

Key Chapter Changes

Key chapter changes highlighted **yellow** are new changes.

- No changes have been made since November 15, 2022.

8 Performance Management

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8.1 Purpose

This chapter provides an overview of the federal Transportation Performance Management (TPM) framework. It provides information on each federal performance measure and highlights requirements for Metropolitan Planning Organizations (MPO) to set performance targets, report performance in Transportation Improvement Programs (TIP) and Long-Range Transportation Plans (LRTP), and integrate TPM into the MPO planning process.

8.2 Authority

This section cites Federal laws and regulations related to TPM.

Table 8.1 Federal TPM Laws and Regulations

Citation	Description
Federal	
23 U.S.C. 150	Describes the national goals, establishment of performance measures and performance targets, and reporting requirements for the Federal-aid highway program.
49 U.S.C. 5301	Describes the national policy and general purposes for funding public transportation systems.
23 U.S.C. 134 49 U.S.C. 5303	Describes the metropolitan transportation planning process.
23 C.F.R. 450	Describes planning assistance and standards.
23 C.F.R. 490	Describes national performance measures for highways.
49 U.S.C. 5326 49 U.S.C. 5329	Describes national performance measures for transit assets and transit safety.

8.3 Performance Management Terminology

Table 8.2 lists key TPM-related terms and definitions as they are defined in federal statutes, regulations, and guidance. Because TPM is a new requirement for all transportation agencies, FDOT, MPOs, and public transportation providers should have a solid understanding of these definitions and how they are applied in the planning process.

Table 8.2 TPM Terminology

Term	Definition
Goal	A broad statement that describes a desired end state. ¹
Objective	A specific, measurable statement that supports achievement of a goal. ²
Performance Measure	An expression based on a metric that is used to establish targets and to assess progress toward meeting the established targets. [23 C.F.R. 450.104] and [23 C.F.R. 490.101]
Metric	A quantifiable indicator of performance or condition. [23 C.F.R. 490.101]
Target	A quantifiable level of performance or condition, expressed as a value for a measure, to be achieved within a time period. [23 C.F.R. 490.101]

¹ FHWA Performance-Based Planning and Programming Guidebook. Page 12. http://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/.

² FHWA Performance-Based Planning and Programming Guidebook. Page 12. http://www.fhwa.dot.gov/planning/performance_based_planning/pbpp_guidebook/.

8.4 Overview – Federal TPM Framework

In 2012, Moving Ahead for Progress in the 21st Century (MAP-21) Act ushered in a national TPM framework to strengthen the U.S. transportation system and improve decision-making through better informed transportation planning and programming. MAP-21 established performance-driven and outcome-based requirements to align Federal transportation funding with national goals and track progress towards achievement of these goals. The purpose of this performance-based program is for state departments of transportation, MPOs, and public transportation providers to invest resources in projects that, collectively, make progress toward achievement of the national goals. The Fixing America's Surface Transportation (FAST) Act in 2015 affirmed this TPM approach.

MAP-21 established the framework for TPM. In the legislation, Congress defined national goals and updated general purposes for the transportation system and required the U.S. Department of Transportation (U.S. DOT) to establish performance measures related to those goals and purposes. States, MPOs, and public transportation providers must establish performance targets for each measure to be achieved within a specified time period, and must monitor and periodically report on progress toward achievement of the targets. **Figure 8.1** presents the MAP-21 TPM framework and the agencies that lead each step. **Figure 8.2** lists the national goals and general purposes defined by MAP-21.

This represents the first time all states, MPOs, and public transportation providers are required to measure, monitor, and report on the performance of the transportation system using a national framework of consistent performance measures. Prior to MAP-21, there were no explicit requirements to do so.

Figure 8.1 Federal Transportation Performance Management Framework

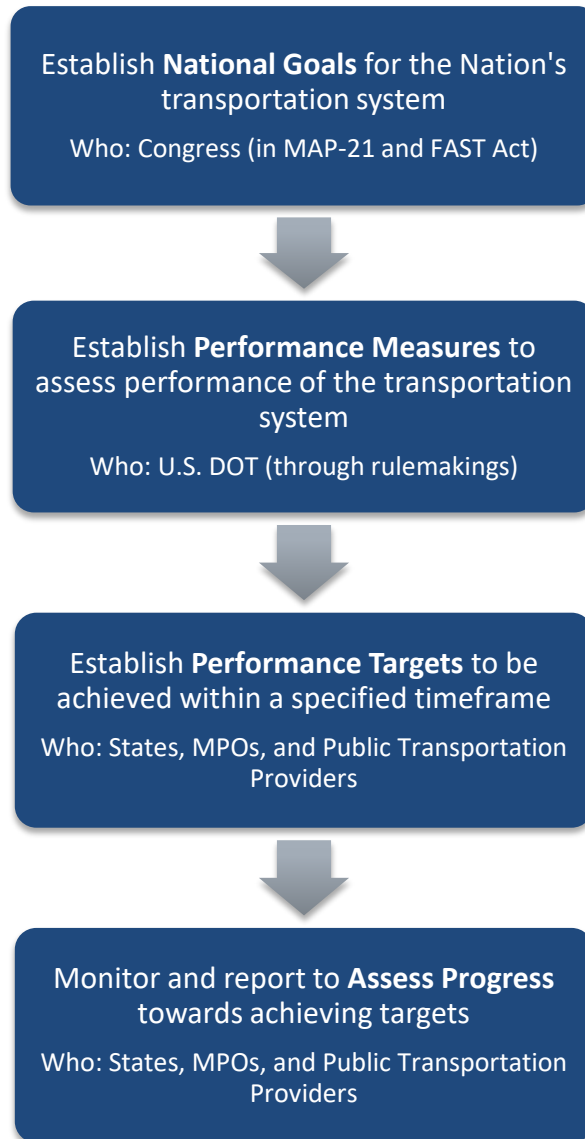


Figure 8.2 MAP-21 National Goals and General Purposes

MAP-21 National Goals [23 U.S.C. 150(b)]
and **General Purposes** [49 U.S.C. 5301]

National Goals

Safety. Achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

Infrastructure Condition. Maintain the highway infrastructure asset system in a state of good repair.

