

FAMPO
2050 LRTP SYSTEM PERFORMANCE REPORT
DRAFT

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DRAFT 2050 LRTP SYSTEM PERFORMANCE REPORT

FAMPO LRTP System Performance Report - Draft

October 28, 2021

Introduction and Background

FAMPO's 2050 Long-Range Transportation Plan (LRTP) defines the region's transportation vision, identifies the current and future transportation needs, establish the region's transportation goals, and lists all future transportation projects that the region anticipates undertaking in the next 20 to 30 years.

FAMPO developed this System Performance Report to accompany the 2050 LRTP. This report documents transportation performance for several federally-required performance measures. FAMPO, VDOT, and providers of public transportation in the FAMPO planning area are required to monitor and report on recent and current performance, and must apply a transportation performance management (TPM) approach when carrying out their transportation planning and programming activities. TPM requires agencies to use a coordinated, performance-based approach to make transportation decisions that support national goals established in Moving Ahead for Progress in the 21st Century (MAP-21) for the federal-aid highway and public transportation programs. These national goals are:

| National Goal Area | Goal |
|---|---|
| Safety | To achieve a significant reduction in traffic fatalities and serious injuries on all public roads and public transportation systems |
| Infrastructure Condition | To maintain the highway infrastructure and transit capital asset systems in a state of good repair |
| Congestion Reduction | To achieve a significant reduction in congestion on the National Highway System (NHS) |
| System Reliability | To improve the efficiency of the surface transportation system |
| Freight Movement and Economic Vitality | To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development |
| Environmental Sustainability | To enhance the performance of the transportation system while protecting and enhancing the natural environment |
| Reduced Project Delivery Delays | To 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 practice |

The US Department of Transportation (USDOT), in consultation with states, MPOs, and other stakeholders, established performance measures relevant to the national goals through a series of federal rulemakings. States, MPOs, and providers of public transportation must set performance targets for each measure, and then monitor performance and periodically report to USDOT on progress achieved toward meeting the targets.

The federal performance measure rules fall into five broad categories – highway safety, highway asset management, highway system performance, transit asset management, and public transportation safety.

Definitions Used in the TPM Framework

Performance measure: an expression based on a quantifiable indicator of performance that is used to establish targets and to assess progress toward meeting established targets.

Target: a quantifiable level of performance, expressed as a value for a measure, to be achieved within a time period.

| Performance Area | What is Measured | Where it is Measured |
|-----------------------------------|---|---|
| Highway Safety | Vehicle, bicycle, and pedestrian fatalities and serious injuries | All public roads |
| Highway Asset Management | Physical condition of pavement and bridges | All National Highway System (NHS) roads |
| Highway System Performance | Reliability of highway passenger travel | All Interstate and non-Interstate NHS roads |
| | Reliability of highway truck freight travel | Interstate System only |
| | Highway congestion and emissions | NHS roads in some air quality nonattainment and maintenance areas |
| Transit Asset Management | Physical condition of transit vehicles, equipment, and facilities | Assets maintained by transit providers in FAMPO planning area |
| Transit Safety | Transit related fatalities, serious injuries, and incidents | Transit providers in FAMPO planning area |

Establishing Performance Targets

FAMPO works closely with the Virginia Office of Intermodal Planning and Investment (OIPI), Virginia Department of Transportation (VDOT), Department of Rail and Public Transportation (DRPT), and local public transportation providers to incorporate the new TPM requirements into planning and programming activities. The Commonwealth Transportation Board (CTB) has provided direction to OIPI,

VDOT, and DRPT and has adopted statewide performance targets, starting in 2017, for several performance measures, consistent with Federal requirements.

Virginia, FAMPO, and the transit providers in the FAMPO region establish performance targets on an ongoing basis, as follows:

- For the highway safety performance measures, VDOT establishes statewide safety targets and reports them to FHWA annually by August 31.
- For the highway asset management and highway system performance measures, VDOT established statewide targets by May 20, 2018.
- For the transit asset measures, Virginia Railway Express (VRE) (Tier 1 operator) and Fredericksburg Regional Transit (FRED) (Tier 2 operator) establish targets annually. FAMPO is required to establish targets within 180 days after receiving the initial transit asset targets.
- For the transit safety targets, the transit providers in the FAMPO region are required to establish initial targets by July 20, 2021. FAMPO is then required to establish targets within 180 days after receiving the transit safety targets.

