



## Appendix 1B. System Performance Report

# **Sarasota Manatee Metropolitan Planning Organization Long Range Transportation Plan System Performance Report**

**Office of Policy Planning  
Florida Department of Transportation**

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## 1.0 Purpose

This document provides language that Florida’s metropolitan planning organizations (MPO) may incorporate in Long-Range Transportation Plan (LRTP) System Performance Reports to meet the federal transportation performance management rules. Updates or amendments to the LRTP must incorporate a System Performance Report that addresses these measures and related information no later than:

- May 27, 2018 for Highway Safety measures (PM1);
- October 1, 2018 for Transit Asset Management measures;
- May 20, 2019 for Pavement and Bridge Condition measures (PM2);
- May 20, 2019 for System Performance measures (PM3); and
- July 20, 2021 for Transit Safety measures. (Due to the emergency declaration resulting from the COVID-19 pandemic, FTA issued a Notice of enforcement discretion which delayed the initial deadline of July 20, 2020 for one-year)

The document is consistent with the Transportation Performance Measures Consensus Planning Document developed jointly by the Florida Department of Transportation (FDOT) and the Metropolitan Planning Organization Advisory Council (MPOAC). This document outlines the minimum roles of FDOT, the MPOs, and the public transportation providers in the MPO planning areas to ensure consistency to the maximum extent practicable in satisfying the transportation performance management requirements promulgated by the United States Department of Transportation in Title 23 Parts 450, 490, 625, and 673 of the Code of Federal Regulations (23 CFR).

The document is organized as follows:

- Section 2 provides a brief background on transportation performance management;
- Section 3 covers the Highway Safety measures (PM1);
- Section 4 covers the Pavement and Bridge Condition measures (PM2);
- Section 5 covers System Performance measures (PM3);
- Section 6 covers Transit Asset Management (TAM) measures; and
- Section 7 covers Transit Safety measures.

## 2.0 Background

Pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21) Act enacted in 2012 and the Fixing America's Surface Transportation Act (FAST Act) enacted in 2015, state departments of transportation (DOT) and metropolitan planning organizations (MPO) must apply a transportation performance management approach in carrying out their federally required transportation planning and programming activities. The process requires the establishment and use of a coordinated, performance-based approach to transportation decision-making to support national goals for the federal-aid highway and public transportation programs.

On May 27, 2016, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) issued the Statewide and Nonmetropolitan Transportation Planning;



### 3.0 Highway Safety Measures (PM1)

Effective April 14, 2016, the FHWA established five highway safety performance measures<sup>3</sup> to carry out the Highway Safety Improvement Program (HSIP). These performance measures are:

1. Number of fatalities;
2. Rate of fatalities per 100 million vehicle miles traveled (VMT);
3. Number of serious injuries;
4. Rate of serious injuries per 100 million vehicle miles traveled (VMT); and
5. Number of non-motorized fatalities and non-motorized serious injuries.

The Florida Department of Transportation (FDOT) publishes statewide safety performance targets in the HSIP Annual Report that it transmits to FHWA each year. Current safety targets address calendar year 2018 and are based on a five-year rolling average (2011-2015). For the 2018 HSIP annual report, FDOT established statewide HSIP interim safety performance measures and FDOT’s 2019 safety targets, which set the target at “0” for each performance measure to reflect the Department’s vision of zero deaths.

The Sarasota/Manatee MPO adopted/approved their first safety performance targets on January 22, 2018. Table 3 -1 indicates the areas in which the MPO is expressly supporting the statewide target developed by FDOT, as well as those areas in which the MPO has adopted a target specific to the MPO planning area.

**Table 3-1 Highway Safety (PM1) Targets**

<b>Performance Target</b>	<b>Sarasota/Manatee MPO agrees to plan and program projects so that they contribute toward the accomplishment of the FDOT safety target of zero</b>	<b>Sarasota/Manatee has adopted a target specific to the MPO Planning Area</b>
Number of fatalities		✓
Rate of fatalities per 100 million vehicle miles traveled (VMT)		✓
Number of serious injuries		✓
Rate of serious injuries per 100 million vehicle miles traveled (VMT)		✓
Number of non-motorized fatalities and non-motorized serious injuries.		✓

The MPO analyzed safety data collected within the MPO planning area for the ten previous years related to safety performance measures in an effort to identify realistic, attainable safety performance targets based on historical data and projected trends. Following the FDOT’s

<sup>3</sup> 23 CFR Part 490, Subpart B

designation of targets for the five safety performance measures, the Sarasota/Manatee MPO Board adopted their first targets for the 2014 – 2018 five-year rolling average on January 22, 2018. The MPO has met the 2014 – 2018 targets for number of fatalities, number of serious injuries, fatality rate, and serious injuries rate.

**Table 3-2 2014-2018 Highway Safety (PM1) Conditions and Performance**

<b>Performance Measures</b>	<b>Florida Statewide Baseline Performance (Five-Year Rolling Average 2014 - 2018)</b>	<b>FDOT 5-year Targets 1/1/14 to 12/31/18</b>	<b>Sarasota/ Manatee Baseline Performance (Five-Year Rolling Average 2014 - 2018*)</b>	<b>Sarasota/ Manatee Adopted 5-Year Targets 1/1/14 to 12/31/18**</b>
Number of Fatalities	3,052	0	112	121
Number of Serious Injuries	20,861	0	1,513	1,540
Non-Motorized Fatalities and Serious Injuries	3,447	0	1,430	171
Fatality Rate	1.65	0	1.51	1.51
Serious Injury Rate	11.06	0	13.37	19.37

\*Based on actual data through December 2018

\*\*Estimate based on available data through November 2017 and interpolated for 12 months

After a careful analysis of data for the ten previous years, the MPO adopted their third round of targets for the 2016 – 2020 five-year rolling average on January 27, 2020 setting realistic, attainable safety performance targets based on historical statistics and projected trends. The MPO also supported FDOT’s target of “0” as a long-term goal and will continue to implement strategies that work towards accomplishing this goal.