Congestion Reduction. Achieve a significant reduction in congestion on the National Highway System (NHS).

System Reliability. Improve the efficiency of the surface transportation system.

Freight Movement and Economic Vitality. Improve the National Highway Freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

Environmental Sustainability. Enhance the performance of the transportation system while protecting and enhancing the natural environment.

Reduced Project Delivery Delays. Reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, including reducing regulatory burdens and improving agencies' work practices.

General Purposes

- Establish standards for the state of good repair of public transportation infrastructure and vehicles.
- Promote continuing, cooperative, and comprehensive planning that improves the performance of the transportation network.

8.5 Federal Performance Measures

As required by MAP-21, U.S. DOT promulgated a series of rulemakings that established performance measures tied to the national goals and general purpose areas. [\[23 U.S.C. 150\(c\), 49 U.S.C. 5301\]](#). The Federal performance measure rules fall into three primary categories – safety, asset maintenance, and system performance.

- Safety performance measures track the number and rate of roadway and transit fatalities and serious injuries, the number of pedestrian and bicyclist fatalities and serious injuries, and transit derailments, collisions, fires, or evacuations.
- Asset management performance measures track the condition of roads, bridges, and transit equipment, vehicles, and facilities to assess how well these assets are being maintained.
- System performance measures track highway travel reliability, freight movement reliability, congestion, and emissions to assess how well a corridor is moving people and freight, not just vehicles.

Between 2016 and 2017, the Federal Highway Administration (FHWA) proposed and finalized three performance measure rules that address highway safety (PM1), highway pavement and bridge condition (PM2), and highway system performance (PM3). The Federal Transit Administration (FTA) proposed and finalized two performance measure rules between 2016 and 2018 that address transit assets and transit safety.

In addition to the performance measure rules, FHWA and FTA issued a final rule for Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning on May 27, 2016. [\[23 C.F.R. 450\]](#) This rule, known as the planning rule, updates state DOT and MPO planning requirements to reflect changes brought about by MAP-21 and the FAST Act, including the performance management framework presented in **Figure 8.2** and associated requirements for target setting and reporting.

Table 8.3 provides dates and regulatory citations for the planning rule and the five performance measure rules. Each performance measure rule is then described.

Table 8.3 Federal TPM Rules and Regulatory Citations

Rule	Regulatory Chapter
<p>Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning</p> <p>Final Rule published May 27, 2016. Effective date June 27, 2016.</p>	<p>23 CFR 450</p>
<p>Highway Safety Performance Management Measures (PM1)</p> <p>Final Rule published March 15, 2016. Effective date April 14, 2016.</p>	<p>23 CFR 490, Subpart B</p>
<p>Assessing Pavement and Bridge Condition for the National Highway Performance Program (PM2)</p> <p>Final Rule published January 18, 2017. Effective date May 20, 2017.</p>	<p>23 CFR 490, Subparts C (pavement) & D (bridge)</p>
<p>Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program (PM3)</p> <p>Final Rule published January 18, 2017. Effective date May 20, 2017.</p>	<p>23 CFR 490, Subparts E (NHS), F (Freight), G (CMAQ Congestion), & H (Emissions)</p>
<p>Transit Asset Management</p> <p>Final Rule published July 26, 2016. Effective date October 1, 2016.</p>	<p>49 CFR 625</p>
<p>Public Transportation Agency Safety Plan</p> <p>Final Rule published July 19, 2018. Effective date July 19, 2019.</p>	<p>49 CFR 673</p>

8.5.1 Highway Safety Performance Measures (PM1)

The first of the performance measures rules issued by FHWA establishes five performance measures to assess road safety and carry out the Highway Safety Improvement Program (HSIP). The HSIP is a federal-aid funding program intended to

achieve a significant reduction in traffic fatalities and serious injuries on all public roads. The PM1 performance measures are listed in **Table 8.4**.

Table 8.4 Highway Safety Performance Measures (PM1)

Highway Safety Performance Measures (PM1)
<ul style="list-style-type: none">• Number of fatalities.• Rate of fatalities per 100 million vehicle miles traveled (VMT).• Number of serious injuries.• Rate of serious injuries per 100 million VMT.• Number of non-motorized fatalities and serious injuries.

The non-motorized performance measure is one measure. It combines non-motorized fatalities and non-motorized serious injuries.

The Florida Department of Highway Safety and Motor Vehicles (DHSMV) is the official custodian of traffic crash reports for the State of Florida. The following data sources are used to measure performance under the PM1 rule:

- Fatality Data: Fatality Analysis Reporting System (FARS), available from DHSMV.
- Serious Injury Data: State motor vehicle crash database, available from DHSMV.
- Number of Non-motorized Fatalities and Non-motorized Serious Injuries: FARS and State motor vehicle crash database, available from DHSMV.
- Volume Data: State VMT data is derived from the Highway Performance Monitoring System (HPMS), available from the FDOT Transportation Data and Analytics Office. VMT for the MPO planning area, if applicable, is estimated by the MPO.

FDOT has made a commitment to make all the data available to the MPOs.

8.5.2 Pavement and Bridge Condition Performance Measures (PM2)

In January 2017, FHWA published the Pavement and Bridge Condition Performance Measures Final Rule, which is also referred to as the PM2 rule. This rule establishes six performance measures for pavement and bridge condition on Interstate and non-

Interstate National Highway system (NHS) roads in each state. **Table 8.5** presents the PM2 performance measures.

