Template to Address Performance Management Requirements in Metropolitan Planning Organization Transportation Improvement Programs

Office of Policy Planning

Florida Department of Transportation

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1 - PURPOSE

This document provides language that Florida's metropolitan planning organizations (MPO) may incorporate in Transportation Improvement Programs (TIP) to meet the federal transportation performance management rules.

MPOs may incorporate this template language and adapt it as needed as they update their TIPs. In most sections, there are two options for the text, to be used by MPOs supporting statewide targets or MPOs establishing their own targets. Areas that require MPO input are highlighted in yellow. This can range from simply adding the MPO name and adoption dates to providing MPO-specific background information and relevant strategies and prioritization processes.

The document is consistent with the Transportation Performance Measures (TPM) 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 - BACKGROUND

Performance management is a strategic approach to connect investment and policy decisions to help achieve performance goals. Performance measures are quantitative criteria used to evaluate progress. Performance measure targets are the benchmarks against which progress is assessed using available data. The Moving Ahead for Progress in the 21st Century Act (MAP-21) requires state departments of transportation (DOT) and MPOs to conduct performance-based planning by tracking performance measures and establishing data-driven targets to improve those measures. Performance-based planning ensures the most efficient investment of transportation funds by increasing accountability, providing transparency, and linking investment decisions to key outcomes related to seven national goals:

- Improving safety;
- Maintaining infrastructure condition;
- Reducing traffic congestion;
- Improving the efficiency of the system and freight movement;
- Protecting the environment; and
- Reducing delays in project delivery.

The Fixing America's Surface Transportation (FAST) Act supplements MAP-21 by establishing timelines for state DOTs and MPOs to comply with the requirements of MAP-21. FDOT and MPOs must coordinate when selecting PM1, PM2, and PM3 performance targets, and public transportation providers must coordinate with states and MPOs in the selection of state and MPO transit asset management and transit safety performance targets. FDOT and the MPOAC developed the TPM Consensus Planning Document to describe the processes through which FDOT, the MPOs, and the providers of public transportation in MPO planning areas will cooperatively develop and share information related to transportation performance management and target setting.

3 - HIGHWAY SAFETY MEASURES (PM1)

Safety is the first national goal identified in the FAST Act. In March 2016, FHWA finalized the Highway Safety Improvement Program (HSIP) and Safety Performance Management Measures Rule (PM1 Rule). The rule requires state DOTs and MPOs to annually establish targets and report performance and progress toward targets to FHWA for the following safety-related performance measures:

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 VMT; and
5. Number of Nonmotorized Fatalities and Serious Injuries.

3.1 Highway Safety Targets

3.1.1 Statewide Targets

Safety performance measure targets are required to be adopted on an annual basis. In August of each calendar year, FDOT reports targets to FHWA for the following calendar year. On August 31, 2021, FDOT established statewide safety performance targets for calendar year 2022. Table 3.1 presents FDOT's statewide targets.

Table 3.1. Statewide Highway Safety Performance Targets

Performance Measure	Calendar Year 2022 Statewide Target
Number of fatalities	0
Rate of fatalities per 100 million vehicle miles traveled (VMT)	0
Number of serious injuries	0
Rate of serious injures per 100 million vehicle miles traveled (VMT)	0
Number of non-motorized fatalities and serious injuries	0

FDOT adopted a vision of zero traffic-related fatalities in 2012. This, in effect, became FDOT's target for zero traffic fatalities and quantified the policy set by Florida's Legislature more than 35 years ago (Section 334.046(2), Florida Statutes, emphasis added):

*"The mission of the Department of Transportation shall be to provide a **safe** statewide transportation system…"*

FDOT and Florida's traffic safety partners are committed to eliminating fatalities and serious injuries. As stated in the Safe System approach promoted by the FHWA, the death or serious injury of any person is unacceptable. The Florida Transportation Plan (FTP), the state's long-range transportation plan, identifies eliminating transportation-related fatalities and serious injuries as the state's highest transportation priority. Therefore, FDOT established 0 as the only acceptable target for all five federal safety performance measures.

3.1.2 MPO Safety Targets

MPOs are required to establish safety targets annually within 180 days of when FDOT established targets. MPOs establish targets by either agreeing to program projects that will support the statewide targets or establish their own quantitative targets for the MPO planning area.

[Use either Option A or Option B below. Option A applies to MPOs that support all five state safety targets. Option B applies to MPOs that establish their own safety target or targets.]

[OPTION A: Use the language below for MPO that supports statewide targets]

The [insert name] MPO, along with FDOT and other traffic safety partners, shares a high concern about the upward trending of traffic fatalities, both statewide and nationally. As such, on [insert date], the [insert MPO name] agreed to support FDOT's statewide safety performance targets for calendar year 2022, thus agreeing to plan and program projects in the TIP that once implemented, are anticipated to make progress toward achieving the statewide targets. The safety initiatives within this TIP are intended to contribute toward achieving these targets. [The MPO may discuss the reasoning or analysis behind the decision to support the state targets.]

[END OF OPTION A. Continue at "Section 3.2 Safety Trends in the MPO Area"]

[OPTION B: Use the language below for MPO that establishes its own targets]

The [insert name] MPO acknowledges FDOT statewide 2022 safety targets, which are set at "0" for each performance measure to reflect FDOT's goal of zero deaths. However, the MPO established safety performance targets specific to the MPO planning area. On [insert date], the [insert MPO name] established the calendar year 2022 safety targets listed in Table 3.2.

[Insert table such as the one below. If desired, include the statewide targets in the table for reference purposes, or combine Tables 3.1 and 3.2 into one table.]

Table 3.2. MPO Safety Performance Targets

Performance Measure	Calendar Year 2022 MPO Target
Number of fatalities	x
Rate of fatalities per 100 million vehicle miles traveled (VMT)	x
Number of serious Injuries	x
Rate of serious injures per 100 million vehicle miles traveled (VMT)	x
Number of non-motorized fatalities and serious injuries	x

[The MPO should discuss why and how it established its own targets. Include the basis for developing the MPO targets and cite relevant factors. Examples may include different safety performance trends in the MPO area compared to the state, additional funding for safety, an increased focus on safety as an MPO priority, the use of safety criteria for selecting projects, differing travel behavior in the MPO area, etc. See examples below.]

Example from a recent Hillsborough MPO TIP:[1]

The Hillsborough MPO is setting its safety performance targets based upon data collected within the MPO planning area for ten previous years related to safety performance measures. With the historical crash data, a linear trend projection is used to estimate the forthcoming year's crash performance. A crash reduction estimate is applied to the future year end crash estimate, the methodology of which has been adopted in the It's Time Hillsborough: 2045 Plan. The methodology forecasts a reduction in crashes based upon level-of-investment in safety projects. It is assumed that all funds will be invested in countermeasures which can optimize crash reduction based on countermeasures and location of crash hotspots. As an example, our It's Time Hillsborough: 2045 Plan used a proprietary post-processor to estimate the crash reduction benefits and found that a countermeasure bundle of sidewalks, streetlights spaced at 1/4mi intervals, and complete streets treatments would optimize the effectiveness of our investments. The 2021 targets reflect the baseline funding scenario and a 0.93% annual reduction.

Example from a recent River to Sea TPO TIP:[2]

While acknowledging and supporting FDOT's vision and their safety target of zero, the River to Sea TPO has established independent safety performance targets based upon data collected within the TPO planning area for previous years and based on analysis of anticipated progress that can be achieved during the calendar year. In January 2018, 2019, and 2020 the River to Sea TPO adopted safety performance targets reflecting a two percent (2%) reduction per year in each of the required safety measures. In January of 2021, the River to Sea TPO updated their annual safety performance targets to continue to reduce the target by two percent for each category where measures are trending downward, however if the data showed that measures were trending upward in a category, the previous year's target was retained.

Example from a recent Sarasota/Manatee MPO TIP[3]. MPOs that include a table similar to this should use the most recent data available:

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 designation of targets for the five safety performance measures, the Sarasota/Manatee MPO Board adopted their second round of targets for the 2015 – 2019 five-year rolling average on September 24, 2018.

The MPO has met the 2015 – 2019 targets for fatality rate and serious injury rate. The MPO missed the targets for number of fatalities, number of serious injuries, fatality rate, and serious injuries rate.

[1] Hillsborough MPO Transportation Improvement Program FY 2021/22 – 2025/26, Adopted June 9, 2021. TPM documentation provided in Appendix E: https://planhillsborough.org/wp-content/uploads/2020/06/FINAL-TIP_Signed_v2.pdf
[2] River to Sea TPO FY 2021/22 – FY 2026/26 Transportation Improvement Plan, adopted June 23, 2021, amended August 26, 2021. https://www.r2ctpo.org/wp-content/uploads/FY-2021-22-to-FY-2024-25-TIP-Amended-August-25-2021_UPDATED.pdf
[3] Sarasota/Manatee MPO Transportation Improvement Program, Fiscal Years 2021/22 – 2025/26. Adopted May 4, 2021. https://www.mympo.org/files/39/Transportation-Improvement-Program/1295/Adopted-2021-22-TIP.pdf

2015 – 2019 Safety Performance Targets

Performance Measures/Targets	FDOT 5-year Targets 1/1/15 to 12/31/19+	FDOT Projected 2015 - 2019 5-year Rolling Average+	FDOT Actual 2015 - 2019 5-year Rolling Average	Sarasota/ Manatee Adopted 5-Year Targets 1/1/15 to 12/31/19*	Sarasota/ Manatee Actual 2015 – 2019 5-year Rolling Average**
Number of Fatalities	0	3,177	3,109	109	114
Number of Serious Injuries	0	21,107	20,169	1,438	1,541
Non-Motorized Fatalities and Serious Injuries	0	3,801	3,287	174	175
Fatality Rate	0	1.63	1.42	1.63	1.46
Serious Injury Rate	0	10.85	9.22	21.84	19.59

+Data extracted from 2019 Highway Safety Improvement Program (HSIP)
*Estimate based on available data through November 2018 and interpolated for 12 months
**Based on actual data through December 2019

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.