**Table 3-3 2015-2020 Highway Safety (PM1) Conditions and Performance**

<b>Performance Measures</b>	<b>FDOT Projected 2015 - 2019 5-year Rolling Average</b>	<b>FDOT 5-year Targets 1/1/15 to 12/31/19</b>	<b>Sarasota/ Manatee Adopted 5-year Targets 1/1/15 to 12/31/19*</b>	<b>Sarasota/ Manatee Projected 2015 – 2019 5-year Rolling Average**</b>	<b>Sarasota/ Manatee Adopted 5-year Targets 1/1/16 to 12/31/20**</b>
Number of Fatalities	3,177	0	109	115	109

Number of Serious Injuries	21,107	0	1,438	1,506	1,438
Non-Motorized Fatalities and Serious Injuries	3,801	0	174	170	170
Fatality Rate	1.63		1.63	1.46	1.46
Serious Injury Rate	10.85	0	21.84	19.59	19.59

\*Estimate based on available data through August 2018 and interpolated for 12 months

\*\*Estimate based on available data through November 2019

### 3.1 Trend and Baseline Conditions

To set the targets for 2019 and 2020, the MPO reviewed the actual annual crashes from 2011 to 2019 and found that fatalities and serious injuries had been increasing throughout the years, following an upwards trend line. Now, using actual data through November of 2019, the projected numbers for 2019 and 2020 show an increase in number of fatalities and number of serious injuries but a decrease in nonmotorized fatalities and serious injuries.

**Table 3-4 Sarasota Manatee MPO Annual Crashes from 2010 to 2020**

Performance Measures	Annual Crashes										
	2011	2012	2013	2014	2015	2016	2017	2018 Actual	2019 Adopted	2019 Estimate*	2020 Trend**
Number of Fatalities	75	95	74	88	114	139	101	120	109	99	123
Number of Serious Injuries	764	777	695	955	1395	1858	1514	1428	1438	1335	1738
Non-Motorized Fatalities and Serious Injuries	125	162	113	158	191	214	162	138	146	146	139
Fatality Rate	1.031	1.302	1.00	1.15	1.44	1.70	1.23	1.43	1.63	2	2
Serious Injury Rate	10.500	10.648	9.35	12.52	17.60	22.72	18.36	17.03	21.84	22	24

\*Numbers are estimated based on available data through November 2019 and interpolated for 12 months.

\*\*Numbers are based on trends

With the available data and 12-month interpolation for 2019, the MPO is projected to not meet their 2015 – 2019 safety targets, for number of fatalities and number of serious injuries. The MPO has projected a decrease in non-motorized fatalities and serious injuries, fatality rates, and serious injuries rates. The MPO has used the observed crash trends from 2011 through 2018 to project the rolling averages for the third round of safety targets for the period, 2016 – 2020.

**Table 3-5 Sarasota Manatee MPO Five-Year Rolling Averages**

Performance Measures	5-Year Rolling Averages						
	2011 - 2015	2012 - 2016	2013 - 2017	2014 - 2018	2015 -2019	2011- 2015	2012- 2016
Number of Fatalities	89	102	103	112	109	115	109
Fatality Rate	1.18	1.32	1.38	1.51	1.63	1.46	1.46
Number of Serious Injuries	917	1136	1283	1430	1438	1506	1438
Serious Injuries Rate	12.12	14.57	16.65	19.37	21.84	19.59	19.59
Non-Motorized Fatalities and Serious Injuries	150	168	168	173	174	170	170

\*Numbers are estimated based on available data through November 2019 and interpolated for 12 months.

The process used to develop the MPO’s Long Range Transportation Plan includes analysis of safety data trends, including the location and factors associated with crashes with emphasis on fatalities and serious injuries. These data are used to help identify regional safety issues and potential safety strategies for the LRTP and TIP.

### 3.2 Coordination with Statewide Safety Plans and Processes

The Sarasota/Manatee MPO recognizes the importance of linking goals, objectives, and investment priorities to established performance objectives, and that this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the Sarasota/Manatee MPO 2045 LRTP reflects the goals, objectives, performance measures, and targets as they are available and described in other state and public transportation plans and processes; specifically the Florida Strategic Highway Safety Plan (SHSP), the Florida Highway Safety Improvement Program (HSIP), and the Florida Transportation Plan (FTP).

- The 2016 Florida Strategic Highway Safety Plan (SHSP) is the statewide plan focusing on how to accomplish the vision of eliminating fatalities and reducing serious injuries on all public roads. The SHSP was developed in coordination with Florida’s 27 metropolitan planning organizations (MPOs) through Florida’s Metropolitan Planning Organization Advisory Council (MPOAC). The SHSP guides FDOT, MPOs, and other safety partners in addressing safety and defines a framework for implementation activities to be carried out throughout the State.
- The FDOT HSIP process provides for a continuous and systematic process that identifies and reviews traffic safety issues around the state to identify locations with potential for improvement. The ultimate goal of the HSIP process is to reduce the number of crashes, injuries and fatalities by eliminating certain predominant types of crashes through the implementation of engineering solutions.
- Transportation projects are identified and prioritized with the MPOs and non-metropolitan local governments. Data are analyzed for each potential project, using traffic safety data and traffic demand modeling, among other data. The FDOT Project Development and Environment Manual requires the consideration of safety when

preparing a proposed project’s purpose and need, and defines several factors related to safety, including crash modification factor and safety performance factor, as part of the analysis of alternatives. MPOs and local governments consider safety data analysis when determining project priorities.