FAMPO has the flexibility to establish targets by either:

- Agreeing to plan and program projects in FAMPO's TIP that contribute toward the accomplishment of the VDOT, DRPT, or VRE targets. FAMPO's numeric target is identical to the VDOT, DRPT, or VRE numeric target, and FAMPO will plan and program projects that contribute to this number. Or,
- Committing to a quantifiable target for a performance measure for the FAMPO planning area. The numeric target for FAMPO is different than the VDOT, DRPT, or VRE numeric target. FAMPO will plan and program projects that contribute to the MPO's numeric target.

These requirement details and responsibilities are also specified in FAMPOs "3C" Planning Agreement between FAMPO, the Commonwealth of Virginia, and the Potomac and Rappahannock Transportation Commission, the Virginia Rail Express, and Fredericksburg Regional Transit (FRED).

System Performance Report Content

States and MPOs must include a description of the federal performance measures and targets and a System Performance Report in their L RTPs. The System Performance Report evaluates the condition and performance of the transportation system with respect to the federal performance targets, including progress achieved in meeting those targets.

FAMPO's 2050 L RTP System Performance Report documents the federal performance measures, baseline and recent performance, performance targets, and progress made toward achieving the targets.

Highway Safety

FHWA established the following five highway safety 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 vehicle miles traveled
5. Number of combined non-motorized fatalities and non-motorized serious injuries.

These federal safety performance measures are aligned with **Goal 3 of the 2050 LRTP: Improve travel safety for all modes of transportation**. Objectives under Goal 3 focus on reducing the number, severity, and frequency of accidents, improving physical characteristics and design of transportation infrastructure to optimize safety, and communicating with the public on future transportation projects and changes that may impact safety for users and workers.

Highway Safety Performance and Targets

The following table presents Virginia’s statewide five-year rolling average data for each highway safety measure for 2017 through 2020, along with targets for calendar year 2020. FAMPO agreed to support Virginia’s 2020 statewide safety targets.¹

| Performance Measure (five-year rolling average*) | 2013-2017 Virginia | 2014-2018 Virginia | 2015-2019 Virginia | 2016-2020 Virginia | 2020 Virginia Target |
|--|--------------------|--------------------|--------------------|--------------------|----------------------|
| Number of Fatalities | 759.6 | 775.2 | 800.8 | 819.4 | 857.0 |
| Rate of Fatalities per 100 Million VMT | 0.916 | 0.924 | 0.944 | 0.992 | 0.995 |
| Number of Serious Injuries | 7,994.4 | 7,754.2 | 7,674.8 | 7,425.4 | 7,641.0 |
| Rate of Serious Injuries per 100 Million VMT | 9.660 | 9.264 | 9.072 | 8.956 | 8.871 |
| Number of Combined Non-Motorized Fatalities and Non-Motorized Serious Injuries | 731.2 | 729.0 | 727.0 | 688.2 | 724.0 |

*The annual five-year rolling average represents the average of five consecutive annual points of data. Use of the five-year rolling average provides a smoothing effect for variations in safety data from year to year and helps to better evaluate performance over time.

¹ <https://oipi.virginia.gov/programs/performance-measures/default.asp> Office of Intermodal Planning and Investment

The table below presents safety performance for the FAMPO region for each federal highway safety performance measure. Fatality data for 2020 at the MPO level is undergoing QA/QC and is not yet available.