2016 -2020 Safety Performance Targets

Safety Performance Measures/Targets	FDOT 5-year Targets 1/1/16 to 12/31/20+	FDOT Projected 2016 - 2020 5-year Rolling Average	Sarasota/ Manatee Adopted 5-year Targets 1/1/16 to 12/31/20*	Sarasota/ Manatee Projected 2016 – 2020 5-year Rolling Average**	Sarasota/ Manatee Adopted 5-year Targets 1/1/16 to 12/31/20**
Number of Fatalities	0	0	109	115	109
Number of Serious Injuries	0	0	1,438	1,423	1,438
Non-Motorized Fatalities and Serious Injuries	0	0	170	162	158
Fatality Rate	0	0	1.46	1.49	1.46
Serious Injury Rate	0	0	19.59	20.85	19.59

+Data extracted from 2019 Highway Safety Improvement Program (HSIP)
*Estimate based on available data through August 2019 and interpolated for 12 months
**Estimate based on available data through November 2020

To set the targets for 2020 and 2021, the MPO reviewed the actual annual crashes from 2012 to 2020 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 2020 and 2021 show an increase in number of fatalities and number of serious injuries but a decrease in non-motorized fatalities and serious injuries.

Sarasota/Manatee MPO Annual Crashes from 2010 to 2020

Performance Measures	Annual Crashes									
	2012	2013	2014	2015	2016	2017	2018	2019	2020*	2021**
Number of Fatalities	95	74	88	114	139	101	120	94	123	118
Fatality Rate	1.302	1.00	1.15	1.44	1.70	1.23	1.43	1.52	1.57	1.62
Number of Serious Injuries	777	695	955	1395	1858	1514	1428	1438	964	1222
Serious Injuries Rate	10.648	9.35	12.52	17.60	22.72	18.36	17.03	22.23	23.92	25.61
Non-Motorized Fatalities and Serious Injuries	162	113	158	191	214	162	138	146	156	154

*Numbers are estimated based on available data through November 2020 and interpolated for 12 months.
**Numbers are based on trends

[END OF OPTION B. Continue with next section, "Section 3.2 Safety Trends in the MPO Area"]

3.2 Safety Trends in the MPO Area

[MPOs may discuss recent safety performance data in the MPO area, as shown in the Sarasota/Manatee TIP example provided above. Note that MPOs are not required to discuss performance trends, but its inclusion can provide context and supporting information for the narrative.]

Example from a Broward MPO TIP[4]. MPOs that include a table similar to this should use the most recent data available:

After FDOT set its Safety Performance Measures targets in 2018, both FDOT and the Broward MPO established 2017 Baseline Safety Performance Measures. To evaluate baseline Safety Performance Measures, the most recent five-year rolling average (2015-2019) of crash data and VMT were utilized. Table 3-2 presents the Baseline Safety Performance Measures for Florida and Broward MPO.

Table 3-2 Baseline Safety Performance Measures

Performance Measure	Florida	Broward MPO
Number of Fatalities	2,685.6	206.6
Number of Serious Injuries	20,830.0	1,663.8
Fatality Rate per 100 million VMT	1.3	1.2
Serious Injury Rate per 100 million VMT	10.2	9.8
Total Number of non-motorized Fatalities and non-motorized serious injuries	3,253.0	333

Source: FDOT 2017 FHWA Performance Measures per MPO.

The MPO uses crash data tracking fatalities and serious injuries in Broward County to analyze past trends and identify regional safety issues. Tracking these measures will help to estimate the effectiveness of future MPO transportation investment, as reflected in the TIP. Table 3-3 shows the changes in Safety Performance Measures for Broward MPO from 2015 through 2019. The measures shown in Table 3-3 were calculated by following the same methodology as that used to calculate the baseline conditions.

Table 3-3 Trends of Broward Safety Performance Measures 2015-2019

Performance Measure	2011-2015	2012-2016	2013-2017	2014-2018	2015-2019
Number of Fatalities	183.0	198.6	206.6	211.8	225.4
Number of Serious Injuries	1,888.6	1,776.6	1,633.8	1,483.6	1,365.8
Fatality Rate per 100 million VMT	1.109	1.199	1.228	1.239	1.276
Serious Injury Rate per 100 million VMT	11.446	10.801	9.782	8.718	7.758
Total Number of non-motorized Fatalities and non-motorized serious injuries	341.2	351.8	333.0	319.0	312.2
VMT (100 MVMT)	165.204	165.202	167.814	170.704	197.598

Source: FDOT 2019 FHWA Performance Measures per MPO.

[4] Broward MPO Transportation Improvement Plan, FY 2022-2026, approved July 8, 2021. https://www.browardmpo.org/images/WhatWeDo/TIP/2022_TIP/Final_TIP_FY_22-26_7_8_2021.pdf

3.3 FDOT Safety Planning and Programming

3.3.1 Florida's Strategic Highway Safety Plan

Florida's Strategic Highway Safety Plan (SHSP), published in March 2021, specifically embraces Vision Zero and a new slogan and logo of Target Zero and identifies strategies to achieve zero traffic deaths and serious injuries. The SHSP was updated in coordination with Florida's 27 MPOs and the MPOAC, as well as other statewide traffic safety partners. The SHSP development process included review of safety-related goals, objectives, and strategies in MPO plans. 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.

Florida's transportation safety partners have focused on reducing fatalities and serious injuries through the 4Es of engineering, education, enforcement, and emergency response. To achieve zero, FDOT and other safety partners will expand beyond addressing specific hazards and influencing individual behavior to reshaping transportation systems and communities to create a safer environment for all travel. The updated SHSP calls on Florida to think more broadly and inclusively by addressing four additional topics, which are referred to as the 4Is: information intelligence, innovation, insight into communities, and investments and policies. The SHSP also embraces an integrated "Safe System" approach that involves designing and managing road infrastructure to keep the risk of a mistake low and to ensure that when a mistake leads to a crash, the impact on the human body does not result in a fatality or serious injury. The five Safe System elements together create a holistic approach with layers of protection: safe road users, safe vehicles, safe speeds, safe roads, and post-crash care.

The SHSP also expands the list of emphasis areas for Florida's safety programs to include six evolving emphasis areas, which are high-risk or high-impact crashes that are a subset of an existing emphasis area or emerging risks and new innovations, where safety implications are unknown. These evolving emphasis areas include work zones, drowsy and ill driving, rail grade crossings, roadway transit, micromobility, and connected and automated vehicles.

3.3.2 Florida's Highway Safety Improvement Program

While the FTP and the SHSP both highlight the statewide commitment to a vision of zero deaths, the Florida Highway Safety Improvement Program (HSIP) Annual Report documents statewide performance and progress toward that vision. It also lists all HSIP projects that were obligated during the reporting year and the relationship of each project to the SHSP.

As discussed above, in the 2021 HSIP Annual Report, FDOT reported 2022 statewide safety performance targets at "0" for each safety performance measure to reflect the vision of zero deaths. Annually, FHWA determines whether Florida has met the targets or performed better than baseline for at least four of the five measures. If this does not occur FDOT must submit an annual implementation plan with actions it will take to meet targets in the future.

On March 25, 2021, FHWA reported the results of its 2019 safety target assessment. FHWA concluded that Florida had not met or made significant progress toward its 2019 safety targets, noting that zero had not been achieved for any measure and that only three out of five measures (number of serious injuries, serious injury rate, and number of non-motorized fatalities and serious injuries) were better than baseline. Subsequently, FDOT developed an HSIP Implementation Plan HSIP Implementation Plan to highlight additional strategies it will undertake in support of the safety targets. This plan was submitted with the HSIP Annual Report to FWHA on August 31, 2021. *Note: FDOT will send updated text once FHWA sends the 2020 safety target assessment.*

Consistent with FHWA requirements, the HSIP Implementation Plan focuses specifically on implementation of the HSIP as a core federal-aid highway program and documents the continued enhancements planned for Florida's HSIP to better leverage the benefits of this program. However, recognizing that FDOT already allocates all HSIP funding to safety programs - and building on the integrated approach that underscores FDOT's safety programs – the HSIP Implementation Plan also documents how additional FDOT and partner activities may contribute to progress toward zero. Key commitments in the HSIP Implementation Plan include:

- Fully implement Florida's SHSP, including the existing and evolving emphasis areas and the expanded list of strategies consistent with the Safe System approach.

- Advance safety priorities from the Department's Vital Few Safety initiative, which is focusing FDOT leadership and staff on solutions to three primary safety emphasis areas: roadway departures, intersections, and pedestrians and bicyclists. These are the top three factors associated with fatalities statewide during the 2015-2019 period.

- Enhance the HSIP funding and allocation processes to ensure Florida's safety challenges are evaluated from both a statewide perspective and a regional and local perspective. FDOT is applying new data and analysis tools to support better priority setting and decision making in the HSIP process.

- Continue to enhance coordination through FDOT's District Offices to MPOs, local governments, community traffic safety teams, and other partners to ensure HSIP and other safety-related investments are focused on the greatest need and greater opportunity for benefit, including the nearly 40 percent of fatalities that occur off the State Highway System.

Florida conducts extensive safety data analysis to understand the state's traffic safety challenges and identify and implement successful safety solutions. Florida's transportation system is evaluated using location-specific analyses that evaluate locations where the number of crashes or crash rates are the highest and where fatalities and serious injuries are most prominent. These analyses are paired with additional systemic analyses to identify characteristics that contribute to certain crash types and prioritize countermeasures that can be deployed across the system as a whole. As countermeasures are implemented, Florida also employs predictive analyses to evaluate the performance of roadways (i.e., evaluating results of implemented crash modification factors against projected crash reduction factors).

FDOT's State Safety Office works closely with FDOT Districts and regional and local traffic safety partners to develop the annual HSIP updates. Historic, risk-based, and predictive safety analyses are conducted to identify appropriate proven countermeasures to reduce fatalities and serious injuries associated with Florida's SHSP emphasis areas, resulting in a list of projects that reflect the greatest needs and are anticipated to achieve the highest benefit. While these projects and the associated policies and standards may take years to be implemented, they are built on proven countermeasures for improving safety and addressing serious crash risks or safety problems identified through a data-driven process. Florida continues to allocate all available HSIP funding to safety projects. FDOT's HSIP Guidelines provide detailed information on this data-driven process and funding eligibility.

Florida received an allocation of approximately $177 million in HSIP funds for use during the 2020 state fiscal year from July 1, 2020 through June 30, 2021, and fully allocated those funds to safety projects. FDOT used these HSIP funds to complete projects that address intersections, lane departure, pedestrian and bicyclist safety, and other programs representing the remaining SHSP emphasis areas. This year's HSIP allocated $131 million in infrastructure investments on state-maintained roadways and $33 million in infrastructure

investments on local roadways. The remaining $9 million included supporting activities such as transportation safety planning, preliminary engineering, traffic engineering studies, transportation statistics, and public information or education. A list of HSIP projects can be found in the HSIP 2020 Annual Report.