### 3.3 *LRTP Safety Priorities*

The Sarasota/Manatee MPO 2045 LRTP increases the safety of the transportation system for motorized and non-motorized users as required. The LRTP aligns with the Florida SHSP and the FDOT HSIP with specific strategies to improve safety performance focused on prioritized safety projects, pedestrian and/or bicycle safety enhancements, and traffic operation improvements to address our goal to reduce fatalities and serious injuries.

The LRTP identifies safety needs within the metropolitan planning area and provides funding for targeted safety improvements. The Sarasota/Manatee MPO has developed a project selection process that gives preference to projects that address an identified motorized or non-motorized high crash location; improve safety for vulnerable users; and improve traffic flow on an evacuation route.

The Sarasota/Manatee MPO 2045 LRTP will provide information from the FDOT HSIP annual reports to track the progress made toward the statewide safety performance targets. The MPO will document the progress on any safety performance targets established by the MPO for its planning area.

The Sarasota/Manatee MPO 2045 LRTP emphasizes the MPO’s commitment to safety through the goals identified in the plan. One of the LRTP’s goals is Safety and Security, which includes the following objectives:

- Decrease vehicle crashes at hazardous locations
- Reduce crashes and conflicts between all users and modes
- Improve safety for vulnerable users
- Improve system for evacuation and recovery
- Provide education to increase safety and security

Additionally, the Sarasota/Manatee MPO supports safety programs including Safe Routes to Schools (SRTS) and the Community Traffic Safety Team (CTST) where local law enforcement, emergency responders, jurisdiction engineers, and the school board come together to tackle safety issues within the region.

In FY 2017/18 the MPO conducted an in-depth analysis of all crashes. Using crash patterns identified throughout the region, the MPO developed a set of mitigation strategies aimed at improving safety. Working with FDOT and local partners, 20 high crash locations were identified as well as the top 12 emerging high crash corridors for further assessment and recommendations. Recommendations for improvements were submitted to FDOT for funding consideration in this and future LRTPs and TIPs.

US 41 Multi Modal Emphasis Corridor is a program included in the past two LRTPs. In 2020, the MPO conducted the US 41 MMEC Gap and Safety Analysis in order to evaluate the MMEC

Program's effectiveness and to determine if any changes to the program's goals, objectives, and strategies are needed while assessing existing conditions along the corridor to identify potential safety and mobility assessments that address the MPO's safety, mobility, and environmental and livability performance measures.

The MPO developed Scenarios: Current Trend, Economic Diversity, Environmental Health, and Vibrant Places were evaluated based on 8 performance measures. To develop a cohesive vision from the scenario preferences, four tiers were produced to capture each aspect of the vision. The first tier, Environmental Health, looks to focus growth into areas west of the existing urban growth boundary to focus development away from rural and environmental lands to the east and to recognize the impacts of climate change for those areas to the west. The next two tiers involve the Economic Diversity of the US-41 corridor and regional access provided by I-75, Port Manatee, and the Sarasota-Bradenton International Airport. The fourth tier, Vibrant Places, joins the others together by providing transportation connections such as premium transit and express bus service, potential future inter-city rail, and new connections to close existing network gaps. Through review and public comment, the vision from the preferred scenario directs local policies, investments, and transportation projects addressed in the Cost Feasible Plan. There are 92 projects in the Cost Feasible Plan that include off-road shared use paths, ITS infrastructure, roundabouts, complete streets projects, and intersection geometry improvements that address conditions and performance of highway safety and performance and efforts to achieve the highway safety performance targets.

## 4.0 Pavement and Bridge Condition Measures (PM2)

### 4.1 *Pavement and Bridge Condition Performance Measures and Targets Overview*

In January 2017, USDOT published the Pavement and Bridge Condition Performance Measures Final Rule, which is also referred to as the PM2 rule. This rule establishes the following six performance measures:

1. Percent of Interstate pavements in good condition;
2. Percent of Interstate pavements in poor condition;
3. Percent of non-Interstate National Highway System (NHS) pavements in good condition;
4. Percent of non-Interstate NHS pavements in poor condition;
5. Percent of NHS bridges (by deck area) classified as in good condition; and
6. Percent of NHS bridges (by deck area) classified as in poor condition.

For the pavement measures, five pavement metrics are used to assess condition:

- International Roughness Index (IRI) - an indicator of roughness; applicable to all asphalt and concrete pavements;
- Cracking percent - percentage of the pavement surface exhibiting cracking; applicable to all asphalt and concrete pavements;
- Rutting - extent of surface depressions; applicable to asphalt pavements;
- Faulting - vertical misalignment of pavement joints; applicable to certain types of concrete pavements; and

- Present Serviceability Rating (PSR) – a quality rating applicable only to certain lower speed roads.

For each pavement metric, a threshold is used to establish good, fair, or poor condition. Pavement condition is assessed for each 0.1 mile section of the through travel lanes of mainline highways on the Interstate or the non-Interstate NHS using these metrics and thresholds. A pavement section is rated as good if all three metric ratings are good, and poor if two or more metric ratings are poor. Sections that are not good or poor are considered fair.