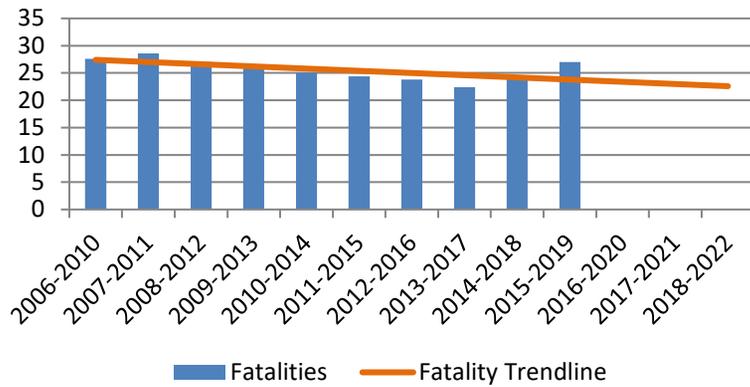
| Performance Measure (five-year rolling average*) | 2017 FAMPO | 2018 FAMPO | 2019 FAMPO | 2020 FAMPO |
|--|------------|------------|------------|------------|
| Number of Fatalities | 22 | 24 | 27 | n/a |
| Rate of Fatalities per 100 Million VMT | 0.681 | 0.724 | 0.793 | n/a |
| Number of Serious Injuries | 322 | 281 | 256 | 237 |
| Rate of Serious Injuries per 100 Million VMT | 9.780 | 8.410 | 7.528 | 7.103 |
| Number of Combined Non-Motorized Fatalities and Non-Motorized Serious Injuries | 20 | 18 | 18 | n/a |

Performance: As shown in the tables above, Virginia experienced an increase in fatalities and fatality rate between 2017 and 2020. Serious injuries and serious injury rate trended downward over this time period, as did non-motorized fatalities and serious injuries.

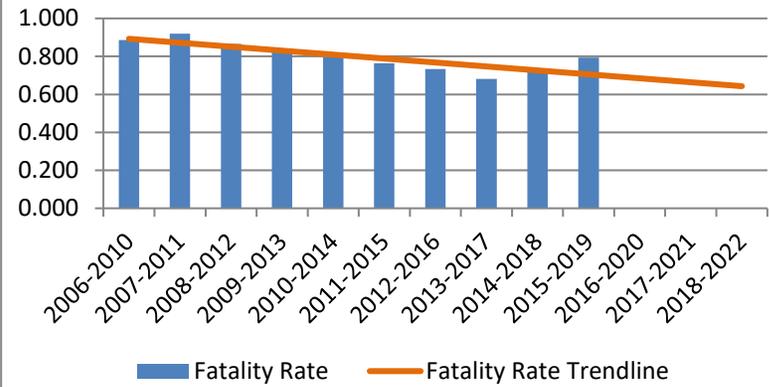
Performance trends in the FAMPO region moved in a similar direction. Between 2017 and 2019, the region experienced an increase in the five-year rolling average of fatalities and fatality rate of approximately eight percent. The fatality rate in the FAMPO region is lower than the statewide fatality rate. Serious injuries, serious injury rate, and combined non-motorized fatalities and serious injuries decreased between 2017 and 2020.

The following charts present performance in the FAMPO region for each measure over the ten year time period of 2010 to 2019. Over this longer period, fatalities, fatality rate, serious injuries, and serious injury rate have steadily trended downward in the FAMPO region. The trendline for non-motorized fatalities and serious injuries has remained flat over this time period.

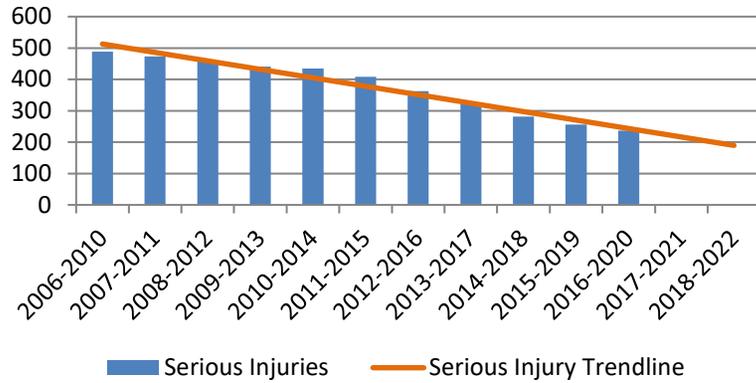
**Fatalities - FAMPO Region
(Five-Year Rolling Average)**