Beginning in fiscal year 2024, HSIP funding will be distributed among FDOT Districts based on statutory formula to allow the Districts to have more clearly defined funding levels for which they can better plan to select and fund projects. MPOs and local agencies coordinate with FDOT Districts to identify and implement effective highway safety improvement projects on non-state roadways.

3.3.3 Additional FDOT Safety Planning Activities

In addition to HSIP, safety is considered as a factor in FDOT planning and priority setting for projects in preservation and capacity programs. Data is analyzed for each potential project, using traffic safety data and traffic demand modeling, among other data. The Florida PD&E 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. Florida design and construction standards include safety criteria and countermeasures, which are incorporated in every construction project. FDOT also recognizes the importance of the American Association of State Highway Transportation Official (AASHTO) Highway Safety Manual (HSM). Through dedicated and consistent training and messaging over the last several years, the HSM is now an integral part of project development and design.

FDOT holds Program Planning Workshops annually to determine the level of funding to be allocated over the next 5 to 10 years to preserve and provide for a safe transportation system. Certain funding types are further analyzed and prioritized by FDOT Central Offices, after projects are prioritized collaboratively by the MPOs, local governments, and FDOT Districts; for example, the Safety Office is responsible for the HSIP and Highway Safety Program (HSP) and the Systems Implementation Office is responsible for the Strategic Intermodal System (SIS). Both the Safety and SIS programs consider the reduction of traffic fatalities and serious injuries in their criteria for ranking projects.

3.4 Safety Investments in the TIP

[The TIP document must include a written narrative describing the anticipated effect of the TIP toward achieving the targets, linking investment priorities to those performance targets. MPOs should address this requirement by describing how the TIP implements goals, objectives, strategies, and investment priorities from other performance-based plans and processes (i.e., the HSIP and SHSP).

The MPO should include the following information as applicable:

- Discuss safety programs included in the TIP and how they link to the LRTP and SHSP. The text should give particular attention to programs consistent with the SHSP emphasis areas, as well as programs involving extensive partner input such as the Community Traffic Safety Team and the Safe Routes to Schools Team.
- Discuss the prioritization process used to select safety related investment priorities in the TIP, including how the safety performance measures are considered in this process.
- Reference safety data used in the decision-making process. For example, some project types, based on research, are anticipated to have a specific quantifiable effect (e.g., roundabouts, pedestrian beacons).

- Compare current levels of funding for specific safety-related projects to previous funding, and/or compare the number of specific safety-related project types to the current number of projects of the same type.
- Identify examples of safety projects that address the most problematic locations in the MPO area. The MPO can provide information on HSIP projects and associated funding from the most recent HSIP Annual Report.

Examples are provided below. Note that MPOs are not required to describe the anticipated effect of individual projects in the TIP on achieving the targets, but rather must describe the collective impact of the program of project activities.]

The TIP includes projects that fall into specific investment priorities established by the MPO in the LRTP. This includes safety programs such as:

- List infrastructure examples: Installation of school flashing signals, roadway lighting, traffic calming, traffic signals, bike lanes, sidewalks.

- List behavioral safety examples: Safe Routes to Schools education/enforcement activities, pedestrian/bicycle safety education.

When referencing other programs such as Federal grants, the text should be clear about whether the referenced activities are included in the TIP. Example from the Broward MPO TIP:

The MPO considers safety as a planning factor in the project selection process. One goal of the 2045 MTP is to reduce accidents, injuries, and fatalities. The MTP strengthened the connection between its spending and safety performance by continuing the Complete Streets Master Plan, the Complete Streets and Localized Incentives program (CSLIP), and introduced the TSMO and safety program, which aim to improve safety of the transportation system. For example, Safety accounts for 30% of the CSLIP selection criteria. As part of the MTP and TIP, the MPO allocates a large portion of its discretionary funds to these programs. Projects identified in these programs have been funded through the TIP.

Example from a recent MetroPlan Orlando TIP:[5]

The TIP considers potential projects that fall into specific investment priorities established by the MPO in the Metropolitan Transportation Plan (MTP). For MetroPlan Orlando this includes Transportation System Management and Operations (TSMO) projects specifically related to improving safety such as traffic signal retiming, adding turn lanes at intersections, dynamic message signs, roadway lighting, etc. MetroPlan Orlando's TSMO Advisory Committee was established several years ago to focus on the planning and implementation of TSMO projects and to provide input to the MetroPlan Orlando Board on the prioritization of these projects. The list of TSMO projects is shown in Section VII in the TIP.

In addition, in 2017, MetroPlan Orlando received a grant of $11.9 million from FHWA as part of the Advanced Traffic and Congestion Management Technology Deployment program which is being used for the installation and operation of advanced transportation technologies to improve safety, efficiency and system performance in east Orange County near the University of Central Florida.

Improving bicycle and pedestrian safety is also a high priority in the MetroPlan Orlando region, and includes adding infrastructure such as sidewalks and bike lanes as well as conducting education programs on bicycle and pedestrian safety. One example of this is the Best Foot Forward program which is a safety initiative designed to improve pedestrian safety through education, engineering and enforcement. The list of bicycle and pedestrian projects is shown in Section IX in the TIP.

In recent years, MetroPlan Orlando and its partner jurisdictions and agencies have emphasized the implementation of Complete Streets projects in the region. These projects can include a combination of adding bicycle and pedestrian facilities, transit improvements such as bus pull-out stops, and intersection improvements that are designed to improve traffic flow and safety along existing roadways without adding capacity.

Example from the River to Sea TPO TIP:[6]

The River to Sea TPO has had a longstanding commitment to improving transportation safety, which is demonstrated through planning and programming activities. Activities included in the Unified Planning Work Program such as the completion of school safety studies for all elementary and middle schools within the planning area, pedestrian law enforcement training and exercises, health and safety partnerships with local agencies, participation on the Community Traffic Safety Teams and helmet distribution programs have led to increased safety awareness and project specific recommendations to reduce injuries and fatalities throughout the planning area. The TPO also developed a 2017 Crash Analysis Report to analyze the five-year crash history within the planning area. The report identified the high crash intersections and segments locations based on crash severity and frequency. The report was followed-up with a more detailed analysis of high crash locations and mitigation strategies to improve safety at those locations.

In order to achieve the reduction established by the safety targets, the TPO has evaluated projects that fall into specific investment categories established by the MPO in the project application, evaluation, and ranking process. All new projects added to the TIP

[5] MetroPlan Orlando Transportation Improvement Plan, FY 2021/22 – 2025/26, Adopted July 7, 2021, amended November 10, 2021. https://metroplanorlando.org/wp-content/uploads/Transportation-Improvement-Program-TIP-2022-2026-Adopted-7-7-2021-Revised-11-10-2021.pdf

[6] River to Sea TPO FY 2021/22 – FY 2026/26 Transportation Improvement Plan, adopted June 23, 2021, amended August 26, 2021. https://www.r2ctpo.org/wp-content/uploads/FY-2021-22-to-FY-2024-25-TIP-Amended-August-25-2021_UPDATED.pdf

by the TPO that will improve safety and help the TPO reach its safety targets include a statement to that effect. In 2019, the River to Sea TPO participated in the Walkability Action Institute and through this effort developed and adopted the Complete Street Policy and Implementation plan for the planning area. The TPO intends to use this policy to promote the incorporation of complete street ordinances by member local governments. Complete Street projects that improve safety and mobility of all road users will continue to be prioritized for funding. The TPO also reviewed safety-related projects that have been identified and added to the work program and TIP by other agencies such as Bicycle and Pedestrian Safety, Lighting projects, Safe Routes to School projects, and Community Traffic Safety Team initiatives. The TPO is very supportive of all agencies that seek to improve transportation safety and we will continue to work with those agencies to understand their selection methodology and to ensure they conform to guidance issued by federal and state agencies.

Note: For all new projects added to the TIP by the TPO that will improve safety and help the TPO reach its safety targets include this statement in the TIP project description: "This project supports efforts to meet the adopted safety targets."

Example from the Broward MPO TIP:

The MPO considers safety as a planning factor in the project selection process. One goal of the 2045 MTP is to reduce accidents, injuries, and fatalities. The MTP strengthened the connection between its spending and safety performance by continuing the Complete Streets Master Plan (CSMP), the Complete Streets and Localized Initiatives Program (CSLIP), and introduced the TSMO and safety program, which aim to improve safety of the transportation system. For example, Safety accounts for 30% of the CSLIP selection criteria. As part of the MTP and TIP, the MPO allocates a large portion of its discretionary funds to these programs. Projects identified in these programs have been funded through the TIP.

The TIP includes specific investment priorities that support all of the MPO's goals including safety, using a prioritization, and project selection process established in the MTP. This process evaluates projects that have an anticipated effect of reducing both fatal and injury crashes. The MPO's goal of reducing fatal and serious injury crashes is linked to this investment plan and the process used in prioritizing the projects is consistent with federal requirements. The TIP prioritization process uses stakeholder input as a criterion to evaluate projects that have an anticipated effect of reducing both fatal and injury crashes. The MPO's goal of reducing fatal and serious injury crashes is linked to the TIP and the process used in prioritizing the projects is consistent with federal requirements.

The program of projects identified through this process are anticipated to contribute toward achievement of the safety targets. The safety infrastructure investments are targeted at specific opportunities to improve safety. For example, additional roadway lighting at intersections will improve pedestrian visibility to drivers. In addition to the specific safety programs included in the TIP, other programs also consider safety as a key factor. Safety impacts are considered in the evaluation of proposed preservation, capacity, and operations projects, including projects on Florida's Strategic Intermodal System as well as regionally significant facilities identified in the MTP.

The TIP FY 2022 to 2026 includes 153 projects that improve safety conditions County-wide, totaling $484 million. These projects fall in the following categories. The MPO continues monitoring investments in the TIP and demonstrating progress toward goals and objectives.

