currently receives an average allocation of federal funding of about \$50 million per year under the program. TA projects can be community-based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of the transportation system. They can expand travel choice, strengthen the local economy, improve the quality of life, and protect the environment. On- and off-road pedestrian and bicycle facilities, improved access to public transportation, community improvement activities, environmental mitigation, recreational trails, and safe routes to school projects are examples of TA projects.

FDOT has collaborated with numerous local governments over the past two decades to provide opportunities to enhance community visions and interests through TE and now TA projects. As shown in **Figure 10**, since 2000, these coordination efforts have resulted in the completion of 1,406 TA and TE projects totaling more than \$562 million. This is a tremendous investment contributing to quality of life across Florida.

Figure 10: Transportation Alternatives & Transportation Enhancement Project Funding

FDOT has programed over a half billion dollars for Transportation Alternatives and Transportation Enhancement projects since 2000.



Transportation Disadvantaged Trips



Lack of transportation is often cited as one of the greatest barriers to community engagement for people with mobility challenges. The transportation disadvantaged (TD) are those that are unable to transport themselves or purchase transportation because of physical or mental disability, income status, or age. The provision of transportation services is their means for accessing employment, health care, education, and participation in community and religious events and activities. These services include both fixed route and demand response transportation.

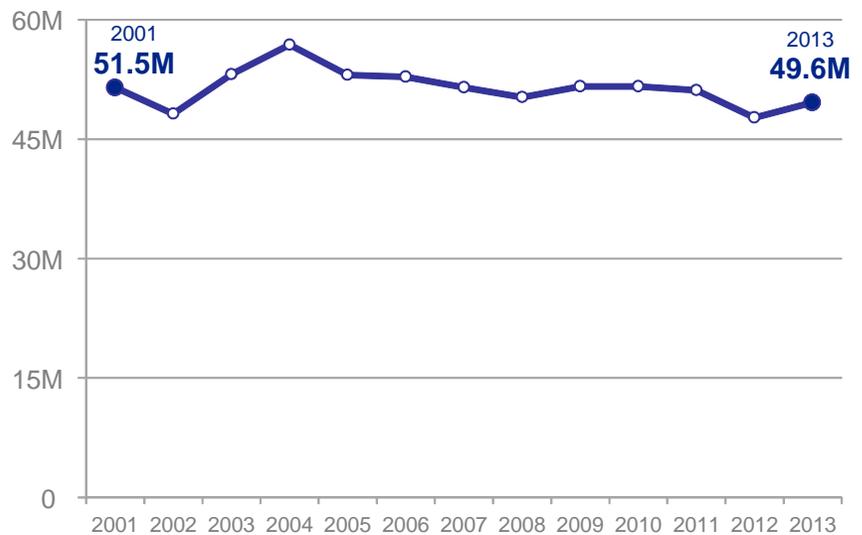
Transportation disadvantaged trips fall into five categories:

- Medical
- Employment
- Education / Training / Day Care
- Nutritional
- Life Sustaining / Other

As shown in **Figure 11**, in 2013 nearly 50 million transportation disadvantaged trips were provided across Florida. The growth in trips provided to transportation disadvantaged citizens has remained relatively flat over the 12 year period between 2001 and 2013, however, during this same period Florida’s population grew slightly more than 18 percent.

Approximately 50 million transportation disadvantaged trips are provided each year.

Figure 11: Transportation Disadvantaged Trips (millions)



According to the Florida Commission for the Transportation Disadvantaged, medical trips are the top purpose for people riding the Coordinated Transportation System. Medical trips account for 36 percent of all trips followed by nutritional trips at 21 percent; education, training and day care trips at 20 percent; trips to other life-sustaining activities at 14 percent; and employment trips at 9 percent. FDOT's Secretary is an ex-officio member of the Commission.

HEALTHY COMMUNITIES

In addition to its core and supporting measures, FDOT has identified several topics that provide further context about the performance of Florida's transportation system for healthy communities, these topics are:

- Safe Mobility for Life
- Public Health and Transportation

Safe Mobility for Life Program

FDOT participates in the Safe Mobility for Life Program (formerly The Elder Road Use Program) which promotes transportation safety for seniors. Recent progress is particularly significant in light of Florida's large and growing senior population:

- An Aging Road User Survey is conducted every year (2011 is the baseline)
- More aging road users have heard of the Safe Mobility for Life Coalition (11 percent in 2013 as compared to 10 percent in 2012)
- 15 percent of survey respondents are preparing for when they can no longer safely or comfortably drive

Public Health and Transportation

The U.S. Department of Transportation and other agencies and stakeholder organizations are focusing on the connection between public health and transportation, recognizing that community design and active transportation (e.g., walking and bicycling) can contribute to wellness and reduced costs associated with chronic disease. See the following website www.fhwa.dot.gov/planning/health_in_transportation/.

Health in Transportation



The Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) promote health through their policies and programs. FHWA, FTA and FDOT have made significant investments in transit infrastructure; bicycle and pedestrian plans, coordinators, and facilities; Safe Routes to School programs; road safety; air quality improvements and congestion reduction; and the management and operations of regional transportation systems. FDOT is an active participant in these funding programs.