Table 8.5 Pavement and Bridge Condition Performance Measures (PM2)

Pavement and Bridge Condition Performance Measures (PM2)
<ul style="list-style-type: none"> • Percent of pavements on the Interstate system in Good condition. • Percent of pavements on the Interstate system in Poor condition. • Percent of pavements on the non-Interstate NHS in Good condition. • Percent of pavements on the non-Interstate NHS in Poor condition. • Percent of NHS bridges (by deck area) classified as in Good condition. • Percent of NHS bridges (by deck area) classified as in Poor condition.

8.5.2.1 Pavement Condition

The PM2 rule defines NHS pavement types as asphalt, jointed concrete, or continuous concrete. The four pavement condition measures represent the percentage of lane-miles on the Interstate and non-Interstate NHS that are in Good condition or Poor condition.

Five metrics are used to assess pavement condition:

- International Roughness Index (IRI) – an indicator of roughness; applicable to asphalt, jointed concrete, and continuous concrete pavements.
- Cracking percent – percentage of the 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.
- 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.

Each pavement metric has a threshold to establish Good, Fair, or Poor condition, as shown in **Table 8.6**.

Table 8.6 Thresholds for Pavement Performance Metrics

Metric Rating	Good	Fair	Poor
IRI (inches/mile)	< 95	95 – 170	> 170
Cracking Percent (%)	< 5	<ul style="list-style-type: none"> • CRCP: 5 – 10 • Jointed: 5 – 15 • Asphalt: 5 – 20 	<ul style="list-style-type: none"> • CRCP: > 10 • Jointed: > 15 • Asphalt: > 20
Rutting (inches) (for asphalt only)	< 0.20	0.20 – 0.40	> 0.40
Faulting (inches) (for jointed concrete only)	< 0.10	0.10 – 0.15	> 0.15
PSR (0.0-5.0 value)	>=4.0	2.0 – 4.0	<=2.0

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 rating 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 in Table 9.6.

For all three pavement types, sections that are not Good or Poor are rated Fair.

The Good and Poor performance 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.

8.5.2.2 Bridge Condition

The two bridge condition performance measures refer to the percentage of bridges by deck area on the NHS that are in Good condition or Poor condition. Bridge owners are required to inspect bridges on a regular basis. Data from these inspections form the basis for determining condition levels and help determine bridge maintenance needs.

The bridge measures assess the condition of a bridge’s deck, superstructure, substructure, and culverts. Each bridge metric has a threshold to establish Good, Fair, or Poor condition, as shown in **Table 8.7**.

Table 8.7 Thresholds for Bridge Performance Metrics

Metric Rating	Good	Fair	Poor
Deck (Item 58)	≥ 7	5 or 6	≤ 4
Superstructure (Item 59)	≥ 7	5 or 6	≤ 4
Substructure (Item 60)	≥ 7	5 or 6	≤ 4
Culvert (Item 62)	≥ 7	5 or 6	≤ 4

Each bridge on the NHS is evaluated using these four metrics. 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 performance measures are expressed as the percent of all 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.

Bridges in Good condition suggests that no major investment is needed. Bridges in Poor condition are safe to drive on; however, they are nearing a point where substantial reconstruction or replacement is needed.

MPOs do not need to collect pavement and bridge condition data. FDOT collects pavement and bridge data for the NHS and has made a commitment to make all the data available to the MPOs.

8.5.3 Highway System/Freight/CMAQ Performance Measures (PM3)

In January 2017, USDOT published the System Performance/Freight/CMAQ Performance Measures Final Rule to assess passenger and freight travel performance on the Interstate and non-Interstate NHS, and traffic congestion and on-road mobile source emission reductions in areas that do not meet federal air quality standards. The rule, which is referred to as the PM3 rule, defines the six performance measures listed in **Table 8.8**.

Table 8.8 Highway System Performance Measures (PM3)

Performance Measures
<ul style="list-style-type: none"> • Percent of person-miles traveled on the Interstate system that are reliable (LOTTR). • Percent of person-miles traveled on the non-Interstate NHS that are reliable (LOTTR). • Truck Travel Time Reliability Index (TTTR). • Annual hours of peak-hour excessive delay (PHED) per capita.* • Percent of non-single occupant vehicle travel (non-SOV).* • Cumulative 2-year and 4-year reduction of on-road mobile source emissions.*

*Not required in Florida.

Three of the six PM3 measures (PHED, percent non-SOV travel, and cumulative emission reduction) apply only to areas that include any part of a designated air quality nonattainment or maintenance area for ozone, carbon monoxide, or particulate matter. Because all areas in Florida meet the air quality standards for these pollutants, these three measures do not apply to either FDOT or the MPOs.

The data used to calculate the LOTTR and TTTR measures is provided by FHWA via the National Performance Management Research Data Set (NPMRDS). This dataset contains travel times, segment lengths, and Annual Average Daily Travel (AADT) for Interstate and non-Interstate NHS roads. If FDOT and the MPOs wish to use a different dataset for travel times and reporting segments in the future, they would need to coordinate with each other to secure agreement on the alternate data. FDOT would then

need to request FHWA approval for the use of the alternate data no later than October 1st before the beginning of the calendar year in which the alternate data would be used. FHWA must approve the use of the data source(s) prior to FDOT and MPO implementation and use of the data source(s).