- *Bike lane/Sidewalk*
- *Lighting*
- *Traffic control devices/system*
- *Safety projects*
- *Push button*

• Corridor improvements
• Add turning lanes
• Signing and pavement markings

The 2045 MTP: The MTP is the primary source for identifying priority projects for inclusion in the TIP. There are many projects included in the 2045 MTP that focus on improving safety of the Broward county transportation systems. For the complete list of projects, refer to the plan at http://browardmpo.org/index.php/commitment-2045-metropolitan-transportation-plan. The MTP consolidates eligible classes of localized projects into one overall program, CSLIP. The MPO's CSLIP provides funding for small local transportation projects which improve the safety and mobility for all transportation users in Broward. This competitive grant program can fund projects such as (but not limited to): complete streets projects, traffic calming and intersection improvements, ADA upgrades, mobility hubs, bus shelters, bike racks, and technology advancements such as transit signal priority and traffic control devices. These projects are ranked based on the projects ability to address connectivity, mobility, safety, and economic development. The ranking is conducted objectively based on these categories to ensure an equal and fair distribution of funding. The MTP set aside 15% discretionary funds to the Systems Management and Safety program, and proposes to utilize 10% of the available federal and state funding included in the "Other Roads" program for off-system safety projects (consistent with the published guidance provided by FDOT in the 2045 Revenue Forecast – Broward MPO/Broward Metropolitan Area). One goal of the Systems Management and Safety program is to identify, prioritize, and implement safety improvements at locations with high fatality and serious injuries. High priority crash locations are included in the Multimodal Priorities List (MMPL) for future safety study and capital project funding. A new off-system Road Safety Audit (RSA) process has also been developed to expedite safety studies and safety construction projects on off-system roadways.

Broward MPO Complete Streets Initiative: The MPO understands the importance of creating a transportation system that addresses the needs of all users of the road, including the needs of people who walk, bike, drive, and take transit. Health, safety, and economic development benefits have been directly attributed to roads planned, designed, and operated for all users. To ensure that this is firmly embedded into our transportation planning process, the Broward MPO developed the Complete Streets Initiative. This program, guided by the Complete Streets Advisory Committee (CSAC), with the main intent to provide the necessary tools to our local governments in implementing Complete Streets in their respective communities. The Complete Streets Initiative also serves as a platform to move forward active transportation projects identified in our plans, initiatives, and studies from the planning to design and ultimately to construction through the MPO's CSMP.

Example from the Sarasota/Manatee MPO TIP:[7]

The TIP considers potential projects that fall into specific investment programs established by the MPO. The TIP includes specific investment projects that support all of the MPOs goals including safety, using a prioritization and project selection process. The TIP prioritization process continues to use a data-driven method to evaluate projects that have an anticipated effect of reducing both fatal and injury crashes. The MPO's goal of reducing fatal and serious injury crashes is linked to this investment plan and the process used in prioritizing the projects is consistent with federal requirements.

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. The following safety factors are considered in the project prioritization process. Does the project:

- *Address an identified motorized or non-motorized high crash location?*
- *Improve safety for vulnerable users?*
- *Improve traffic flow on an evacuation route*

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. Then, in 2020, the MPO analyzed the US 41 Multi Modal Emphasis Corridor (MMEC) to examine 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. US 41 MMEC is a program included in the past two Long Range Transportation Plans (LRTP) and was recently expanded to include seven additional corridors in the Transform 2045 Long Range Transportation Plan (LRTP). For this LRTP, the MPO updated the 2019 Safety Report to incorporate in the 25 year long range transportation plan. Based on the safety recommendations from the 2018 safety analysis, the 2020 US 41 MMEC study, as well as high crash locations throughout the region, a list of over 70 high priority locations have been identified.

[Note: this is a subset of the list of high priority locations]:

High Crash Safety Priority Locations

Jurisdiction	Facility	From	To
Sarasota County	US 41/ S Tamiami Trl	at Stickney Point Rd	
Manatee County	SR 70/ 53rd Ave W	at Tara Blvd	
Manatee County	SR 70/ 53rd Ave E	at US 301	
Sarasota County	Fruitville Rd	at N Cattlemen Rd	
Sarasota	Fruitville Rd	at N Washington Blvd	
Sarasota County	Fruitville Rd	at Honore Ave	
Sarasota	US 41/ N Tamiami Trl	at University Pkwy	
Sarasota	Frutiville Rd	at N Beneva Rd	

The Sarasota/Manatee MPO continues monitoring investments in the TIP and demonstrating progress toward goals and objectives. The TIP 2021 to 2026 includes $125 million totaling 34 projects improving safety between the two counties. These projects fall in the following categories: Bike lane/Sidewalk; Lighting; Traffic control devices/system; Safety projects; Push button; Corridor improvements; Add turning lanes; and Signing and pavement markings.

[7] Sarasota/Manatee MPO Transportation Improvement Program, Fiscal Years 2021/22 – 2025/26. Adopted May 4, 2021. https://www.mympo.org/files/39/Transportation-Improvement-Program/1295/Adopted-2021-22-TIP.pdf

Sarasota/Manatee MPO Sample Safety Projects

Project Number	Project Name	County	Type of Work
440688	SR 684 (Cortez Rd) from 86th/Palma Sola Blvd to Cape Vista Dr	Manatee	Add Left Turn Lane
441551	SR 64 (Manatee Ave) from 43rd St W to 15th St W (SR 64)	Manatee	Resurfacing
444210	SR 683 (US 301) at 51st Ave E	Manatee	Intersection Improvement
444211	SR 683 (US 301) at 63rd Ave E	Manatee	Intersection Improvement
444440	SR 45 (US Bus 41) from 17th S to Bayshore Rd	Manatee	Resurfacing
444612	SR 45 (US 41) Edwards Dr to Magellan Dr	Manatee	Resurfacing
448390	SR 45 (US 41) from 63rd Ave to 53rd Ave	Manatee	Safety Project
433550	SR 45 (US 41) Caribbean Dr to SR 72 Stickney Point Rd	Sarasota	Bike Lane/Sidewalk
440685	SR 45 (US 41) at SR 72	Sarasota	Intersection Improvement
447870	SR 683 at University Pkwy	Sarasota	Safety Project
447871	SR 780 (Fruitville Rd) at Beneva Rd	Sarasota	Safety Project
447872	SR 683 (US 301) from 12th St to Dr MLK Jr Way	Sarasota	Safety Project
447882	Sr 776 from Charlotte County Line to Tangerine Woods Blvd	Sarasota	Median Modification
447887	SR 72 from Swift Rd to Sawyer Rd	Sarasota	Median Modification

Because safety is inherent in so many FDOT and [insert MPO name] programs and projects, and because of the broad and holistic approach FDOT is undertaking with its commitment to Vision Zero, the program of projects in this TIP is anticipated to support progress towards achieving the safety targets.

4 - PAVEMENT & BRIDGE CONDITION MEASURES (PM2)

FHWA's Pavement and Bridge Condition Performance Measures Final Rule, which is also referred to as the PM2 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 asphalt, jointed concrete, and continuous concrete pavements;
- Cracking percent - percentage of pavement surface exhibiting cracking; applicable to asphalt, jointed concrete, and continuous concrete pavements;
- Rutting - extent of surface depressions; applicable to asphalt pavements only;
- Faulting - vertical misalignment of pavement joints; applicable to jointed concrete pavements only; and
- Present Serviceability Rating (PSR) – a quality rating applicable only to NHS roads with posted speed limits of less than 40 miles per hour (e.g., toll plazas, border crossings). States may choose to collect and report PSR for applicable segments as an alternative to the other four metrics.

For each pavement metric, a threshold is used to establish good, fair, or poor condition. Using these metrics and thresholds, 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. Asphalt pavement is assessed using the IRI, cracking, and rutting metrics, while jointed concrete is assessed using IRI, cracking, and faulting. For these two pavement types, a pavement section is rated good if the ratings for all three metrics are good, and poor if the ratings for two or more metrics are poor.

Continuous concrete pavement is assessed using the IRI and cracking metrics. For this pavement type, a pavement section is rated good if both metrics are rated good, and poor if both metrics are rated poor.

If a state collects and reports PSR for any applicable segments, those segments are rated according to the PSR scale. For all three pavement types, sections that are not good or poor are rated 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.

4.1 Pavement and Bridge Condition Targets

4.1.1 Statewide Targets

Federal rules require state DOTs to establish two-year and four-year targets for the pavement and bridge condition measures. On May 18, 2018, FDOT established statewide pavement and bridge targets for the first performance period ending in 2021. The two-year targets represent pavement and bridge condition at the end of calendar year 2019, while the four-year targets represent condition at the end of 2021. Table 4.1 presents the statewide targets.

Table 4.1. Statewide Pavement and Bridge Condition Performance Targets

Performance Measure	2019 Statewide Target	2021 Statewide Target
Percent of Interstate pavements in good condition	Not required	≥60%
Percent of Interstate pavements in poor condition	Not required	≤5%
Percent of non-Interstate NHS pavements in good condition	≥40%	≥40%
Percent of non-Interstate NHS pavements in poor condition	≤5%	≤5%
Percent of NHS bridges (by deck area) in good condition	≥50%	≥50%
Percent of NHS bridges (by deck area) in poor condition	≤10%	≤10%

For comparative purposes, the baseline (2017) conditions are as follows:

- 66.1 percent of the Interstate pavement is in good condition and 0.0 percent is in poor condition;
- 44.0 percent of the non-Interstate NHS pavement is in good condition and 0.4 percent is in poor condition; and
- 67.7 percent of NHS bridges (by deck area) is in good condition and 1.2 percent is in poor condition.

In determining its approach to establishing performance targets for the federal pavement and bridge condition performance measures, FDOT considered many factors. 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 initial MAP-21 requirements in 2018 and the final TAMP was approved on June 28, 2019. The TAMP will be updated in 2022.

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 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.

FDOT collects and reports bridge and pavement data to FHWA each year to track performance and progress toward the targets. Reported pavement and bridge data for 2018 and 2019 show relatively stable conditions compared to the 2017 baseline and exceeded the established 2019 targets; 2020 data are being developed. In early 2021, FHWA determined that FDOT made significant progress toward the two-year targets.

4.1.2 MPO Targets

MPOs must set four-year targets for the six pavement and bridge condition measures within 180 days of when FDOT established targets. 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 for one or more measures.

[Use either Option A or Option B below. Option A applies to MPOs that support all six state pavement and bridge targets. Option B applies to MPOs that establish their own targets.]

[OPTION A: Use the language below for MPO that supports all statewide targets]

On [insert date], the [insert MPO name] agreed to support FDOT's statewide pavement and bridge performance targets, thus agreeing to plan and program projects in the TIP that once implemented, are anticipated to make progress toward achieving the statewide targets. [The MPO may discuss the reasoning or analysis behind the decision to support the state targets.]

[END OF OPTION A. Continue at "Section 4.2 Pavement and Bridge Investments in the TIP"]

[OPTION B: Use the language below for MPO that establishes its own targets for one or more PM2 measures]

The [insert name] MPO acknowledges FDOT's statewide pavement and bridge condition targets. However, on [insert date], the [insert MPO name] established the four-year pavement and bridge condition targets for the MPO's planning area identified in Table 4.2:

[Insert table similar to the one below. If desired, include the statewide targets in the table for reference purposes, or combine Tables 4.1 and 4.2 into one table. Note that MPOs are required to establish only 4-year

targets for the federal pavement and bridge condition measures. An MPO may choose to establish 2-year targets.]

