Florida Department of Transportation



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About This Report

This report provides a snapshot of select measures that are used to inform decisions and provide feedback on the performance of FDOT, our partners, and Florida's transportation system. While the direct impact of the Department's efforts on individual measures varies, the suite of measures reported here collectively provides a high-level overview of performance. Some of the activities included here are measured and reported in other contexts. For example, certain measures presented in this report are similar to those included in the Florida Transportation Commission's (FTC) *Annual Performance Review* pursuant to s. 334.045, Florida Statutes. Others help to define broader systemwide performance in support of Florida Transportation Plan implementation. This report draws from those other contexts to provide an at-a-glance overview of key measures.

Performance in Context

The mission of the FDOT is to provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity and preserves the quality of our environment and communities. Because Florida's transportation system needs exceed available funding, performance measures are used and integrated into FDOT's business practices to ensure resources are invested in the most strategic, effective and efficient ways possible.



Figure 1: Policy Framework for Investment Decisions

Performance measures are indicators of progress toward attaining a goal, objective or target (a desired level of future performance).

It is the policy of the Department to link performance measures to investment policies and project programming decision-making. This informs decisions provides feedback and on transportation system performance, agency operations and program outcomes. Performance measures also reflect the Department's priorities for accountability and stewardship of resources.

Figure 1 illustrates FDOT'S policy framework for investment decisions.

The **Florida Transportation Plan (FTP)** is the single overarching statewide plan that guides Florida's transportation future. It is a plan for all of Florida;

providing policy direction to FDOT and all statewide, regional, and local partners involved in planning, implementing, and managing Florida's transportation system.

The Strategic Intermodal System (SIS) is a primary focus for implementing the FTP. It is Florida's primary network for ensuring a strong link between transportation and economic competitiveness. These facilities are the workhorses of Florida's transportation system and account for a dominant share of the people and freight movement to, from and within Florida. Therefore, they are the state's highest priority for transportation capacity investments. And while state law (s. 339.135, F.S.) directs FDOT to allocate at least 50 percent of new discretionary highway capacity funds to the SIS, the Department has set a target to allocate up to 75 percent.

The **Program and Resource Plan (PRP)** provides the link between the FTP, the Department's numerous programs (as reflected in the project specific Work Program), and the Department's Legislative Budget Request (LBR). It contains the specific long-range goals and objectives from the FTP, as well as selected operating policies and performance measures, which guide the development of each program in the Department.

The PRP is produced annually, and is a ten-year allocation of projected funding for all major agency functions and programs. Fund allocations and program targets are established based on FDOTs finance plan program and resource planning process, which produces a PRP balanced to anticipated revenues. This is the programming framework by which the Work Program is developed.

As a five-year plan, the **Work Program (WP)** provides details on when and where specific projects and services will be provided and how these projects and services will be funded using available revenue.

The **Legislative Budget Request (LBR)** is the Department's request to the Governor and Legislature for spending authority to do the work of the agency for the next fiscal year. It includes a balanced 36-month forecast of cash and expenditures and a five-year finance plan. For every \$1 invested through FDOT's Work Program, an estimated \$4.40 in economic benefits is generated.

Performance Monitoring is conducted using both qualitative and quantitative measures to show progress towards the attainment of the Department's goals and objectives. For this report, only quantitative measures will be reported.