8.5.3.1 LOTTR Measures

The LOTTR performance measure assesses 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 all applicable roads. Travel times are analyzed for each highway segment. The LOTTR is calculated for each segment for four time periods that cover the hours of 6:00 am to 8:00 pm each day:

1. AM Peak 6:00 a.m. – 10:00 a.m. Monday through Friday
2. Mid-day 10:00 a.m. – 4:00 p.m. Monday through Friday
3. PM Peak 4:00 p.m. – 8:00 p.m. Monday through Friday
4. Weekends 6:00 a.m. – 8:00 p.m. Saturday and Sunday

A segment is reliable if its LOTTR is less than 1.5 during all four time periods. If one or more time periods has a LOTTR of 1.5 or above, that segment is unreliable. The two LOTTR measures are expressed as the percent of person-miles traveled on the Interstate or Non-Interstate NHS system that are reliable. Person-miles take into account the number of people traveling in buses, cars, and trucks over these roadway segments. Thus, to translate the LOTTR to the performance measure, the length of each segment is multiplied by its annual average daily traffic (AADT) and average occupancy factor for all vehicles, which results in person-miles. This calculation is done for reliable segments and for all segments. The sum of reliable segment person-miles is divided by the sum of all segment person-miles to calculate the measures. Average vehicle occupancy is obtained from either the most recently available data tables published by FHWA or from other sources chosen by the state, as long as the alternate data is allowed by FHWA. As of April 2018, FHWA provided guidance that an occupancy factor of 1.7 be used.

8.5.3.2 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 five time periods throughout weekdays and weekends:

1. AM Peak 6:00 a.m. – 10:00 a.m. on Monday – Friday
2. Mid-day 10:00 a.m. – 4:00 p.m. on Monday – Friday
3. PM Peak 4:00 p.m. – 8:00 p.m. on Monday – Friday
4. Weekend 6:00 a.m. – 8:00 p.m. on Saturday – Sunday
5. Overnight 8:00 p.m. – 6:00 a.m. on all days of the week

For each segment, the highest TTTR value among the five time periods is multiplied by the length of the segment. The sum of all length-weighted segments is then divided by the total length of Interstate to generate the TTTR Index.

8.5.4 Transit Asset Management Performance Measures

On July 26, 2016, FTA published the final Transit Asset Management (TAM) rule. This rule applies to all recipients and subrecipients of Federal transit funding that own, operate, or manage public transportation capital assets. The rule defines the term “state of good repair,” requires that public transportation providers develop and implement TAM plans, and establishes state of good repair standards and performance measures for four asset categories: rolling stock, equipment, transit infrastructure, and facilities. Transit asset performance in each category is measured by asset class, which is the subgroup of capital assets within an asset category. **Table 8.9** lists the asset classes and associated transit asset performance measures.

Table 8.9 Transit Asset Management Performance Measures

Asset Class	Performance Measures
Equipment: Non-revenue support-service and maintenance vehicles	Percent of non-revenue vehicles that have met or exceeded their Useful Life Benchmark.
Rolling Stock: Revenue vehicles by mode	Percent of revenue vehicles that have met or exceeded their Useful Life Benchmark.
Infrastructure: Only rail fixed-guideway, track, signals and systems	Percentage of track segments with performance restrictions.
Facilities: Maintenance and administrative facilities; and passenger stations (buildings) and parking facilities	Percentage of facilities rated in marginal or poor condition on the Transit Economic Requirements Model (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. and is not the same as an asset’s useful life.

The TAM rule also established two tiers of agencies. A Tier I provider is one that owns, operates, or manages either rail or more than 100 vehicles in revenue service during peak regular service across all fixed route modes or in any one non-fixed route mode. A Tier II provider is one that is either a sub-recipient of FTA 5311 funds, or is an American Indian Tribe, or has 100 vehicles or less in revenue service during peak regular service across all non-rail fixed route modes or in any one non-fixed route mode.

A Tier I provider must develop its own TAM plan. Tier II agencies may develop their own plans or participate in a group TAM plan, which is compiled by a group TAM plan sponsor. FDOT is the sponsor of a Group TAM plan for subrecipients of Section 5311 and 5310 grant funds.

8.5.5 Public Transportation Agency Safety Measures

FTA established requirements for Public Transportation Agency Safety Plans (PTASP) and related performance measures in a final rule published on July 19, 2018. This rule requires certain operators of public transportation systems that receive federal financial

assistance under 49 U.S.C. Chapter 53 to develop and implement a PTASP based on a management systems approach. The rule applies to all operators of public transportation that are a recipient or sub-recipient of FTA 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 rule does not apply to certain modes of transit service that are subject to the safety jurisdiction of another Federal agency, including passenger ferry operations that are regulated by the United States Coast Guard, and commuter rail operations that are regulated by the Federal Railroad Administration.

The PTASP will set targets based on performance measures established by FTA in the National Public Transportation Safety Plan. These transit safety performance measures are based on data transit providers already submit to the National Transit Database (NTD), and are listed in **Table 8.10**.

Table 8.10 Public Transportation Agency Safety Plan (PTASP) Performance Measures

Performance Measures
<ul style="list-style-type: none">• 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.

Each provider of public transportation that is subject to the rule must develop and certify a PTASP that includes transit safety targets for the above measures. Providers were initially required to certify a PTASP and targets by July 20, 2020. However, on April 22, 2020, FTA extended the deadline to December 31, 2020 to provide regulatory flexibility due to the extraordinary operational challenges presented by the COVID-19 public health emergency. On December 11, 2020, FTA extended the PTASP deadline for a second time to July 20, 2021.

Once completed and certified, transit providers must make their safety plans available to their State and MPO(s) in which their transit services are programmed in the MPO’s Transportation Improvement Program (TIP).

In Florida, each Section 5307 and 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.

8.6 Establishing Performance Targets

The next step in the TPM framework is for states, MPOs, and providers of public transportation to set targets for each measure that applies in the planning area. This section discusses the target setting process and highlights key dates and other considerations MPOs should be aware of.

The final Planning rule provides the framework for target setting. Under the rule, states must have established initial performance targets no later than one year after the effective dates of each FHWA final performance measure rule. [\[23 C.F.R. 450.206\(c\)\(2\)\]](#) The FTA performance measure rules establish the schedule for when public transportation providers must establish targets. The deadline for the TAM rule was January 1, 2017. The deadline for the PTASP rule was July 20, 2020; however, FTA granted a one-time extension of the PTASP deadline to December 31, 2020 due to the COVID-19 national emergency.