Table 4.2 [MPO name] Pavement and Bridge Condition Performance Targets

Performance Measure	2021 MPO Target
Percent of Interstate pavements in good condition	≥xx.x%
Percent of Interstate pavements in poor condition	≤x.x%
Percent of non-Interstate NHS pavements in good condition	≥xx.x%
Percent of non-Interstate NHS pavements in poor condition	≤x.x%
Percent of NHS bridges by deck area in good condition	≥xx.x%
Percent of NHS bridges by deck area in poor condition	≤x.x%

In establishing the MPO's targets for the pavement and bridge condition performance measures, [insert MPO name] considered many factors. [The MPO should discuss why and how it established its own targets. Include the basis for developing the MPO targets and cite relevant factors. Examples may include different performance trends in the MPO area compared to the state, additional funding for bridge or pavement projects in the MPO area, an increased focus on pavement or bridges as an MPO priority, the use of pavement or bridge condition criteria for selecting projects, etc.]

[END OF OPTION B. Continue with "Section 4.2 Pavement and Bridge Investments in the TIP", below.]

4.2 Pavement and Bridge Investments in the TIP

[The TIP document must include a written narrative describing the anticipated effect of the TIP toward achieving the targets, linking investment priorities to those performance targets. MPOs could address this requirement by describing how the pavement and bridge preservation projects in the TIP were determined, including how performance targets were considered in this process. This section also could discuss how the TIP implements goals, objectives, strategies, and investment priorities from other performance-based plans and processes (for example, the TAMP). MPOs are required to describe the anticipated effect of the collective program of project activities, not the impact of individual projects in the TIP.]

The [insert MPO name] TIP reflects investment priorities established in the [insert name of the current LRTP]. The focus of [insert MPO name]'s investments in bridge and pavement condition include [list example programs and strategies or major projects funded in the TIP that address system preservation/maintenance on the Interstate and non-Interstate NHS in the MPO area, such as those in the following categories:

- Pavement replacement or reconstruction (on the NHS)
- New NHS lanes or widenings, including resurfacing existing lanes associated with new capacity
- Bridge replacement or reconstruction
- New bridge capacity on the NHS
- System resiliency projects that improve NHS bridge components (e.g., upgrading culverts)]

[If the MPO uses project selection criteria related to pavement and bridge condition in the LRTP or TIP selection process, insert a discussion here. Note any data-driven, performance-based elements.]

[Summarize the funding amounts identified in the TIP for pavement and bridge condition programs and strategies such as those listed above. Also consider how other programs may contribute toward achievement of the statewide pavement and bridge condition targets, such as widenings that will have new pavement.]

[Example: The TIP devotes a significant amount of resources to projects that will maintain pavement and bridge condition performance. Investments in pavement and bridge condition include pavement replacement and reconstruction, bridge replacement and reconstruction, and new bridge and pavement capacity. The TIP will fund $xx million for bridges, $xx million for resurfacing, and xx million for new capacity.]

Example below is from a recent Forward Pinellas TIP:[8]

The Forward Pinellas TIP reflects investment priorities established in Advantage Pinellas, the 2045 LRTP. The focus of Forward Pinellas' investments in bridge and pavement condition include:

- *Rigid Pavement Rehabilitation on I-175 from 16th St to 4th St*
- *Rigid Pavement Rehabilitation on I-375 from I-275 to 4th St*
- *Resurfacing on SR 693/ Pasadena Ave from Park St to Central Ave*
- *Resurfacing on SR 679/Pinellas Bayway from Bunces Pass to Madeira Cir*
- *Structural Rehab on I-275/Sunshine Skyway Bridge*
- *Replacement of the 40th Ave NE Bridge over Placido Bayou*
- *Rehabilitation of I-275 SB over 31st St Bridge*
- *Bridge Replacement on Ridgemoor Blvd & Brooker Creek*

By advancing these projects, and other system preservation projects included in the Forward Pinellas TIP, it is expected that progress will be made towards achieving the targets set in this section.

The TIP devotes a significant amount of resources to projects that will maintain pavement and bridge condition performance. Investments in pavement and bridge condition include pavement replacement and reconstruction, bridge replacement and reconstruction, and new bridge and pavement capacity. The TIP will fund $971 million for bridges, $13 million for resurfacing, and $43 million for intersection improvements.

The projects included in the TIP are consistent with FDOT's Five Year Work Program, and therefore to FDOT's approach to prioritize funding to ensure the transportation system is adequately preserved and maintained. Per federal planning requirements, the state selects projects on the NHS in cooperation with the MPO from the approved TIP. Given the significant resources devoted in the TIP to pavement and bridge projects, the MPO anticipates that once implemented, the TIP will contribute to progress towards achieving the statewide pavement and bridge condition performance targets.

[8] Forward Pinellas TIP, FY 2021/22-2025/26, Adopted June 9, 2021, https://forwardpinellas.org/programs/transportation-improvement-program/

5 - SYSTEM PERFORMANCE, FREIGHT, & CONGESTION MITIGATION & AIR QUALITY IMPROVEMENT PROGRAM MEASURES (PM3)

USDOT's System Performance/Freight/CMAQ Performance Measures Final Rule established 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 state DOTs and MPOs to establish 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 (NOx, VOC, CO, PM10, and PM2.5) for CMAQ funded projects.

Because all areas in Florida meet current NAAQS, the last three measures pertaining to the CMAQ Program do not currently apply in Florida. A description of the applicable measures follows.

LOTTR Measures

The LOTTR performance measures assess the percent of person-miles traveled on the Interstate or the non-Interstate NHS that are reliable. LOTTR is defined as the ratio of longer travel times (80th percentile) to a normal travel time (50th percentile) over of all applicable roads, across four time periods between the hours of 6 a.m. and 8 p.m. each day. The measure is expressed as the percent of person-miles traveled on the Interstate or Non-Interstate NHS system that are reliable. Person-miles consider the number of people traveling in buses, cars, and trucks over these roadway segments.

TTTR Measure

The TTTR performance measure assesses the reliability index for trucks traveling on the interstate. A TTTR ratio is generated by dividing the 95th percentile truck travel time by a normal travel time (50th percentile) for each segment of the Interstate system over specific time periods throughout weekdays and weekends. This is averaged across the length of all Interstate segments in the state or metropolitan planning area to determine the TTTR index.

5.1 System Performance and Freight Targets

5.1.1 Statewide Targets

Federal rules require state DOTs to establish two-year and four-year targets for the system performance and freight targets. On May 18, 2018, FDOT established statewide performance targets for the first performance period ending in 2021. The two-year targets represent performance at the end of calendar year 2019, while the four-year targets represent performance at the end of 2021. Table 5.1 presents the statewide targets.

Table 5.1. Statewide System Performance and Freight Targets

Performance Measure	2019 Statewide Target	2021 Statewide Target
Percent of person-miles on the Interstate system that are reliable (Interstate LOTTR)	≥75%	≥70%
Percent of person-miles on the non-Interstate NHS that are reliable (Non-Interstate NHS LOTTR	Not Required[7]	≥50%
Truck travel time reliability (TTTR)	≤1.75	≤2.00

For comparative purposes, baseline (2017) statewide conditions are as follows:

- 82.2 percent of person-miles traveled on the Interstate are reliable;
- 84.0 percent of person-miles traveled on the non-Interstate are reliable; and
- 1.43 truck travel time reliability index.

In establishing these targets, FDOT reviewed external and internal factors that may affect reliability, analyzed travel time data from the National Performance Management Research Dataset (NPMRDS) for the years 2014 to 2017, and developed a sensitivity analysis indicating the level of risk for road segments to become unreliable.

The federal travel time reliability measures follow a new methodology that differ from prior Florida efforts. In addition, beginning in 2017, the NPMRDS expanded its coverage of travel segments, and a new vendor began to supply the dataset, creating a difference in reliability performance results on non-Interstate NHS segments between pre-2017 trends and later trends. These factors create challenges for establishing a confident trend line to inform target setting for the next two to four years.

In consideration of these differences, as well as other unknowns and unfamiliarity associated with the new required processes, FDOT took a conservative approach when establishing its initial statewide system performance and freight targets.

FDOT collects and reports reliability data to FHWA each year to track performance and progress toward the reliability targets. During 2018 and 2019, the percentage of person-miles that are reliable improved over the 2017 baseline on both the Interstate and non-Interstate NHS. The truck travel time reliability index improved slightly from the 2017 baseline to 2018 but declined slightly in 2019. Actual performance in 2019 was better than the 2019 targets, and in early 2021 FHWA determined that FDOT made significant progress toward the 2019 targets. Performance improved for all measures in 2020. Final data for 2021 are under development.

System performance and freight are addressed through several statewide initiatives:

- Florida's Strategic Intermodal System (SIS) is composed of transportation facilities of statewide and interregional significance. The SIS is a primary focus of FDOT's capacity investments and is Florida's primary network for ensuring a strong link between transportation and economic competitiveness. These facilities, which span all modes and includes highways, 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. The SIS includes 92 percent of NHS lane miles in the state. Thus, FDOT's focus on improving performance of the SIS goes hand-in-hand with improving the NHS, which is the focus of the FHWA's TPM program. The SIS Policy Plan was updated in early 2022 consistent with the updated FTP. The SIS Policy Plan defines the policy framework for designating which facilities are part of the SIS, as well as how SIS investments needs are identified and prioritized. The development of the SIS Five-Year Plan by FDOT considers scores on a range of measures including mobility, safety, preservation, and economic competitiveness as part of FDOT's Strategic Investment Tool (SIT).
- In addition, FDOT's Freight Mobility and Trade Plan (FMTP) defines policies and investments that will enhance Florida's economic development efforts into the future. The FMTP identifies truck bottlenecks and other freight investment needs and defines the process for setting priorities among these needs to receive funding from the National Highway Freight Program (NHFP). Project evaluation criteria tie back to the FMTP objectives to ensure high priority projects support the statewide freight vision. In February 2018, FHWA approved the FMTP as FDOT's State Freight Plan. FDOT updated the plan in spring 2020.
- FDOT also developed and refined a methodology to identify freight bottlenecks on Florida's SIS on an annual basis using vehicle probe data and travel time reliability measures. Identification of bottlenecks and estimation of their delay impact aids FDOT in focusing on relief efforts and ranking them by priority. In turn, this information is incorporated into FDOT's SIT to help identify the most important SIS capacity projects to relieve congestion.