Performance At a Glance

• goal met or exceeded

needs improvement

unchanged since last report

FDOT Performance Measures	Page	Previous Result	Current Result	Goal	Progress Made		
INFRASTRUCTURE							
Percent of lane miles on the state highway system (SHS) having a pavement condition rating of either excellent or good.	Pg. 4	91.5%	92.0%	> 80%			
Percent of bridge structures on the state highway system (SHS) having a condition rating of either excellent or good.	Pg. 5	95.1%	96.0%	> 90%	•		
Achieve the acceptable maintenance standard on the state highway system (SHS).	Pg. 6	86	86	> 80	•		
MOBILITY							
Vehicle hours of delay (thousands) on the state highway system (SHS) during the peak hour.	Pg. 8	106.38	121.16	decrease each year			
Combination truck hours of delay (thousands) on the state highway system (SHS) during the peak hour.	Pg. 9	16.7	18.2	decrease each year			
Annual transit revenue miles (millions) .	Pg. 9	145.7	148.2	increase/maintain each year	•		
SAFETY							
Number of fatalities on all public roads.	Pg. 10	2,494	2,939	0			
Number of serious injuries on all public roads.	Pg. 10	20,912	21,551	0			
ACCOUNTABILITY			<u> </u>	1			
Percent of construction projects completed on time .	Pg. 11	85.6%	87.8%	> 80%	•		
Percent of construction projects completed within budget .	Pg. 12	92.0%	91.7%	> 90%			

INFRASTRUCTURE

INFRASTRUCTURE

FDOT continues to make substantial investments to meet established standards for highway pavement, bridges, and routine maintenance to keep state highways and bridges in acceptable condition. Regular maintenance and improvements keep assets operating efficiently, extending their useful life, and

delaying the substantial cost of reconstruction or replacement.



Figure 2: Percent of Pavement on the SHS Meeting FDOT Standards

Pavement Condition

exceeding FDOT standards.

FDOT has primary jurisdiction over the State Highway System (SHS) which carries over half of all traffic within Florida. This system includes major roads such as interstates and highways with U.S. or state road numbers.

Resurfacing needs are identified through FDOT's annual pavement condition survey. This survey evaluates pavement conditions in terms of 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 deterioration of the pavement, which leads to loss of smoothness and ultimately, deterioration of the road base by water seepage if not corrected. Wheel-path ruts or "rutting" are pavement depressions caused mainly by heavy use. These depressions or ruts can collect water, creating potential safety hazards.

Figure 2 shows the SHS is in excellent condition, with 92 percent currently exceeding FDOT standards (s. 334.046(4), F.S.). This trend is expected to remain above the 80 percent target, as it has throughout the last decade. Many national surveys consistently rate Florida as having the nation's best pavements when compared to other states.

Source: FDOT Roadway Design Office.

INFRASTRUCTURE

Bridge Condition

FDOT's core bridge measure is percent of bridges on the SHS meeting FDOT standards. The target is to have at least 90 percent of bridges maintained by the Department achieve a National Bridge Inventory (NBI) rating of 6 or higher.



Figure 3: Percent of Bridges on the SHS Meeting FDOT Standards

Source: FDOT Office of Maintenance.

The NBI is a Federal Highway Administration (FHWA) requirement for evaluating bridge conditions, based on a 0 to 9 scale with 0 indicating a failed condition and 9 indicating an excellent condition. An NBI rating of 6 or 7 means a bridge is in good condition.

Figure 3 shows that 96 percent of all FDOT-maintained bridges meet the standard (i.e., an NBI rating of 6 or higher), which substantially exceeds the Department's 90 percent target (s. 334.046(4), F.S.). This means most of FDOT-maintained bridges do not show evidence of structural deterioration nor are they weight restricted.

The Department takes a proactive approach to bridge maintenance, which has proven to be cost-effective. Preventative maintenance and repairs are performed so that bridges will not deteriorate and require greater repair costs. This helps to ensure that FDOT-maintained bridges meet or exceed their life expectancy, resulting in a lower frequency of replacements.

INFRASTRUCTURE

Maintenance

FDOT is responsible for scheduling and performing routine maintenance on the SHS to preserve its condition. The primary measure is to achieve an overall Maintenance Rating Program score of at least 80 for the SHS (s. 334.046(4), F.S.).





Source: FDOT Office of Maintenance.

To determine the maintenance rating, field conditions are evaluated by rating each highway component to develop an overall maintenance condition score. Conditions are compared to FDOT standards and a composite state score is set. 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, litter removal, turf condition, and tree trimming

As shown in Figure 4, FDOT consistently exceeds its roadway maintenance standard year after year, preserving roads at an optimal level for driver safety, mobility, and comfort.