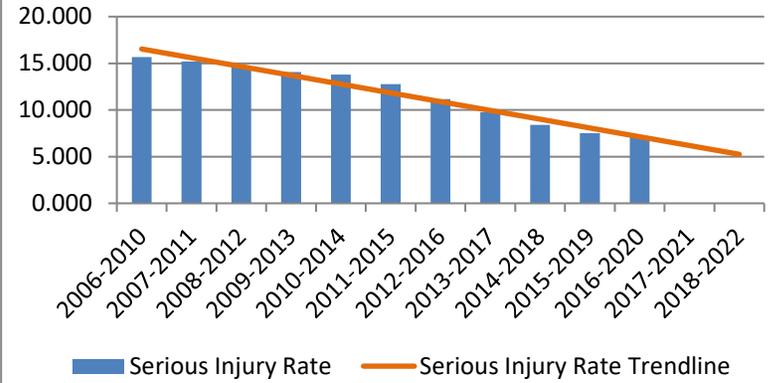
**Fatality Rate - FAMPO Region
(Five-Year Rolling Average)**

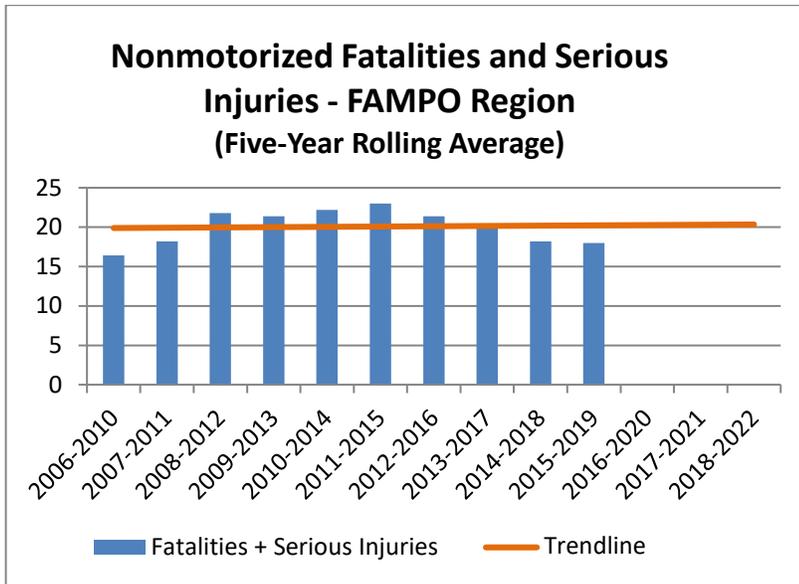


**Serious Injuries - FAMPO Region
(Five-Year Rolling Average)**



**Serious Injury Rate - FAMPO Region
(Five-Year Rolling Average)**





Progress Toward State Targets: Each year, FHWA completes an assessment of progress for each state toward achieving previous statewide safety targets. A state made significant progress toward its safety targets when at least four of the five targets were met, or the actual outcome was better than the baseline performance. In early 2021, FHWA assessed Virginia’s progress toward achieving its 2019 safety targets. Based on FHWA’s review, Virginia demonstrated significant progress toward achieving its 2019 safety targets. In early 2022 FHWA will assess progress toward Virginia’s 2020 safety targets.

Recently, 2020 safety performance data and 2022 statewide targets were reviewed as part of the annual process to submit targets within Virginia’s Highway Safety Plan (HSP) and the Highway Safety Improvement Program (HSIP). Virginia submitted its HSP to the National Highway Traffic Safety Administration (NHTSA) by June 30th. The HSIP was submitted to FHWA by August 31, 2021. These reports identify strategies and countermeasures to improve safety on Virginia’s roads, and establish 2022 targets for the five federally required safety measures.

Highway Asset Management (Bridge and Pavement Condition)

FHWA established six performance measures to assess pavement condition and bridge condition for the National Highway Performance Program:

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
6. Percent of NHS bridges by deck area classified as in poor condition

The four pavement condition measures represent the percentage of lane-miles on the Interstate or non-Interstate NHS that are in good and poor condition based on an assessment of roughness and cracking, rutting, faulting, or serviceability. The bridge condition measures represent the percentage of bridges on the NHS, by deck area, that are in good or poor condition based on an assessment of primary bridge components. Pavement and bridges in good condition do not require major investment, while those in poor condition will need substantial reconstruction or replacement.