The good/poor measures are expressed as a percentage and are determined by summing the total lane-miles of good or poor highway segments and dividing by the total lane-miles of all highway segments on the applicable system. Pavement in good condition suggests that no major investment is needed and should be considered for preservation treatment. Pavement in poor condition suggests major reconstruction investment is needed due to either ride quality or a structural deficiency.

The bridge condition measures refer to the percentage of bridges by deck area on the NHS that are in good condition or poor condition. The measures assess the condition of four bridge components: deck, superstructure, substructure, and culverts. Each component has a metric rating threshold to establish good, fair, or poor condition. Each bridge on the NHS is evaluated using these ratings. If the lowest rating of the four metrics is greater than or equal to seven, the structure is classified as good. If the lowest rating is less than or equal to four, the structure is classified as poor. If the lowest rating is five or six, it is classified as fair.

The bridge measures are expressed as the percent of NHS bridges in good or poor condition. The percent is determined by summing the total deck area of good or poor NHS bridges and dividing by the total deck area of the bridges carrying the NHS. Deck area is computed using structure length and either deck width or approach roadway width.

A bridge in good condition suggests that no major investment is needed. A bridge in poor condition is safe to drive on; however, it is nearing a point where substantial reconstruction or replacement is needed.

Federal rules require state DOTs and MPOs to coordinate when setting pavement and bridge condition performance targets and monitor progress towards achieving the targets. States must establish:

- Four-year statewide targets for the percent of Interstate pavements in good and poor condition;
- Two-year and four-year targets for the percent of non-Interstate NHS pavements in good and poor condition; and
- Two-year and four-year targets for the percent of NHS bridges (by deck area) in good and poor condition.

MPOs must establish four-year targets for all six measures. MPOs can either agree to program projects that will support the statewide targets or establish their own quantifiable targets for the MPO’s planning area.

The two-year and four-year targets represent pavement and bridge condition at the end of calendar years 2019 and 2021, respectively.

#### 4.2 Pavement and Bridge Condition Baseline Performance and Established Targets

This System Performance Report discusses the condition and performance of the transportation system for each applicable target as well as the progress achieved by the MPO in meeting targets in comparison with system performance recorded in previous reports. Because the federal performance measures are new, performance of the system for each measure has only recently been collected and targets have only recently been established. Accordingly, this first Sarasota/Manatee MPO LRTP System Performance Report highlights performance for the baseline period, which is 2017. FDOT will continue to monitor and report performance on a biennial basis. Future System Performance Reports will discuss progress towards meeting the targets since this initial baseline report.

Table 4 -1 presents baseline performance for each PM2 measure for the State and for the MPO planning area as well as the two-year and four-year targets established by FDOT for the State.

**Table 4-1 Pavement and Bridge Condition (PM2) Performance and Targets**

<b>Performance Measures</b>	<b>Statewide Performance (2017 Baseline)</b>	<b>Statewide 2-year Target (2019)</b>	<b>Statewide 4-year Target (2021)</b>	<b>Sarasota/Manatee MPO Performance (2017 Baseline)</b>
Percent of Interstate pavements in good condition	66%	n/a	60%	95%
Percent of Interstate pavements in poor condition	0.1%	n/a	5%	0%
Percent of non-Interstate NHS pavements in good condition	76.4%	40%	40%	40%
Percent of non-Interstate NHS pavements in poor condition	3.6%	5%	5%	1%
Percent of NHS bridges (by deck area) in good condition	67.7%	50%	50%	92%
Percent of NHS bridges (by deck area) in poor condition	1.2%	10%	10%	0%

FDOT established the statewide PM2 targets on May 18, 2018. In determining its approach to establishing performance targets for the federal pavement and bridge condition performance measures, FDOT considered many factors. To begin with, FDOT is mandated by Florida Statute 334.046 to preserve the state's pavement and bridges to specific standards. To adhere to the statutory guidelines, FDOT prioritizes funding allocations to ensure the current transportation system is adequately preserved and maintained before funding is allocated for capacity improvements. These statutory guidelines envelope the statewide federal targets that have been established for pavements and bridges.

In addition, MAP-21 requires FDOT to develop a Transportation Asset Management Plan (TAMP) for all NHS pavements and bridges within the state. The TAMP must include investment strategies leading to a program of projects that would make progress toward achievement of the state DOT targets for asset condition and performance of the NHS. FDOT's TAMP was updated to reflect MAP-21 requirements in 2018.

Further, the federal pavement condition measures require a new methodology that is a departure from the methods currently used by FDOT and uses different ratings and pavement segment lengths. For bridge condition, the performance is measured in deck area under the federal measure, while the FDOT programs its bridge repair or replacement work on a bridge by bridge basis. As such, the federal measures are not directly comparable to the methods that are most familiar to FDOT.

In consideration of these differences, as well as the unfamiliarity associated with the new required processes, FDOT took a conservative approach when setting its initial pavement and bridge condition targets.

The Sarasota/Manatee MPO agreed to support FDOT's pavement and bridge condition performance targets on September 24, 2018. By adopting FDOT's targets, the Sarasota/Manatee MPO agrees to plan and program projects that help FDOT achieve these targets.

The Sarasota/Manatee MPO recognizes the importance of linking goals, objectives, and investment priorities to established performance objectives, and that this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the Sarasota/Manatee MPO 2045 LRTP reflects the goals, objectives, performance measures, and targets as they are described in other state and public transportation plans and processes, including the Florida Transportation Plan (FTP) and the Florida Transportation Asset Management Plan.