5.1.2 MPO Targets

MPOs must establish four-year targets for all three performance 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 for one or more measures.

[Use either Option A or Option B below. Option A applies to MPOs that support all state targets for the federal system performance and freight measures. Option B applies to MPOs that establish their own targets.]

[OPTION A: Use the language below for MPO that supports statewide targets]

On [insert date], the [insert MPO name] agreed to support FDOT's statewide system performance and freight targets, thus agreeing to plan and program projects in the TIP that once implemented, are anticipated to make progress toward achieving the statewide targets. [The MPO may discuss the reasoning or analysis behind the decision to support the state targets.]

[END OF OPTION A. Continue at "Section 5.2 System Performance and Freight Investments in the TIP"]

[OPTION B: Use the language below for MPO that establishes its own targets for one or more measures]

The [insert name] MPO acknowledges FDOT's statewide system performance and freight targets. However, on [insert date], the [insert MPO name] established the four-year targets for the MPO's planning area identified in Table 5.2:

[Insert table similar to the one below. If desired, include the statewide targets in the table for reference purposes, or combine Tables 5.1 and 5.2 into one table. MPOs are required to establish only 4-year targets for the federal system performance and freight measures. However, an MPO may choose to establish 2-year targets.]

Table 5.2 [MPO name] System Performance and Freight Targets

Performance Measure	2021 MPO Target
Percent of person-miles on the Interstate system that are reliable (Interstate LOTTR)	≥xx.x%
Percent of person-miles on the non-Interstate NHS that are reliable (Non-Interstate NHS LOTTR	≥xx.x%
Truck travel time reliability (TTTR)	≤x.xx

In establishing the MPO's targets for the system performance and freight measures, [insert MPO name] considered many factors. [The MPO should discuss why and how it established its own targets. Include the basis for developing the MPO targets and cite relevant factors. Examples may include different performance trends in the MPO area compared to the state, additional funding for system performance and/or freight projects in the MPO area, an increased focus on system performance or freight as an MPO priority, the use of reliability criteria for selecting projects, etc.]

[END OF OPTION B. Continue with "Section 5.2 System Performance and Freight Investments in the TIP" below.]

5.2 System Performance and Freight Investments in the TIP

[The TIP document must include a written narrative describing the anticipated effect of the TIP toward achieving the targets, linking investment priorities to those performance targets. MPOs could address this requirement by describing how the system performance and freight projects in the TIP were determined, including how performance targets were considered in this process. The section also can discuss how the TIP implements goals, objectives, strategies, and investment priorities from other performance-based plans and processes (for example, the Florida Freight Mobility and Trade Plan). MPOs are required to describe the anticipated effect of the collective program of project activities, not the impact of individual projects in the TIP.]

The [insert MPO name] TIP reflects investment priorities established in the [insert name of the current LRTP]. The focus of [insert MPO name]'s investments that address system performance and freight include [list example programs and strategies or major projects funded in the TIP that address system performance and freight on the Interstate and non-Interstate NHS in the MPO area, such as those in the following categories:

- Corridor improvements
- Intersection improvements (on NHS roads)
- Projects evaluated in the CMP and selected for the TIP
- Investments in transit, bicycle, or pedestrian systems that promote mode shift
- Managed lanes
- Freight improvements (Interstate) that increase reliability (could include improved weigh stations, addressing identified truck bottlenecks on the Interstate, etc.).
- TSMO/ITS projects or programs
- Travel demand management programs, park and ride lots, etc.]

[If the MPO uses project selection criteria related to congestion-relief, reliability, mode shift, freight, TDM, etc. in the LRTP or TIP development process, insert a discussion here. Note any data-driven, performance-based elements.]

[Summarize the funding amounts identified in the TIP for system performance and freight-related projects on the NHS such as those listed above. Also consider how other project types may contribute toward achievement of statewide targets - for example, safety programs could reduce incidents and related travel delay.]

[Example: The TIP devotes a significant amount of resources to programs and projects that will improve system performance and freight reliability on the Interstate and non-Interstate NHS. Investments include (list programs such as those identified above). The TIP will fund $x million for intersection improvements, $x million for congestion relief projects, $x million for freight, $x thousand for TDM, $xx million for managed lanes, and $x million for TSMO projects.]

Example from the Space Coast TPO:[9]

The Space Coast TPO's TIP reflects investment priorities established in the 2045 LRTP. The focus of Space Coast TPO's investments that address system performance and freight are identified below. The TIP will fund $201 million for congestion relief projects and freight, $12.2 million for TSM&O projects.

- *Intersection improvements (on NHS roads) – US 192 / Hollywood.*
- *Freight improvements (SIS) to increase capacity on SR 528 (Beachline).*
- *Ellis Road widening (SIS) to Orlando-Melbourne International Airport.*
- *Space Freight (SIS hubs and connectors) – replacement of NASA Cswy/Indian River Bridge; SR 405 Spaceport Connector Intersection improvements; Space Commerce Way widening.*
- *Freight and Cargo - SR 401 bascule bridges replacement – critical to economic prosperity of central Florida regions – corridor serves, Port Canaveral cruise passengers, Kennedy Space Center, Space Florida, Seaport Canaveral, port assets of the US Navy and US army and the Cape Canaveral Air force Station. The volume of freight and cargo movement is drivers that impact the performance and reliability of the bascule bridges.*

[9] Space Coast TPO TIP, Fiscal Year 2022-2026, Adopted July 8, 2021
https://www.spacecoasttpo.com/what-we-do/planning/core-work-products/transportation-improvement-program

- *Investments in transit, bicycle, or pedestrian systems that promote mode shift.*
- *TSM&O / ITS projects - The strategies to address these objectives include capital investments in the county's arterial and limited access roadways providing access to major economic generators like ports, downtown areas, and other emerging employment centers as well as incremental improvements in the county's Intelligent Transportation System through the TPO's ITS Master Plan.*
- *Projects evaluated in the State of the System / Congestion Management System and selected for the TIP.*

Example from the Forward Pinellas TIP:[10]

The Forward Pinellas TIP reflects investment priorities established in Advantage Pinellas, the 2045 LRTP. The focus of Forward Pinellas' investments that address system performance and freight include:

- *Alt US 19/Bayshore Blvd at Curlew Rd Intersection Improvements*
- *Duhme Rd/113th St. ATMS Improvements*
- *SR 586/Causeway Blvd ATMS Improvements*
- *Alt US 19 CMP Improvements at Curlew Pl*
- *SR 590/Drew St. ATMS Improvements*
- *SR 580/Skinner ATMS Improvements*
- *Capital and Construction funding for SunRunner BRT*
- *Capital Funding for new transit vehicles for PSTA*
- *Capital Funding for new regional vanpool vehicles*

Forward Pinellas includes mobility measures in its project selection and review criteria. Criteria considered include if the project is intended to improve traffic flow (including if the project encourages a mode shift), if the project provides new services where one currently does not exist (for all modes), if the project completes a gap in the network and if the project is supportive of the Investment Corridor framework identified in Advantage Pinellas, the 2045 LRTP.

The TIP devotes a significant amount of resources to programs and projects that will improve system performance and freight reliability on the Interstate and non-Interstate NHS. Investments include ATMS and enhancement projects to improve mobility across the network. The TIP will fund $23 million in ITS/ATMS projects, $13 million in enhancement projects and more than $2.6 billion in roadway reconstruction projects.

The projects included in the TIP are consistent with FDOT's Five Year Work Program, and therefore to FDOT's approach to prioritize funding to address performance goals and targets. Per federal planning requirements, the state selects projects on the NHS in cooperation with the MPO from the approved TIP. Given the significant resources devoted in the TIP to programs that address system performance and freight, the MPO anticipates that once implemented, the TIP will contribute to progress towards achieving the statewide reliability performance targets.

[10] Forward Pinellas TIP, FY 2021/22-2025/26, Adopted June 9, 2021, https://forwardpinellas.org/programs/transportation-improvement-program/

6 - TRANSIT ASSET MANAGEMENT MEASURES

Transit Asset Performance Measures

FTA's Transit Asset Management (TAM) regulations apply to all recipients and subrecipients of Federal transit funding that own, operate, or manage public transportation capital assets. The regulations define the term "state of good repair," require that public transportation providers develop and implement TAM plans, and established state of good repair standards and performance measures for four asset categories: equipment, rolling stock, transit infrastructure, and facilities. Table 6.1 identifies the TAM performance measures.

Table 6.1. FTA TAM Performance Measures

Asset Category	Performance Measure
1. Equipment	Percentage of non-revenue, support-service and maintenance vehicles that have met or exceeded their Useful Life Benchmark
2. Rolling Stock	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their Useful Life Benchmark
3. Infrastructure	Percentage of track segments with performance restrictions
4. 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, service frequency, etc.

Public transportation agencies are required to establish and report TAM targets annually for the following fiscal year. Each public transit provider or its sponsors must share its targets with each MPO in which the transit provider's projects and services are programmed in the MPO's TIP. MPOs were required to establish initial TAM targets within 180 days of the date that public transportation providers established initial targets by October 1, 2018. However, MPOs are not required to establish TAM targets annually each time the transit provider establishes targets. Instead, subsequent MPO targets must be established when the MPO updates the LRTP. When establishing TAM targets, the MPO can either agree to program projects that will support the transit provider targets or establish its own separate regional TAM targets for the MPO planning area. MPO targets may differ from agency targets, especially if there are multiple transit agencies in the MPO planning area. To the maximum extent practicable, transit providers, states, and MPOs must coordinate with each other in the selection of performance targets.

The TAM regulation 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 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 or less vehicles in one non-fixed route mode. A Tier I provider must establish its own TAM 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 for the entire group in coordination with a group plan sponsor, typically a state DOT.

[If there are Tier II providers serving the MPO region that are participants in FDOT's Group TAM Plan, include Section 6.1. If not, skip to Section 6.2.]