MPOs must establish performance targets not later than 180 days after the date on which the State or public transportation provider establishes the performance targets. [\[23 C.F.R. 450.306\(d\)\(3\)\]](#) There are two ways to do this:

Option 1: The MPO agrees to plan and program projects so that they contribute toward the accomplishment of the relevant state or public transportation provider target for that performance measure. (The MPO numeric target is the same as the relevant state or public transportation provider numeric target.)

Option 2: The MPO evaluates performance data and establishes a numeric target for the MPO planning area that is different than the numeric target established by the state or public transportation provider. (The MPO will plan and program projects that contribute toward the accomplishment of the MPO target for that performance measure.)

When states establish statewide targets for the PM1, PM2, and PM3 measures, they may elect to establish additional targets for portions of the state for any number and combination of urban and non-urban areas. [\[23 C.F.R. 490.105\(e\)\(3\)\]](#) This approach

provides the state flexibility to account for differences in urban and non-urban areas when establishing targets. In this case, when an MPO chooses to support the state's target, the relevant target the MPO is supporting is the state target that applies to that area. As of the date when this chapter was final, Florida established only one statewide target for each applicable measure.

Because the performance measure rules have different effective dates, deadlines for establishing initial and subsequent targets vary. Annual targets are required for PM1 and transit measures, while two-year or four-year targets are required for PM2 and PM3 measures. **Table 8.11** summarizes the dates initial targets were or are required to be established by the state or provider of public transportation and the MPO, the frequency with which targets must be established, and target update frequency. This is followed by discussion of each measure area.

Note that for the transit safety targets, FTA granted an extension of the PTASP compliance date from July 20, 2020 to July 21, 2021 due to the COVID-19 national emergency. The 180 day timeframe for MPOs to set targets begins when the MPO receives transit safety targets from the transit providers.

Table 8.11 Initial Target Dates, Target Frequency, and Subsequent Targets

Perf. Area	Date for Initial State/Transit Targets	Date for Initial MPO Targets	Target Setting Frequency	Date for Ongoing State/Public Trans. Provider Targets
PM1	Aug. 31, 2017	Feb 27, 2018	Annual	Aug. 31, 2018 and each year thereafter
PM2	May 20, 2018	+180 days (Nov. 18, 2018)	Every four years	Oct. 1, 2022 and every four years thereafter
PM3	May 20, 2018	+180 days (Nov. 18, 2018)	Every four years	Oct. 1, 2022 and every four years thereafter
Transit Assets	Jan. 1, 2017	+180 days (June 30, 2018)	Annual	Within 4 months of the end of the provider's Fiscal Year
Transit Safety	July 21, 2021	+180 days (On or before Jan. 18, 2022)	Annual	On or before July 22, 2022 and each year thereafter

8.6.1 Establishing PM1 Targets

Performance for the PM1 measures is assessed on an annual basis. Accordingly, targets for the PM1 safety measures are established annually by FDOT and the MPOs. FDOT reports safety targets in its HSIP Annual Report that is due to FHWA each year by August 31. Targets are applicable to all public roads regardless of functional classification or ownership.

MPOs must then establish PM1 targets within 180 days of the date that the state established targets. If a State submits its HSIP report prior to August 31st, FHWA still considers the PM1 targets as being established and reported on August 31. Therefore, MPOs must establish their HSIP targets no later than February 27 each year.

If an MPO elects to establish a PM1 target specific to the MPO planning area for one of the rate measures, the MPO must report the VMT estimate used for rate target and the methodology used to develop the VMT estimate.

In addition to reporting PM1 targets in the HSIP annual report, FDOT must also describe the progress toward achieving safety outcomes and performance targets, and include an overview of general highway safety trends, a discussion of the basis of each established target and how the established target supports FDOT safety goals established in the Strategic Highway Safety Plan, and a discussion of reasons for differences in the actual outcomes and targets.

Initial PM1 Targets. FDOT established and reported Florida's first PM1 targets in the HSIP Annual Report that was due to FHWA on August 31, 2017. Those targets were set for calendar year (CY) 2018. MPOs were then required to establish PM1 targets for CY2018 no later than February 27, 2018.

Subsequent PM1 Targets. FDOT and the MPOs establish PM1 targets annually. Each year by August 31, FDOT will establish and report PM1 targets for the following calendar year in the HSIP Annual Report that is submitted to FHWA. MPOs must then establish PM1 targets for the same calendar year by February 27.

8.6.2 Establishing PM2 and PM3 Targets

Performance for the PM2 and PM3 measures is assessed over a four-year performance period. The first performance period runs from January 1, 2018 through December 31, 2021. The second runs from January 1, 2022 through December 31, 2025, and so on. States are required to report on performance at the beginning, midpoint, and end of each performance period (see [Section 8.7 Monitoring and Reporting](#) for more information on reporting).

Targets for the PM2 and PM3 measures are established every four years by FDOT and the MPOs for the associated performance period. Additionally, FDOT is required to establish two-year targets for each measure. Note that in areas where the percent non-SOV travel and total emissions reduction measures apply, MPOs establish both two-year and four-year targets. At the time of this writing, the percent non-SOV travel and total emissions reduction measures do not apply in Florida.

Two-year targets reflect the anticipated performance level at the midpoint of the associated four-year performance period, while four-year targets reflect the anticipated performance level at the end of the performance period.