- The FTP is the single overarching statewide plan guiding Florida's transportation future. It defines the state's long-range transportation vision, goals, and objectives and establishes the policy framework for the expenditure of state and federal funds flowing through FDOT's work program. One of the seven goals defined in the FTP is Agile, Resilient, and Quality infrastructure.
- The Florida Transportation Asset Management Plan (TAMP) explains the processes and policies affecting pavement and bridge condition and performance in the state. It presents a

strategic and systematic process of operating, maintaining, and improving these assets effectively throughout their life cycle.

The Sarasota/Manatee MPO 2045 LRTP seeks to address system preservation, identifies infrastructure needs within the metropolitan planning area, and provides funding for targeted improvements. The MPO uses a project prioritization process and project selection criteria related to pavement and bridge condition in the LRTP and TIP that prioritize projects that address aging or deteriorating infrastructure on roads and bridges. One of the LRTP's goals is Infrastructure Resiliency, which includes the following objectives:

- Preserve and maintain the existing transportation system
- Retrofit and replace aging bridges to include multi modal options
- Identify and mitigate the effect of extreme weather events on the system

The annual Pavement Condition Report and the Federal Highway Administration's (FHWA) National Bridge Inventory show that 21 regionally significant bridges in the MPO's jurisdiction are rated as being in Fair condition. Additionally, one bridge of regional significance was previously rated as being in Poor condition, the Cortez Bridge over Sarasota Pass, but recent repairs improved the bridge rating to Fair. Continued bridge inspections and assessments will identify potential bridge deficiencies and include recommended repairs, rehabilitation, or replacement of bridges when ratings fall below Fair conditions.

Additionally, in 2018, the MPO's Security Assessment Report was developed in response to emergency recovery planning training the MPO received in 2018. The report documents existing regional hazard planning efforts, outlines current MPO practices, and identifies recommendations for the MPO moving forward. The information and recommendations from this report inform the long-term hazard mitigation and recovery planning process in the LRTP.

On or before October 1, 2020, FDOT will provide FHWA and the Sarasota/Manatee MPO a detailed report of pavement and bridge condition performance covering the period of January 1, 2018 to December 31, 2019. FDOT and the Sarasota/Manatee MPO also will have the opportunity at that time to revisit the four-year PM2 targets.

The MPO developed Scenarios: Current Trend, Economic Diversity, Environmental Health, and Vibrant Places were evaluated based on 8 performance measures. To develop a cohesive vision from the scenario preferences, four tiers were produced to capture each aspect of the vision. The first tier, Environmental Health, looks to focus growth into areas west of the existing urban growth boundary to encourage development away from rural and environmental lands to the east recognizing the impacts of climate change for those areas to the west. The next two tiers involve the Economic Diversity of the US-41 corridor and regional access provided by I-75, Port Manatee, and the Sarasota-Bradenton International Airport. The fourth tier, Vibrant Places, joins the others together by providing transportation connections such as premium transit and express bus service, potential future inter-city rail, and new connections to close existing network gaps. Through review and public comment, the vision from the preferred scenario directs local policies, investments, and transportation projects addressed in the Cost Feasible Plan. There are 46 projects in the Cost Feasible Plan that include road widening projects,

additional lanes, and complete street projects that address preservation of the existing transportation system, pavement and bridge condition, and performance efforts to achieve the PM2 performance targets.

## 5.0 System Performance, Freight, and Congestion Mitigation & Air Quality Improvement Program Measures (PM3)

### 5.1 System Performance/Freight/CMAQ Performance Measures and Targets Overview

In January 2017, USDOT published the System Performance/Freight/CMAQ Performance Measures Final Rule to establish measures to assess passenger and freight performance on the Interstate and non-Interstate National Highway System (NHS), and traffic congestion and on-road mobile source emissions in areas that do not meet federal National Ambient Air Quality Standards (NAAQS). The rule, which is referred to as the PM3 rule, requires MPOs to set targets for the following six performance measures:

#### **National Highway Performance Program (NHPP)**

1. Percent of person-miles on the Interstate system that are reliable, also referred to as Level of Travel Time Reliability (LOTTR);
2. Percent of person-miles on the non-Interstate NHS that are reliable (LOTTR);

#### **National Highway Freight Program (NHFP)**

3. Truck Travel Time Reliability index (TTTR);

#### **Congestion Mitigation and Air Quality Improvement Program (CMAQ)**

4. Annual hours of peak hour excessive delay per capita (PHED);
5. Percent of non-single occupant vehicle travel (Non-SOV); and
6. Cumulative 2-year and 4-year reduction of on-road mobile source emissions (NO<sub>x</sub>, VOC, CO, PM<sub>10</sub>, and PM<sub>2.5</sub>) for CMAQ funded projects.

In Florida, only the two LOTTR performance measures and the TTTR performance measure apply. Because all areas in Florida meet current NAAQS, the last three measures listed above pertaining to the CMAQ Program do not currently apply in Florida.