MOBILITY

MOBILITY

Mobility, the movement of people and goods, is transportation's essential function. Florida travel is diverse. People use various modes to commute to jobs, conduct business and obtain services for many other purposes. By providing mobility, FDOT and other transportation system operators make a significant contribution to Florida's economic competitiveness and quality of life. Therefore, measuring mobility performance is essential.





Sources: FDOT Transit Office, Roadway Characteristics Inventory, Traffic Characteristics Inventory; Florida Ports Council; Amtrak Fact Sheet; U.S. Department of Transportation's Aviation Administration, Air Carrier Activity Information System (ACAIS).

Vehicle Hours of Delay

Delay is any additional travel time beyond some norm experienced by a traveler. Delay is important to evaluate because ultimately it equates to cost in time and money for individuals and businesses.

As shown in Figure 6 below, vehicle hours of delay statewide on the SHS and the Strategic Intermodal System (SIS) had been declining over the past decade, but since 2013, have gradually started to increase. While an increase in delay is undesirable from a transportation perspective, it may indicate an economic upturn (which did occur around that period after the 2008 recession).

In the seven most populous metropolitan areas (see Figure 7), vehicle hours of delay have steadily but slowly increased, indicative of the economic recovery and population growth. However, the hours of delay are still well below the levels of the early 2000's even though population growth and vehicle miles of travel have surpassed previous peaks. As such, Florida's transportation system appears to be accommodating economic development with sufficient capacity to support further economic growth.



Figure 6: Vehicle Hours of Delay by Facility Type During Peak Hour

Source: The FDOT Source Book.



Figure 7: Vehicle Hours of Delay on the SHS by Area Type During Peak Hour

Note: the seven largest Metropolitan Planning Organizations (MPOs) are Broward, Hillsborough, MetroPlan Orlando, Miami-Dade, North Florida, Palm Beach and Forward Pinellas. Source: The FDOT Source Book.

MOBILITY

Combination Truck Hours of Delay

A combination truck is a vehicle type consisting of a tractor and a trailer. Since 2011, combination truck hours of delay have generally been trending upwards (see Figure 8). This is notable with respect to efficient goods movement where time does translate into money – additional cost to shippers, carriers, and consumers or cost saving for each.



Figure 8: Combination Truck Hours of Delay by Facility Type

Transit Revenue Miles

Transit revenue

remained almost level for the past

several years.

miles have

Figure 9 shows that the annual number of trips per transit revenue mile has remained almost level over the past ten years. However, there has been a slight increase since 2013. This measure reflects the importance of productivity and efficiency for transit providers.



Figure 9: Transit Revenue Miles

Source: The FDOT Source Book.

Source: The FDOT Source Book.

SAFETY

SAFETY

Transportation safety and security are among the Department's highest commitments to residents, businesses and visitors. Safety improvements and promotion save lives, enhance quality of life and support the state's economic competitiveness. Safety spans all transportation modes. It is affected by many factors, such as driver behaviors, infrastructure conditions, innovations in technology, enforcement and education, and even weather and the natural environment.





Fatalities and Serious Injuries

FDOT's core measures for transportation safety are the number of fatalities and serious injuries. As shown in Figure 10, the number of fatalities and serious injuries are increasing. The Department's long-term aspirational vision is zero deaths on Florida's roadways. To advance this vision, safety is addressed in numerous FDOT plans, including the FTP, the Florida Strategic Highway Safety Plan (SHSP), the Florida Highway Safety Plan (HSP), and the Highway Safety Improvement Plan (HSIP).

It is essential that federal, state, regional and local safety partners and other stakeholders work together to improve safety. Therefore, FDOT collaborates with its safety partners to implement Florida's SHSP to reduce fatalities and serious injuries by strategically targeting resources to the areas with the greatest potential for improvement.

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 obviously more work to do. Driver behavior, for example, is a safety challenge requiring continuous attention and safety improvements often take several years to properly evaluate.

Source: The FDOT Source Book.