There is a phase in period for the initial performance period beginning January 1, 2018, whereby states are not required to establish two-year targets for the following four measures:

- Percent of pavements on the Interstate system in good condition.
- Percent of pavements on the Interstate system in poor condition.
- Percent of person-miles traveled on the non-Interstate NHS that are reliable.
- Annual hours of peak-hour excessive delay per capita (PHED). Note that at the time of this writing, the PHED measure does not apply in Florida.

The phase-in applies only to the first performance period (January 1, 2018 through December 31, 2021). For subsequent performance periods, states will be required to establish two-year targets for all PM2 and PM3 measures.

Initial PM2 and PM3 Targets. Initial statewide PM2 and PM3 targets were required to be established by May 20, 2018. FDOT established Florida's PM2 and PM3 targets on May 18, 2018. MPOs were then required to establish PM2 and PM3 targets no later than November 14, 2018.

Subsequent PM2 and PM3 Targets. FDOT and the MPOs will establish PM2 and PM3 targets every four years. FDOT is required to next establish two-year and four-year targets on or before October 1, 2022 for the four-year performance period that covers January 1, 2022 through December 31, 2025. MPOs will then establish four-year targets no later than 180 days after FDOT establishes state targets.

8.6.2.1 Adjusting PM2 and PM3 Targets

States may adjust an established four-year target for any PM2 or PM3 measure after the midpoint of the four-year performance period. This adjustment would take place on or before October 1 of the third year of the performance period, which is when the state submits a report to FHWA on performance over the first two years.

Within 180 days of the state reporting the adjusted target to FHWA, the MPO must report to the state whether it will either agree to plan a program of projects so that they contribute to the adjusted State DOT target for that performance measure, or commit to a new quantifiable target for that performance measure for its metropolitan planning area.

Note that if an MPO agreed to plan and program projects so that they contribute toward the accomplishment of the State DOT targets, and the State DOT does not adjust a four-year target at the midpoint of the performance period, the MPO cannot establish its own target at the midpoint. The MPO must continue to contribute to the State targets established at the beginning of the performance period.

8.6.3 Establishing Transit Asset Management Targets

Performance for the transit asset measures is assessed on an annual basis. Accordingly, providers of public transportation annually establish performance targets for the following fiscal year for each asset class included in its TAM plan. FDOT establishes collective transit targets for all providers that participate in the Group TAM plan.

MPOs must then establish transit asset targets within 180 days of the date that the provider of public transportation established targets.

Initial Transit Asset Targets. Transit providers were required to establish transit asset management targets within three months after the effective date of the TAM rule, or by January 1, 2017. However, some transit providers did not have complete data available to establish their initial targets by January 1, 2017 and therefore did not meet the deadline, instead establishing initial targets sometime after January 1, 2017. MPOs were then required to establish targets within 180 days. Providers were required to complete a TAM plan by October 1, 2018.

Subsequent Transit Asset Targets. Transit providers will establish transit asset targets annually. Within four (4) months of the end of each transit provider's fiscal year, the provider establishes and submits to FTA's National Transit Database performance targets for the next fiscal year, an asset inventory and condition assessment, as well as a narrative on changes in transit system conditions and progress toward achieving previous performance targets. Unlike with PM1, PM2, and PM3 measures, MPOs are not required to establish new transit asset targets annually each time the transit provider establishes

targets. Instead, MPOs may choose to update their transit targets when the transit provider(s) updates theirs, or when the MPO updates its LRTP.

Multiple Transit Providers in an MPO Area. In cases where two or more transit providers operate in an MPO planning area and establish a different target for a given measure, the MPO has the option of either coordinating with the providers to establish a single target for the MPO planning area, or establishing a set of targets for the MPO planning area that reflects the different transit provider targets. For both options, the MPO must set the target in coordination with the transit providers.

8.6.4 Establishing Transit Safety Targets

The PTASP rule took effect on July 19, 2019. Transit operators subject to the rule were to have initial Public Transportation Agency Safety Plans in place no later than July 20, 2020. However, due to the COVID-19 national emergency, FTA extended the PTASP compliance date from July 20, 2020 to July 21, 2021. One of the required elements of the plan is establishing safety performance targets. Transit operators are required to review, update, and certify their plans annually.

Once providers establish initial transit safety targets, MPOs must then establish transit safety targets within 180 days. As with the transit asset targets, MPOs are not required to establish new transit safety targets annually each time the transit provider establishes targets. Instead, MPOs may choose to update their transit targets when the transit provider(s) updates theirs, or when the MPO updates its LRTP.

Multiple Transit Providers in an MPO Area. In cases where two or more transit providers operate in an MPO planning area and establish a different safety target for a measure, the MPO may establish a single target for the MPO planning area or establish a set of targets for the MPO planning area that reflect the differing transit provider targets.

8.7 Monitoring and Reporting

Accountability and transparency in transportation decision-making is a key provision of MAP-21's performance management framework. To ensure this, MAP-21 set new requirements for States, MPOs, and public transportation providers to report on progress towards meeting performance targets.

States and providers of public transportation are required to submit performance information directly to FHWA and FTA on an ongoing basis through reports and plan updates. The frequency of reporting varies with each performance rule. In contrast, MPOs are not required to report performance information directly to FHWA or FTA. Instead, MPOs provide ongoing performance information and progress towards achieving performance targets in the LRTP, and an assessment of the anticipated effect of the TIP in achieving progress towards targets. After the MPOs establish targets, the State DOT must be able to provide these targets to FHWA upon request. [\[23 CFR 490.105\(f\)\(9\)\]](#) [\[23 CFR 490.209\(c\)\(3\)\]](#) Therefore, MPOs must report target-related status information to FDOT upon request.