6.1 FDOT Group TAM Plan Participants

A total of 19 transit providers participated in the FDOT Group TAM Plan and continue to coordinate with FDOT on establishing and reporting group targets to FTA through the National Transit Database (NTD) (Table 6.2). These are FDOT's Section 5311 Rural Program subrecipients. The Group TAM Plan was adopted in October 2018 and covers fiscal years 2018-2019 through 2021-2022. Group TAM Plan targets for fiscal year 2021 were submitted to NTD in March 2021; updated targets for fiscal year 2022 are under development. *Note: MPO has the option of including the full table below for context, or just identifying those Tier II providers in the MPO planning area that participated in the Group TAM Plan, if any. If the MPO area includes any providers participating in the Group TAM Plan, the MPO should check with FDOT before submitting the TIP to confirm the final 2022 targets.*

Table 6.2. Florida Group TAM Plan Participants

District	Participating Transit Providers
1	Central Florida Regional Planning Council Hendry County
2	Baker County Transit Big Bend Transit* Levy County Transit Nassau County Transit Ride Solution Suwannee River Economic Council Suwannee Valley Transit Authority
3	Big Bend Transit* Calhoun Transit Gulf County ARC JTRANS Liberty County Transit Tri-County Community Council Wakulla Transit
4	*No participating providers*
5	Flagler County Marion Transit Sumter Transit
6	Key West Transit
7	*No participating providers*

* Provider service area covers portions of Districts 2 and 3.

6.2 Transit Asset Management Targets

The following providers operate in the MPO planning area: identify providers and indicate those that are Tier I providers and/or Tier II providers. For Tier II providers, indicate those that are participants in FDOT's Group TAM Plan.

Example from River to Sea TPO TIP:[11]

The River to Sea TPO planning area is served by three (3) transit service providers: Flagler County Public Transportation (FCPT), Votran, and SunRail. Votran and SunRail are considered Tier I providers, and, as such, each must develop a TAM Plan. FCPT is considered a Tier II provider and thus is included in a group TAM plan developed by the FDOT Public Transit Office in Tallahassee.

6.2.1 Transit Provider Targets

Use this language to discuss targets established by Tier I provider(s) and Tier II providers that are not part of the Group TAM Plan, if applicable: The [insert transit agency] established TAM targets for each of the applicable asset categories on [insert date]. Table 6.3 presents the targets. Include Table 6.3 below to list TAM targets for Tier 1 provider(s) and Tier II providers that are not part of the Group TAM Plan, if applicable. Repeat the table for each transit provider. Note that transit providers establish targets only for the asset classes operated by the agency; therefore, different asset classes than those shown in the example tables may apply.

Use this language to identify targets established by Tier II provider(s) that are part of the FDOT Group TAM Plan: [Transit provider] is part of the Group TAM Plan for Fiscal Years 2018/2019-2021/2022 developed by FDOT for Tier II providers in Florida. The FY 2020 asset conditions and FY 2021 targets for the Tier II providers are shown in Table 6.4. *Note: FDOT will provide update once FY 2021 conditions and FY 2022 targets are available.*

The transit provider's TAM targets are based on the condition of existing transit assets and planned investments in equipment, rolling stock, infrastructure, and facilities. The targets reflect the most recent data available on the number, age, and condition of transit assets, and capital investment plans for improving these assets. The table summarizes both existing conditions for the most recent year available, and the current targets [augment text as needed].

[11] River to Sea TPO TIP – FY 2021/22 to FY 2025/26. https://www.r2ctpo.org/wp-content/uploads/FY-2021-22-to-FY-2024-25-TIP-Amended-August-25-2021_UPDATED.pdf

Table 6.3. Transit Asset Management Targets for [insert transit provider name]

Asset Category - Performance Measure	Asset Class	FY 20xx Asset Condition	FY 20xx Target
Rolling Stock			
Age - % of revenue vehicles within a particular asset class that have met or exceeded their ULB	Articulated Bus	X	%
	Bus	X	%
	Mini-Bus	X	%
	Van	X	%
	Etc.	X	%
Equipment			
Age - % of non-revenue vehicles within a particular asset class that have met or exceeded their ULB	Non Revenue/Service Automobile	X	%
	Trucks and other Rubber Tire Vehicles	X	%
	Maintenance Equipment	X	%
	Etc.	X	%
Infrastructure (this category is only applicable to Tier I providers with rail service)			
% of track segments with performance restrictions	Guideway Elements	X	%
	Power & Signal Elements	X	%
	Track Elements	X	%
Facilities			
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration	X	%
	Maintenance	X	%
	Parking Structures	X	%
	Passenger Facilities	X	%
	Shelter	X	%
	Storage	X	%
	Etc.	X	%

Table 6.4. FDOT Group Plan Transit Asset Management Targets for Tier II Providers

Asset Category - Performance Measure	Asset Class	FY 2020 Asset Conditions	FY 2021 Performance Target
Revenue Vehicles			
Age - % of revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	Automobile	28.6%	≤28%
	Bus	17.0%	≤16%
	Cutaway Bus	14.1%	≤14%
	School Bus	100.0%	≤75%
	Mini-Van	26.6%	≤26%
	SUV	18.2%	≤18%
	Van	47.9%	≤47%
Equipment			
Age - % of equipment or non-revenue vehicles within a particular asset class that have met or exceeded their Useful Life Benchmark (ULB)	Non Revenue Automobile	66.7%	≤66%
	Trucks and other Rubber Tire Vehicles	7.1%	≤7%
Facilities			
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Passenger/Parking Facilities	0%	≤0%
	Administration/ Maintenance Facilities	0%	≤0%

6.2.2 MPO Transit Asset Management Targets

As discussed above, MPOs established TAM targets within 180 days of the date that public transportation providers established their first targets in 2018. MPOs are not required to establish TAM targets annually each time the transit provider establishes targets. Instead, MPO's must revisit targets each time the MPO updates the LRTP. MPOs can either agree to program projects that will support the transit provider targets or establish separate regional TAM targets for the MPO planning area. MPO targets may differ from agency targets, especially if there are multiple transit agencies in the MPO planning area.

[Use either Option A or Option B below. Option A applies to MPOs that support all transit agency TAM targets. Option B applies to MPOs that establish their own TAM targets.]

[OPTION A: Use the language below for MPO that supports the transit agency targets]

On [insert date], the [insert MPO name] agreed to support the [insert transit agency's name] TAM targets, thus agreeing to plan and program projects in the TIP that once implemented, are anticipated to make progress toward achieving the provider's targets. [The MPO may discuss the reasoning or analysis behind the decision to support the transit provider's targets.]

[END OF OPTION A. Continue at section "6.3 Transit Asset Management Investments in the TIP"]

[OPTION B: Use the language below for MPO that establishes its own TAM targets]

On [insert date], the [insert MPO name] established TAM targets for the MPO planning area. The targets are presented in Table 6.5.

Table 6.5. [insert MPO name] Transit Asset Management Targets

Asset Category - Performance Measure	Asset Class	FY 20XX Asset Condition	FY20xx Target
Revenue Vehicles			
Age - % of revenue vehicles within a particular asset class that have met or exceeded their ULB	Articulated Bus	X	%
	Bus	X	%
	Mini-Bus	X	%
	Van	X	%
	Etc.	X	%
Equipment			
Age - % of non-revenue vehicles within a particular asset class that have met or exceeded their ULB	Non Revenue/Service Automobile	X	%
	Trucks and other Rubber Tire Vehicles	X	%
	Maintenance Equipment	X	%
	Etc.	X	%
Infrastructure			
% of track segments with performance restrictions (applicable only for Tier I providers)	Guideway Elements	X	%
	Power & Signal Elements	X	%
	Track Elements	X	%
Facilities			
Condition - % of facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Administration	n/a	%
	Maintenance	n/a	%
	Parking Structures	n/a	%
	Passenger Facilities	n/a	%
	Shelter	n/a	%
	Storage	n/a	%
	Etc.	n/a	%

The MPO's TAM targets reflect the targets established by list names of individual transit providers(s) and/or contained in the FDOT Group TAM Plan. In establishing the MPO's TAM targets, [insert MPO name] considered several factors. Include discussion of how the MPO established regional targets based on the individual provider and/or Group TAM Plan targets; for example, if there are multiple providers did the MPO weight targets by the relative size of each transit provider's assets?

[END OF OPTION B. Continue below at "6.3 Transit Asset Management Investments in the TIP".]

6.3 Transit Asset Management Investments in the TIP

The [insert MPO name] TIP was developed and is managed in cooperation with [insert name(s) of public transportation providers(s)]. It reflects the investment priorities established in the [insert name and year of the current LRTP].

[The TIP document must include a written narrative describing the anticipated effect of the TIP toward achieving the targets, linking investment priorities to those performance targets. MPOs could address this requirement by describing how the projects in the TIP were determined, including how performance targets were considered in this process. This section also could discuss how the TIP implements goals, objectives, strategies, and investment priorities from other performance-based plans and processes (for example, the Group TAM plan or individual provider TAM plan(s)). MPOs are required to describe the anticipated effect of the collective program of project activities, not the impact of individual projects in the TIP.]

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 [insert MPO name]'s investments that address transit state of good repair include [list projects, programs, and strategies funded in the TIP that address transit equipment, vehicles, infrastructure, or facilities in the MPO area, such as those in the following categories; list project selection criteria for the TIP consistent with the transit asset performance measures. These may include:

- Bus and other vehicle purchases and replacements
- Equipment purchases and replacements
- Retrofits
- Repair, rehabilitation, and replacement of transit facilities
- Repair, rehabilitation, and replacement of transit infrastructure]

Example below is from the Hillsborough MPO TIP:[12]

The Hillsborough MPO TIP was developed and is managed in cooperation with HART, TBARTA, and the Hillsborough County Sunshine Line. It reflects the investment priorities established in the It's Time Hillsborough: 2045 Plan. 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 Hillsborough MPO's investments that address transit state of good repair include:

- *Compressed Natural Gas (CNG) Duplex Compressor*
- *Marion Transfer Center Infrastructure Improvements*
- *Bus Replacements with CNG Conversion*
- *Additional $4 million for Bus Replacements*
- *CAD-AVL System Replacement*

Transit asset condition and state of good repair is a consideration in the methodology [insert MPO name] uses to select projects for inclusion in the TIP. The TIP includes specific investment priorities that support all of the MPO's goals, including transit state of good repair, using a prioritization and project selection process established in the LRTP. This process evaluates projects that, once implemented, are anticipated to improve transit state of good repair in the MPO's planning area. This prioritization process considers factors such as [include examples. Add language specific to the MPO's consideration of transit state of good repair in the TIP project selection process. If applicable, note any data-driven, performance-based elements, scoring criteria, goals established in the LRTP, etc.]

Example: The TIP devotes resources to projects that will maintain and improve transit state of good repair. Investments in transit assets in the TIP include $xx million for vehicle purchases and $xx million for facility improvements.]

The [insert MPO name] TIP has been evaluated and the anticipated effect of the overall program is that, once implemented, progress will be made towards achieving the TAM performance targets. The [insert MPO name] will continue to coordinate with the [insert name(s) of transit provider(s)] to maintain the region's transit assets in a state of good repair.