ACCOUNTABILITY

ACCOUNTABILITY

As travel demand increases and changes, Florida continues to improve the management and operation of our multimodal transportation system. This improvement is achieved through consistent performance evaluation. FDOT continuously monitors its own performance to ensure that it is working as efficiently and effectively as possible to help deliver that system. A key component of monitoring is the monthly Performance Review where key production and organizational measures are tracked by the Department's executive leadership. While FDOT monitors these measures to ensure predictability and stability of project delivery, the Department also simultaneously looks for innovations to improve processes.

For example, FDOT increasingly uses recycled materials in roadway construction and reconstruction for cost savings and environmental benefits. The Department has also made significant progress in using the nationally recognized Efficient Transportation Decision-Making (ETDM) project screening process. ETDM screenings occur in the planning and programming stages as an integral part of project delivery. In 2017, 38 screening events were completed, providing early coordination and collaboration with environmental resource agencies and stakeholders. These are just a couple of the many innovations and improvements that FDOT implements every day.

One of the best means to evaluate the Department's accountability and success as a steward of public resources is to monitor project delivery performance. Key measures include the timeliness and efficiency of the Department in constructing projects.

Construction Projects Completed On-Time

This core measure is the percent of FDOT highway and bridge construction contracts that are completed within 20 percent of the original schedule. Figure 13 shows that of the 327 construction contracts completed in fiscal year 2016/17, 87.8 percent were completed within 20 percent of the original schedule estimate, which surpassed FDOT's 80 percent goal.



In fiscal year 2016/17 FDOT continues to surpass its 80 percent target for construction projects completed on-time.

Figure 11: Construction Projects Completed On-Time

Source: FDOT Office of Construction, Quarterly Performance Measures Reports

ACCOUNTABILITY

continue to be

budget.

completed within

By completing projects on time, FDOT and its contractors save time and money for freight shippers and the industries that depend on them, as well as for other road users. Completing projects on time also helps reduce the extent of time delays and cost associated with travel through construction work zones. This reflects FDOT's emphasis on responding to customer needs and priorities.

Construction Projects Completed Within Budget

This core measure is the percent of construction contracts that have been completed at a cost within 10 percent of the original contract amount. Figure 14 shows that of the 327 construction contracts completed in fiscal year 2016/17, 91.7 percent were completed within the 10 percent standard, exceeding FDOT's 90 percent goal.

The ability to complete projects within budget helps to ensure that FDOT can deliver more transportation projects with its limited resources, getting a greater "bang" out of every transportation dollar expended.



Figure 12: Construction Projects Completed Within Budget

Source: FDOT Office of Construction, Quarterly Performance Measures Reports.

NEW FEDERAL REQUIREMENTS

In addition to the measures that FDOT proactively tracks to monitor performance, there are additional federal requirements that all state DOT's must report. In July 2012, Congress enacted legislation titled Moving Ahead for Progress in the 21st Century or more commonly referred to as MAP-21. The stated primary objectives of MAP-21 are to increase the transparency and accountability related to states' investment of federal taxpayer dollars into transportation infrastructure and services nationwide, and to ensure that states distribute funds to transportation projects that collectively make progress toward the achievement of national goals.

The national goal areas identified were:

- Safety;
- Infrastructure Condition;
- System Reliability;
- Freight Movement and Economic Vitality;
- Environmental Sustainability; and
- Reduced Project Delivery Delays

Other legislation followed in December 2015 titled Fixing America's Surface Transportation (FAST) Act. It supported and continued the goals and overall performance management approach of MAP-21.

To assess states' progress, performance measures were established through rule-making that address each of the national goal areas. State departments of transportation (DOTs) are required to establish targets for the performance measures prescribed by the rules within one year of their release date. The Metropolitan Planning Organizations (MPOs) then have 180 additional days after the State DOT establishes targets to report targets for their jurisdictions. The State DOT may incur penalties and be held accountable if the FHWA determines significant progress toward established targets has not been met.

FDOT is currently working in collaboration with the MPOs and providers of public transportation, to the extent practicable, to establish statewide targets by the required deadlines.