8.7.1 TPM Reporting Requirements in the MPO LRTP

The LRTP must include a description of all applicable performance measures and targets used in assessing the performance of the transportation system in the MPO planning area. [\[23 C.F.R. 450.324\(f\)\(3\)\]](#)

The LRTP must also include a system performance report. The system performance report must evaluate the condition and performance of the transportation system with respect to the MPO's performance targets, including progress achieved by the MPO in meeting the performance targets in comparison with system performance recorded in previous reports, including baseline data. [\[23 C.F.R. 450.324\(f\)\(4\)\(i\)\]](#)

The Initial system performance report will focus on baseline performance. With additional LRTP cycles, the system performance report will discuss how the program of projects from the prior LRTP and TIPs performed relative to the targets.

For MPOs that elect to develop multiple scenarios when developing their LRTP, the system performance report must include an analysis of how the preferred scenario has improved the conditions and performance of the transportation system and how changes in local policies and investments have impacted the costs necessary to achieve the identified performance targets. [\[23 C.F.R. 450.324\(f\)\(4\)\(ii\)\]](#)

Currently, there is no standard template from FHWA or FTA for the required description of the applicable performance measures and targets or for the system performance report. [FHWA's PBPP Roadmap](#) summarizes TPM requirements, describes available resources, and guides FHWA Division Offices to enhance their planning oversight and stewardship

activities. The Roadmap does not include a specific template, but does address the basic steps of incorporating the PBPP approach into the LRTP.

FDOT created [templates](#) MPOs may use to develop LRTP language specific to each MPO. The system performance report can be included in the body of the LRTP or as an appendix.

The requirement to include a system performance report in the LRTP only has to be met at the time that the LRTP is updated. The system performance report does not have to be updated when the LRTP is amended.

8.7.2 TPM Reporting Requirements in the MPO TIP

MPOs must design the Transportation Improvement Program (TIP) such that once implemented, it makes progress toward achieving the MPO's performance targets. [[23 C.F.R. 450.326\(c\)](#)]

To the maximum extent practicable, the TIP must include a description of the anticipated effect of the TIP toward achieving the performance targets identified in the LRTP, linking investment priorities to those performance targets. [[23 C.F.R. 450.326\(d\)](#)] FHWA defines maximum extent practicable as capable of being done after taking into consideration the cost, existing technology, and logistics of accomplishing the requirement.

Currently, there is no standard template from FHWA or FTA for development of the TIP TPM language. FDOT created [templates](#) MPOs may use to develop TIP language to meet the TPM requirements.

[FHWA's PBPP Roadmap](#), described above, addresses the basic steps of incorporating the PBPP approach into the TIP and documenting the anticipated effect of the TIP toward achieving the performance targets and linking investment priorities to those performance targets. In addition, [FHWA Florida Division documentation](#) states that in general, this description of effect should be at a systems or program level and not at the level of individual projects. As a minimum, it should discuss the effect that the program of projects in the TIP would have toward achieving the federally required performance targets. It should be consistent with and include or reference the goals, objectives, strategies, performance measures and targets in the LRTP (as applicable) and in other plans and processes as they relate to the federally required performance targets.

The requirement to assess the effect of the TIP in achieving performance targets only has to be done at the time the TIP is updated, it does not have to be updated with a TIP amendment.

8.8 Additional MPO TPM Requirements

MPOs must meet the following performance management requirements in addition to the target setting and performance reporting requirements described above.

8.8.1 Use of a Performance-Based Planning and Programming Process

MPOs, in cooperation with the state and public transportation operators, must develop LRTPs and TIPs through a performance-driven, outcome-based approach to planning for metropolitan areas of the state. [[23 C.F.R. 450.306\(a\)](#)]

The MPO planning process must provide for the establishment and use of a performance-based approach to transportation decision-making to support the national goals. [[23 C.F.R. 450.306\(d\)\(1\)](#)]

MPOs must integrate in the metropolitan transportation planning process, directly or by reference, the goals, objectives, performance measures, and targets described in other state or public transportation provider transportation plans and processes required as part of a performance-based program. These include:

- The state asset management plan for the NHS, referred to as the Transportation Asset Management Plan (TAMP)
- The Transit Asset Management Plan.
- Applicable portions of the Highway Safety Improvement Program, including the Strategic Highway Safety Plan.
- The Public Transportation Agency Safety Plan.
- Other safety and security planning and review processes, plans, and programs, as appropriate.
- The Congestion Mitigation and Air Quality Improvement Program performance plan, as applicable.

- Appropriate metropolitan portions of the State Freight Plan, referred in Florida law as the Freight Mobility and Trade Plan.
- The Congestion Management Process, if applicable.
- Other State transportation plans and transportation processes required as part of a performance-based program.

Regarding the TAMP, FHWA published a final rule on October 24, 2016, titled “Asset Management Plans and Periodic Evaluations of Facilities Repeatedly Requiring Repair and Reconstruction Due to Emergency Events.” This rule requires states to develop and implement the TAMP for the NHS to improve or preserve the condition of assets and the performance of the system. [[23 CFR Part 515](#)] The rule also requires the state to conduct periodic evaluations to determine if reasonable alternatives exist to roads, highways, or bridges that repeatedly require repair and reconstruction activities. [[23 CFR Part 667](#)]

Although the TAMP rule is not a performance measure rule, it does require that the TAMP include investment strategies leading to a program of projects that would make progress toward achievement of state targets for pavement and bridge condition. In addition, the planning rule requires the State DOT to integrate into the statewide transportation planning process the goals, objectives, performance measures, and targets of other State transportation plans, including the TAMP. These provisions mean that, in carrying out the transportation planning process, the State DOT must consider its TAMP, including the TAMP's investment strategies, as part of the decision-making process during planning. Similarly, MPOs, as listed above, must integrate in the metropolitan transportation planning process the goals, objectives, performance measures, and targets contained in the TAMP.