These federal bridge and pavement condition measures are aligned with **Goal 2 of the 2050 LRTP: Strategically develop, manage, and preserve the transportation system.** Objectives under Goal 3 focus on ensuring transportation infrastructure is in a state of good repair and reducing maintenance costs through proper maintenance planning.

Highway Asset Performance and Targets

Virginia collects and reports pavement and bridge condition data to FHWA each year. This data is used as the basis for establishing two-year and four-year targets and for tracking performance and progress toward the targets. The tables and charts below present statewide and FAMPO pavement and bridge performance for the 2017 baseline year through 2020, the most recent year of available data. The 2019 and 2021 statewide targets that Virginia established on May 18, 2018 are also shown.

FAMPO agreed to support the statewide targets on October 15, 2018. By doing so, FAMPO agrees to plan and program projects that will help VDOT make progress toward achieving the targets. In determining whether to support the statewide targets or establish its own targets for the region, FAMPO conducted the following actions in 2018:

- For the pavement condition measures, FAMPO staff reviewed Interstate and non-Interstate pavement performance trends within the region (197 lane miles of Interstate and 368 lane miles of non-Interstate NHS), reviewed programmed state of good repair and capacity investments, and looked at other considerations such as truck volumes and ongoing or planned construction in order to evaluate future performance. Overall, across all four pavement measures, pavement condition in the region was above or close to statewide performance in the 2017 baseline year, and was expected to remain that way as a result of programmed investments. As a result, FAMPO elected to support the statewide targets.
- For the bridge condition measures, FAMPO staff reviewed bridge condition performance trends within the region (78 NBI bridges and culverts on the NHS totaling 910,000 sf of deck area), reviewed programmed state of good repair and capacity investments, and looked at other considerations such as truck volumes and ongoing or planned construction in order to evaluate future performance. There were eight total structures within the region rated as poor, most of which are programmed for rehabilitation or replacement in the near term. In addition, a number of bridges on I-95 in fair condition are undergoing improvement or will be in the near term as a result of planned investments. While regional bridge performance significantly trailed statewide performance in the baseline year, programmed projects in the region are expected to narrow the gap somewhat between regional and statewide performance. As a result, FAMPO elected to support the statewide targets.

Pavement Performance: As shown in the table, pavement condition on the Interstate and non-Interstate NHS remained fairly steady between 2017 and 2019. On the Interstate system, pavement in good condition dropped slightly in 2020 to 56.3 percent, while pavement in poor condition decreased to 0.2 percent. On the non-Interstate NHS system, pavement performance improved, going from 35.4 percent in good condition in 2017 to 36.6 percent in 2020, and from one percent in poor condition down to 0.8 percent.

Performance in 2019 for non-Interstate NHS pavement condition exceeds the 2019 targets for both good and poor condition. Across all four measures, 2019 performance also well exceeds the established 2021 targets. Based on VDOT's maintenance strategy and funding, these results were expected and there is high confidence that performance in 2020 and 2021 will exceed the four-year targets.

Pavement condition in the FAMPO region has been trending in the same direction as pavement condition statewide since 2017. On the Interstate system, pavement in good condition in the FAMPO area fluctuated above and below statewide performance over the past four years, but is lower in 2020 by about 10 percent. However, the percent in poor condition has been at zero or 0.1 percent during this same period.