LOTTR is defined as the ratio of longer travel times (80th percentile) to a normal travel time (50th percentile) over all applicable roads during four time periods (AM peak, Mid-day, PM peak, and weekends) that cover the hours of 6 a.m. to 8 p.m. each day. The LOTTR ratio is calculated for each roadway segment, essentially comparing the segment with itself. Segments with  $LOTTR \geq 1.50$  during any of the above time periods are considered unreliable. The two LOTTR measures are expressed as the percent of person-miles traveled on the Interstate or non-Interstate NHS system that are reliable. Person-miles take into account the number of people traveling in buses, cars, and trucks over these roadway segments. To obtain person miles traveled, the vehicle miles traveled (VMT) for each segment are multiplied by the average vehicle occupancy for each type of vehicle on the roadway. To calculate the percent of person miles traveled that are reliable, the sum of the number of reliable person miles traveled is divided by the sum of total person miles traveled.

TTTR is defined as the ratio of longer truck travel times (95<sup>th</sup> percentile) to a normal travel time (50<sup>th</sup> percentile) over the Interstate during five time periods (AM peak, Mid-day, PM peak, weekend, and overnight) that cover all hours of the day. TTTR is quantified by taking a weighted average of the maximum TTTR from the five time periods for each Interstate segment. The maximum TTTR is weighted by segment length, then the sum of the weighted values is divided by the total Interstate length to calculate the Travel Time Reliability Index.

The data used to calculate these PM3 measures are provided by FHWA via the National Performance Management Research Data Set (NPMRDS). This dataset contains travel times, segment lengths, and Annual Average Daily Travel (AADT) for Interstate and non-Interstate NHS roads.

The PM3 rule requires state DOTs and MPOs to coordinate when establishing performance targets for these measures and to monitor progress towards achieving the targets. FDOT must establish:

- Two-year and four-year statewide targets for percent of person-miles on the Interstate system that are reliable;
- Four-year targets for the percent of person-miles on the non-Interstate NHS that are reliable<sup>4</sup>; and
- Two-year and four-year targets for truck travel time reliability

MPOs must establish four-year performance targets for all three measures within 180 days of FDOT establishing statewide targets. MPOs establish targets by either agreeing to program projects that will support the statewide targets, or setting quantifiable targets for the MPO's planning area.

The two-year and four-year targets represent system performance at the end of calendar years 2019 and 2021, respectively.

## 5.2 PM3 Baseline Performance and Established Targets

The System Performance Report discusses the condition and performance of the transportation system for each applicable PM3 target as well as the progress achieved by the MPO in meeting targets in comparison with system performance recorded in previous reports. Because the federal performance measures are new, performance of the system for each measure has only recently been collected and targets have only recently been established. Accordingly, this first Sarasota/Manatee MPO LRTP System Performance Report highlights performance for the baseline period, which is 2017. FDOT will continue to monitor and report performance on a biennial basis. Future System Performance Reports will discuss progress towards meeting the targets since this initial baseline report.

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<sup>4</sup> Beginning with the second performance period covering January 1, 2022 to December 31, 2025, two year targets will be required in addition to four-year targets for the percent of person-miles on the non-Interstate NHS that are reliable measure.



Table 5 -1 presents baseline performance for each PM3 measure for the state and for the MPO planning area as well as the two-year and four-year targets established by FDOT for the state.

**Table 5-1 System Performance and Freight (PM3) - Performance and Targets**

<b>Performance Measures</b>	<b>Statewide Performance (2017 Baseline)</b>	<b>Statewide 2-year Target (2019)</b>	<b>Statewide 4-year Target (2021)</b>	<b>Sarasota/Manatee MPO Performance (2017 Baseline)</b>	<b>Sarasota/Manatee MPO 4-year Target (2021)</b>
Percent of person-miles on the Interstate system that are reliable (Interstate LOTTR)	82.2%	75.0%	70.0%	92%	80%
Percent of person-miles on the non-Interstate NHS that are reliable (Non-Interstate NHS LOTTR)	84.0%	n/a	50.0%	91%	70%
Truck travel time reliability index (TTTR)	1.43%	1.75	2.00%	1.43	2.10

FDOT established the statewide PM3 targets on May 18, 2018. In setting the statewide targets, FDOT reviewed external and internal factors that may affect reliability, conducted a trend analysis for the performance measures, and developed a sensitivity analysis indicating the level of risk for road segments to become unreliable within the time period for setting targets. One key conclusion from this effort is that there is a lack of availability of extended historical data with which to analyze past trends and a degree of uncertainty about future reliability performance. Accordingly, FDOT took a conservative approach when setting its initial PM3 targets.

The Sarasota/Manatee MPO agreed to support FDOT’s PM3 targets on September 24, 2018. By adopting FDOT’s targets, the Sarasota/Manatee MPO agrees to plan and program projects that help FDOT achieve these targets.

The Sarasota/Manatee MPO recognizes the importance of linking goals, objectives, and investment priorities to established performance objectives, and that this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the Sarasota/Manatee MPO 2045 LRTP reflects the goals, objectives, performance measures, and targets as they are described in other state and public transportation plans and processes, including the Florida Transportation Plan (FTP) and the Florida Freight Mobility and Trade Plan.

- The FTP is the single overarching statewide plan guiding Florida’s transportation future. It defines the state’s long-range transportation vision, goals, and objectives and establishes

the policy framework for the expenditure of state and federal funds flowing through FDOT's work program. One of the seven goals of the FTP is Efficient and Reliable Mobility for People and Freight.

- The Florida Freight Mobility and Trade Plan presents a comprehensive overview of the conditions of the freight system in the state, identifies key challenges and goals, provides project needs, and identifies funding sources. Truck reliability is specifically called forth in this plan, both as a need as well as a goal.