FDOT submitted its initial TAMP to FHWA on April 30, 2018 and its fully compliant TAMP on June 28, 2019, as required by the Asset Management rule. FDOT will update the TAMP every four years beginning from the date of initial FHWA certification, which was November 1, 2018, or whenever an asset management process changes. FDOT completed the first Part 667 evaluation for NHS roads, highways, and bridges on Nov. 23, 2018. The report documents permanent repairs on NHS roads (with two or more occurrences), and permanent repairs on NHS bridges (with one occurrence). Beginning on Nov. 23, 2020, FDOT must prepare an evaluation for all other roads, highways, and

bridges prior to including any project for the repeatedly damaged facility in the STIP, and must consider the evaluation when developing the project (i.e., project planning, the environmental review process, and preliminary and final design that move a highway project to construction). FDOT and the MPOs are encouraged, but not required, to consider the information during development of transportation plans and programs and during the environmental review process.

FDOT will incorporate the results of the evaluation into each TAMP update, and will update the evaluations after every emergency event, as well as on a regular 4-year cycle.

8.8.2 Coordination Requirements and Consensus Planning Document

States, MPOs and public transportation providers have overlapping performance management roles and responsibilities. For example, they may draw from the same data sources when addressing performance measures. Because of this, Federal legislation and regulations require the agencies to coordinate when establishing targets and assessing progress.

MPOs must coordinate the selection of targets with the relevant State(s) and public transportation providers to ensure consistency, to the maximum extent practicable. [\[23 C.F.R. 450.306\(d\)\]](#) In turn, each State shall select and establish performance targets in coordination with the relevant MPOs to ensure consistency to the maximum extent practicable. [\[23 C.F.R. 450.206\(c\)\(2\)\]](#) Providers of public transportation must coordinate with states and MPOs in the selection of state and MPO transit asset and transit safety performance targets, to the maximum extent practicable. [\[49 C.F.R. 625.45\(e\), 49 C.F.R. 673.15\(b\)\]](#)

FHWA defines maximum extent practicable as capable of being done after taking into consideration the cost, existing technology, and logistics of accomplishing the requirement.

Coordination is defined in this context as the cooperative development of plans, programs, and schedules among agencies and entities with legal standing and adjustment of such plans, programs, and schedules to achieve general consistency, as appropriate. [\[23 C.F.R. 450.104\]](#)

This coordination process must be formalized. The MPO, State, and providers of public transportation must jointly agree upon and develop specific written provisions for: [\[23 C.F.R. 450.314\(h\)\(1\)\]](#)

- Cooperatively developing and sharing information related to transportation performance data.
- Selection of performance targets.
- Reporting of performance targets.
- Reporting of performance to be used in tracking progress toward attainment of critical outcomes for the MPO.
- Collection of data for the State asset management plans for the NHS.

These provisions must be documented either as part of the metropolitan planning agreements required under [23 C.F.R. 450.314\(a\), \(e\), and \(g\)](#), or in some other means outside of the metropolitan planning agreements as determined cooperatively by the parties to the agreement. [\[23 C.F.R. 450.314\(h\)\(2\)\]](#)

FDOT and the MPOAC developed the *Transportation Performance Measures Consensus Planning Document* to describe the general 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 to ensure consistency to the maximum extent practicable. Each individual MPO is adopting the Consensus Planning Document by incorporation in its annual Transportation Improvement Program (TIP) or by separate board action as documented in a resolution or meeting minutes, which will also serve as documentation of agreement by the provider(s) of public transportation in the MPO planning area to carry out their roles and responsibilities as described in the document.

8.9 Phase-in of Performance Management Requirements

When updating or amending LRTPs or TIPs, MPOs should consider when the new TPM requirements must be incorporated. Two years from the effective date of each U.S. DOT rule establishing performance measures, MPO TIPs and LRTPs must meet the

performance-based planning requirements of the planning rule and the applicable performance measure rule(s). [\[23 C.F.R. 450.340\(e\) and \(f\)\]](#)

Thus, MPOs TIPs and MTPs adopted or amended after the following dates must include the required TPM information and discussion for the associated performance measures:

- May 27, 2018 – Highway Safety measures (PM1).
- October 1, 2018 – Transit Asset Management measures.
- May 20, 2019 – Pavement and Bridge Condition measures (PM2).
- May 20, 2019 – System Performance/Freight/Congestion Mitigation & Air Quality Improvement Program measures (PM3).
- July 19, 2021 - Public Transportation Agency Safety Plan measures.

FHWA and FTA plan to provide technical assistance to the States, MPOs, and public transportation providers through a number of means, including the issuance of guidance, conducting peer reviews and workshops, sharing best practices, and conducting training on topics such as target setting, implementation of performance-based planning and programming, interagency coordination, data collection, and performance progress reporting. Performance-based planning and programming will also become a topic of discussion in MPO planning certification reviews.

FDOT has worked with the MPOAC to develop the process for reporting on performance and targets; to develop factsheets, training materials, and documentation on TPM and the target setting process; and to develop templates MPOs may use to address TPM in the TIP and LRTP.

8.10 Role of the FDOT MPO Liaison in TPM

FDOT, MPOs, and transit providers are mutually responsible for implementing TPM regulations and coordinating with each other on performance data collection and analysis, setting performance targets, reporting on performance, and developing and implementing performance-based plans. MPO Liaisons have the following specific TPM-related responsibilities:

Communicate the status of FDOT target setting progress and actions.

Monitor MPO decisions about supporting FDOT targets or setting their own targets.

Review TIPs and LRTPs and **provide guidance and technical support** for incorporating performance-based planning language and required performance information (e.g., targets).

8.11 References

Table 8.12 provides references related to Performance Management requirements for MPOs.

Table 8.12 References

Reference	Description
FDOT Performance Management Policy	Establishes FDOT's policy on performance management
FHWA Performance-Based Planning and Programming Guidebook	FHWA's guidance on performance-based planning and programming
FHWA Transportation Performance Management Website	FHWA's guidance on transportation performance management