For more information on these programs and projects, see [insert name of TIP section that discusses transit projects and investments].

[12] Hillsborough MPO 2021/2022 TIP, Appendix E. https://planhillsborough.org/wp-content/uploads/2020/06/Appendix-E_System-Performance-Report.pdf

Example below is from the River to Sea TPO TIP:[13]

The River to Sea TPO FY 2021/22 to FY 2025/26 TIP was developed and is managed in cooperation with Flagler County Public Transit (FCPT), Votran, and SunRail. It reflects the investment priorities established in Connect 2045. The investments addressing transit state of good repair are included in Section VI - Transit & Transportation Disadvantaged Projects. Projects in this section of the TIP include the funding of equipment, vehicles, infrastructure, maintenance, and/or facilities in the TPO planning area.

Both Flagler County Public Transit and Votran are working to update their respective Transit Development Plans in 2021. The River to Sea TPO will play a role in supporting these updates and monitoring potential changes that may impact transit planning, operations, capital asset management and state of good repair.

Transit asset condition and state of good repair is a consideration in the methodology used by the public transit providers and the River to Sea TPO to select projects for inclusion in the TIP. As such, the TIP includes specific investment priorities that support all of the TPO's goals, including transit state of good repair, using priorities established in the LRTP. This includes the allocation of 30% of the Transportation Management Area (TMA) funding available to the TPO to support the replacement of capital assets. The River to Sea TPO evaluates, prioritizes and funds transit projects that, once implemented, are anticipated to improve state of good repair in the TPO's planning area. The TPO's goal of supporting local transit providers to achieve transit asset condition targets is linked to this investment plan, and the process used to prioritize the projects within the TIP is consistent with federal requirements.

Additional text that could be added to reflect Tier II providers participating in the Group TAM Plan:

Investment decisions for asset replacement in the FDOT Group TAM Plan inventory are made with the goal to maintain or improve the percentage of vehicles, equipment, and facilities in an adequate or better condition. FDOT and its subrecipient transit providers will monitor all assets for unsafe conditions. Identifying an opportunity to improve the safety of an asset, however, does not necessarily indicate an unsafe condition. If an unacceptable safety risk associated with an asset is identified, that asset will be ranked with higher investment priority to the extent practicable. The subrecipients prioritize the rehabilitation and replacement of vehicles that provide transit service over non-revenue vehicles and facilities.

[13] River to Sea TPO TIP – FY 2021/22 to FY 2025/26. https://www.r2ctpo.org/wp-content/uploads/FY-2021-22-to-FY-2024-25-TIP-Amended-August-25-2021_UPDATED.pdf

7 - TRANSIT SAFETY PERFORMANCE

FTA's Public Transportation Agency Safety Plan (PTASP) regulations established transit safety performance management requirements for providers of public transportation systems that receive federal financial assistance under 49 U.S.C. Chapter 53.

The regulations apply to all operators of public transportation that are a recipient or sub-recipient of FTA Urbanized Area Formula Grant Program funds under 49 U.S.C. Section 5307, or that operate a rail transit system that is subject to FTA's State Safety Oversight Program. The PTASP regulations do not apply to certain modes of transit service that are subject to the safety jurisdiction of another Federal agency, including passenger ferry operations regulated by the United States Coast Guard, and commuter rail operations that are regulated by the Federal Railroad Administration.

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.

In Florida, each Section 5307 or 5311 transit provider must develop a System Safety Program Plan (SSPP) under Chapter 14-90, Florida Administrative Code. FDOT technical guidance recommends that Florida's transit agencies revise their existing SSPPs to be compliant with the new FTA PTASP requirements.[14]

Each provider of public transportation that is subject to the PTASP regulations must certify that its SSPP meets the requirements for a PTASP, including transit safety targets for the federally required measures. Providers were required to certify their initial PTASP and safety targets by July 20, 2021. Once the public transportation provider establishes safety targets it must make the targets available to MPOs to aid in the planning process. MPOs had 180 days after receipt of the PTASP targets to establish transit safety targets for the MPO planning area. MPOs are not required to establish transit safety targets annually each time the transit provider establishes targets. Instead, subsequent MPO targets must be established when the MPO updates the LRTP. When establishing transit safety targets, the MPO can either agree to program projects that will support the transit provider targets or establish its own separate regional transit safety targets for the MPO planning area. In addition, the [insert MPO name] must reflect those targets in LRTP and TIP updates.

7.1 Transit Safety Targets

The following transit provider(s) operate in the [insert MPO name] planning area: [list providers(s)]. Of these, [insert name of provider(s) subject to the PTASP requirements] is/are responsible for developing a PTASP and establishing transit safety performance targets annually.

[14] FDOT Public Transportation Agency Safety Plan Guidance Document for Transit Agencies. Available at https://www.fdot.gov/transit/default.shtm

Example from River to Sea TPO TIP:[15]

The following transit provider(s) operate in the River to Sea TPO planning area: Votran and Flagler County Public Transportation (FCPT) Of these, Votran is responsible for developing a PTASP and establishing transit safety performance targets annually.

7.1.1 Transit Agency Safety Targets

The [insert name of transit agency or agencies] established the transit safety targets identified in Table 7.1 on [insert date]:

Include Table 7.1 to list the transit safety targets established by the transit provider(s). Note that this table is an example; the MPO should adapt the table to their specific situation. If more than one provider in the MPO area established transit safety targets, the MPO may include a separate table for each provider or one table that combines the providers, as shown in the example below. Because transit safety targets are established by transit mode, the table may include additional modes not shown below or may list fewer modes. Transit providers also choose the units they use to express the fatality rate, injury rate, and safety events rate measures. For example, a provider may use total annual vehicle revenue miles (VRM) or per 100,000 VRM. The units should be specified in the table. The MPO also may include relevant details from the provider's PTASP, as needed.

Table 7.1. Transit Safety Performance Targets for [insert names of transit provider(s)]

Transit Mode	Fatalities (total)	Fatalities (rate)	Injuries (total)	Injuries (rate)	Safety Events (total)	Safety Events (rate)	System Reliability
Transit Provider 1							
Fixed Route Bus							
Community Bus							
Etc.							
Transit Provider 2							
Fixed Route Bus							
Paratransit							

7.1.2 MPO Transit Safety Targets

As discussed above, MPOs established transit safety targets within 180 days of the date that public transportation providers established their first safety targets in 2020-2021. MPOs are not required to establish transit safety targets annually each time the transit provider establishes targets. Instead, MPO's must revisit

[15] River to Sea TPO TIP – FY 2021/22 to FY 2025/26. https://www.r2ctpo.org/wp-content/uploads/FY-2021-22-to-FY-2024-25-TIP-Amended-August-25-2021_UPDATED.pdf

targets each time the MPO updates the LRTP. MPOs can either agree to program projects that will support the transit provider targets or establish separate regional transit safety targets for the MPO planning area. MPO targets may differ from agency targets, especially if there are multiple transit agencies in the MPO planning area.

[Use either Option A or Option B below. Option A applies to MPOs that support all transit agency safety targets. Option B applies to MPOs that establish their own transit safety targets.]

[OPTION A: Use the language below for MPO that supports the transit agency targets]

On [insert date], the [insert MPO name] agreed to support the [insert transit agency's name] transit safety targets, thus agreeing to plan and program projects in the TIP that once implemented, are anticipated to make progress toward achieving the provider's targets. [The MPO may discuss the reasoning or analysis behind the decision to support the transit agency targets.]

[END OF OPTION A. Continue at section "7.2 Transit Safety Investments in the TIP"]

[OPTION B: Use the language below for MPO that establishes its own transit safety targets]

On [insert date], the [insert MPO name] established transit safety targets for the MPO planning area. The targets are presented in Table 7.2.

Table 7.2. [Insert MPO name] Transit Safety Performance Targets

Transit Mode	Fatalities (total)	Fatalities (rate)	Injuries (total)	Injuries (rate)	Safety Events (total)	Safety Events (rate)	System Reliability
Fixed Route Bus							
Community Bus							
Etc.							

The MPO's transit safety targets reflect the targets established by [list name(s) of individual transit providers(s)] through their Public Transportation Agency Safety Plan(s). In establishing the MPO's targets, [insert MPO name] considered several factors. Add discussion of how/why the MPO established regional targets based on the individual provider targets; for example, if there are multiple providers did the MPO weight targets by the relative size of each transit provider's ridership or other factors?

[END OF OPTION B. Continue below at section "7.2 Transit Safety Investments in the TIP".]

7.2 Transit Safety Investments in the TIP

The [insert MPO name] TIP was developed and is managed in cooperation with [insert name(s) of public transportation providers(s) in the MPO area]. It reflects the investment priorities established in the [insert name and year of the current LRTP].

[The TIP document must include a written narrative describing the anticipated effect of the TIP toward achieving the targets, linking investment priorities to those performance targets. MPOs could address this requirement by describing how the projects in the TIP were determined, including how performance targets were considered in this process. This section also should discuss how the TIP implements goals, objectives, strategies, and investment priorities from the provider(s) PTASP. MPOs are required to describe the anticipated effect of the collective program of projects on targets, not the impact of individual projects in the TIP.]

FTA funding, as programmed by the region's transit providers and FDOT, is used for programs and products to improve the safety of the region's transit systems. The focus of [insert MPO name]'s investments that address transit safety include [list projects, programs, and strategies funded in the TIP that address transit safety and transit system reliability. The PTASP should identify safety issues and safety risk mitigation strategies that can be summarized here.

Transit safety is a consideration in the methodology [insert MPO name] uses to select projects for inclusion in the TIP. The TIP includes specific investment priorities that support all of the MPO's goals, including transit safety, using a prioritization and project selection process established in the LRTP. This process evaluates projects that, once implemented, are anticipated to improve transit safety in the MPO's planning area. This prioritization process considers factors such as [include examples. Add language specific to the MPO's consideration of transit safety in the TIP project selection process, including criteria consistent with the transit safety performance measures. If applicable, note any data-driven analyses, performance-based elements, linkages to goals established in the LRTP, etc.]

The [insert MPO name] TIP has been evaluated and the anticipated effect of the overall program is that, once implemented, progress will be made towards achieving the transit safety performance targets. The [insert MPO name] will continue to coordinate with the [insert name(s) of transit provider(s)] to maintain and improve the safety of the region's transit system and maintain transit assets in a state of good repair.

Example: The TIP devotes resources to projects that will maintain and improve transit safety. Investments in transit safety in the TIP include $xx million for [insert brief description of safety measures and programs].

For more information on these programs and projects, see [insert name of TIP section that discusses transit projects and investments].