The Sarasota/Manatee MPO 2045 LRTP seeks to address system reliability and congestion mitigation through various means, including capacity expansion and operational improvements. The MPO uses a project prioritization process and project selection criteria related to addressing and reducing congestion through congestion mitigation measures in the LRTP and TIP. One of the LRTP's goals is Mobility/Reliability, which includes the following objectives:

- Promote projects that reduce travel time
- Expand transportation option to reduce auto use
- Identify and expand connectivity in the regional network
- Use best practices to reduce congestion

In the Congestion Management Process (CMP), the top ten most unreliable intersections and roadway segments were identified using (National Performance Management Research Data Set) NPMRDS 2017 data and updated by the MPO in 2020. Identifying these crucial intersections and segments helped guide project prioritization during the LRTP process and aid the MPO in allocating limited dollars to the projects with the largest impact. The Cost Feasible Plan includes funding for an ITS infrastructure project along the US 301 in Sarasota County from Mound St to Manatee County line which is one of the top unreliable roadway segments.

On or before October 1, 2020, FDOT will provide FHWA and the Sarasota/Manatee MPO a detailed report of performance for the PM3 measures covering the period of January 1, 2018 to December 31, 2019. FDOT and the Sarasota/Manatee MPO also will have the opportunity at that time to revisit the four-year PM3 targets.

The MPO developed Scenarios: Current Trend, Economic Diversity, Environmental Health, and Vibrant Places were evaluated based on 8 performance measures. To develop a cohesive vision from the scenario preferences, four tiers were produced to capture each aspect of the vision. The first tier, Environmental Health, looks to focus growth into areas west of the existing urban growth boundary to focus development away from rural and environmental lands to the east and to recognize the impacts of climate change for those areas to the west. The next two tiers involve the Economic Diversity of the US-41 corridor and regional access provided by I-75, Port Manatee, and the Sarasota-Bradenton International Airport. The fourth tier, Vibrant Places, joins the others together by providing transportation connections such as premium transit and express bus service, potential future inter-city rail, and new connections to close existing network gaps. Through review and public comment, the vision from the preferred scenario directs local policies, investments, and transportation projects addressed in the Cost Feasible Plan. There are 83 projects in the Cost Feasible Plan that include ITS infrastructure, turn lanes, improved interchanges and roundabouts, and road widening projects that address system

reliability and freight travel and support investments and efforts to achieve the PM3 performance targets.

## 6.0 Transit Asset Management Measures

### 6.1 Transit Asset Performance

On July 26, 2016, FTA published the final Transit Asset Management rule. This rule applies to all recipients and subrecipients of Federal transit funding that own, operate, or manage public transportation capital assets. The rule defines the term “state of good repair,” requires that public transportation providers develop and implement transit asset management (TAM) plans, and establishes state of good repair standards and performance measures for four asset categories: transit equipment, rolling stock, transit infrastructure, and facilities. The rule became effective on October 1, 2018.

Table 6 -1 below identifies performance measures outlined in the final rule for transit asset management.

**Table 6-1 FTA TAM Performance Measures**

<b>Asset Category</b>	<b>Performance Measure and Asset Class</b>
Equipment	Percentage of non-revenue, support-service and maintenance vehicles that have met or exceeded their useful life benchmark
Rolling Stock	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark
Infrastructure	Percentage of track segments with performance restrictions
Facilities	Percentage of facilities within an asset class rated below condition 3 on the TERM scale

For equipment and rolling stock classes, useful life benchmark (ULB) is defined as the expected lifecycle of a capital asset, or the acceptable period of use in service, for a particular transit provider’s operating environment. ULB considers a provider’s unique operating environment such as geography and service frequency and is not the same as an asset’s useful life.

Public transportation agencies are required to establish and report transit asset management targets annually for the following fiscal year. Each public transit provider or its sponsors must share its targets, TAM, and asset condition information with each MPO in which the transit provider’s projects and services are programmed in the MPO’s TIP.

MPOs are required to establish initial transit asset management targets within 180 days of the date that public transportation providers establish initial targets. However, MPOs are not required to establish transit asset management targets annually each time the transit provider establishes targets. Instead, subsequent MPO targets must be established when the MPO updates the TIP or LRTP.



When establishing transit asset management targets, the MPO can either agree to program projects that will support the transit provider targets, or establish its own separate regional transit asset management targets for the MPO planning area. In cases where two or more providers operate in an MPO planning area and establish different targets for a given measure, the MPO has the option of coordinating with the providers to establish a single target for the MPO planning area, or establishing a set of targets for the MPO planning area that reflects the differing transit provider targets.

To the maximum extent practicable, transit providers, states, and MPOs must coordinate with each other in the selection of performance targets.

The TAM rule defines two tiers of public transportation providers based on size parameters. Tier I providers are those that operate rail service or more than 100 vehicles in all fixed route modes, or more than 100 vehicles or more in one non-fixed route mode. Tier II providers are those that are a subrecipient of FTA 5311 funds, or an American Indian Tribe, or have 100 or less vehicles across all fixed route modes, or have 100 vehicles or less in one non-fixed route mode. A Tier I provider must establish its own transit asset management targets, as well as report performance and other data to FTA. A Tier II provider has the option to establish its own targets or to participate in a group plan with other Tier II providers whereby targets are established by a plan sponsor, typically a state DOT, for the entire group.

A total of 28 transit providers participated in the FDOT Group TAM Plan (Table 6-2). The participants in the FDOT Group TAM Plan are comprised of the Section 5311 Rural Program and open-door Section 5310 Enhanced Mobility of Seniors & Individuals with Disabilities FDOT subrecipients. The Group TAM Plan was adopted in October 2018 and covers fiscal years 2018-2019 through 2021-2022.

**Table 6-2 Florida Group TAM Plan Participants**

District	Participating Transit Providers	
1	Good Wheels, Inc Central Florida Regional Planning Council	DeSoto County Transportation
2	Suwannee Valley Transit Big Bend Transit Baker County Council on Aging Nassau County Transit	Clay Transit Ride Solutions Levy County Transit Ride Solutions Suwannee River Economic Council (SREC)
3	Tri-County Community Council Big Bend District 3 Santa Rosa Transit Gulf County ARC	Calhoun Senior Citizen Center Liberty County Transit JTRANS Wakulla Transit
4	<i>No participating providers</i>	
5	Sumter Transit Marion Transit	Flagler County Public Transportation
6	Key West Transit	
7	Neighborly Care Network Mid-Florida Community Service ARC Tampa Bay	ARC Nature Coast PARC

The Sarasota/Manatee MPO planning area is served by two (2) transit service providers: Manatee County Area Transit and Sarasota County Area Transit are considered Tier II providers.

The Sarasota/Manatee MPO LRTP was developed in cooperation with MCAT and SCAT. The MPO supports MCAT and SCAT’s transit asset targets and agrees to plan projects in the TIP that will, once implemented, make progress toward achieving the transit provider’s targets. The TIP has been evaluated and the anticipated effect of the overall program is that, once implemented, progress will be made towards achieving the transit asset performance targets. FTA funding, as programmed by the region’s transit providers and FDOT, is used for programs and products to improve the condition of the region’s transit assets. The focus of Sarasota/Manatee MPO’s investments that address transit state of good repair include:

**MCAT**

- Operating fixed route
- Capital for fixed route
- Anna Maria Island Trolley enhanced transit services
- Purchase vehicles/equipment

**SCAT**

- Operating fixed route
- Capital for fixed route

The transit asset management targets are based on the condition of existing transit assets and planned investments in equipment, rolling stock, and facilities. The targets reflect the most recent data available on the number, age, and condition of transit assets, and expectations and capital investment plans for improving these assets. Table 6.3 summarizes both existing

conditions for the most recent year available, and the targets developed by MCAT, while Table 6.4 shows the same for SCAT.

**Table 6.3. Manatee County Area Transit (MCAT) Transit Asset Targets**

Asset Category Performance Measure	Asset Class	Useful Life Benchmark	2020 Asset Condition	2020/2021 Target
<b>Rolling Stock</b>				
Age - % of revenue vehicles within a particular asset class that have met or exceeded their ULB	CU-Cutaway	5 years or 200,000 miles	53%	60%
	MB-Motor Bus	12 and 10 years or 500,000 miles	27%	30%
	MV-Minivans	4 years	0%	0%
<b>Equipment</b>				
Age - % of non-revenue vehicles within a particular asset class that have met or exceeded their ULB	Non Revenue/Service Automobile	4 years or 100,000 miles	63%	100%
	Non-Revenue/Service Trucks	4 years or 100,000 miles	60%	75%
<b>Facilities</b>				
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration/Maintenance Facility	n/a	0%	0%
	Passenger Facility	n/a	0%	0%

**Table 6.4. Sarasota County Area Transit (SCAT) Transit Asset Targets**

Asset Category Performance Measure	Asset Class	Useful Life Benchmark	2020 Asset Condition	2020/2021 Target
<b>Rolling Stock</b>				
Age - % of revenue vehicles within a particular asset class that have met or exceeded their ULB	Cutaway Buses	7 years and/or 200,000 miles	12%	12%
	Motor Bus	12 years or 500,000	0%	4%
<b>Equipment</b>				
Age - % of non-revenue vehicles within a particular asset class that have met or exceeded their ULB	Non Revenue/Service Automobile	4 years or 100,000 miles	53%	76%
<b>Facilities</b>				
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration/Maintenance Facility	Rated under 3.0 on TERM scale	0%	0%
	Passenger Facility	Rated under 3.0 on TERM scale	0%	0%

## 7.0 Transit Safety Performance

The Federal Transit Administration (FTA) established transit safety performance management requirements in the Public Transportation Agency Safety Plan (PTASP) final rule, which was published on July 19, 2018. This rule requires providers of public transportation systems that receive federal financial assistance under 49 U.S.C. Chapter 53 to develop and implement a PTASP based on a Safety Management Systems approach.

The PTASP must include performance targets for the performance measures established by FTA in the National Public Transportation Safety Plan, which was published on January 28, 2017. The transit safety performance measures are:

- Total number of reportable fatalities and rate per total vehicle revenue miles by mode.
- Total number of reportable injuries and rate per total vehicle revenue miles by mode.
- Total number of reportable safety events and rate per total vehicle revenue miles by mode.
- System reliability – mean distance between major mechanical failures by mode.



The PTASP rule takes effect on July 19, 2019. Each provider of public transportation that is subject to the rule must certify it has a PTASP, including transit safety targets for the above measures, in place no later than July 20, 2020. MPOs then have 180 days to establish transit safety targets for the MPO planning area. Once the public transportation provider establishes targets, it must make the targets available to MPOs to aid in the planning process. The Sarasota/Manatee MPO must reflect those targets in any LRTP and TIP updated on or after July 20, 2021.

Over the course of 2019-2021, the Sarasota/Manatee MPO will coordinate with public transportation providers in the planning area on the development and establishment of transit safety targets. Future TIPs will include a discussion of the anticipated effect towards achieving the transit safety targets.