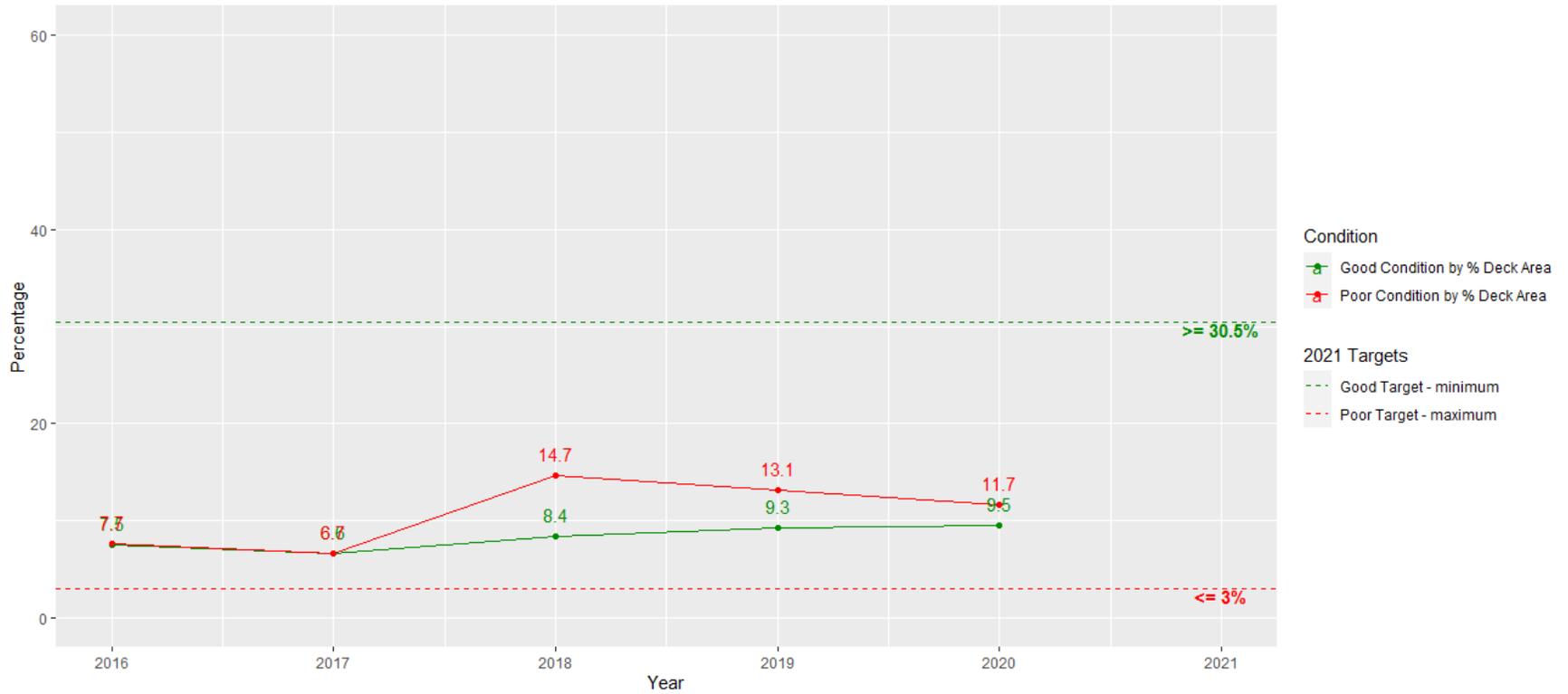
On the non-Interstate NHS, pavement in good condition in the FAMPO region has been close to, but below, statewide performance, while the percent of pavement in poor condition is also below statewide levels.

| Performance Measure | Virginia Baseline (2017) | FAMPO Baseline (2017) | Virginia 2018 | FAMPO 2018 | Virginia 2019 | FAMPO 2019 | Virginia 2020 | FAMPO 2020 | Virginia 2-year Target (2019) | Virginia 4-year Target (2021) |
|--|--------------------------|-----------------------|---------------|------------|---------------|------------|---------------|------------|-------------------------------|-------------------------------|
| Interstate Pavement Condition | | | | | | | | | | |
| % in good condition | 57.8% | 60.0% | 57.5% | 44.1% | 57.9% | 61.8% | 56.3% | 46.8% | n/a | 45.0% |
| % in poor condition | 0.5% | 0% | 0.3% | 0% | 0.3% | 0.1% | 0.2% | 0% | n/a | 3.0% |
| Non-Interstate NHS Pavement Condition | | | | | | | | | | |
| % in good condition^ | 35.4% | 30.9% | 34.8% | 30.7% | 36.7% | 35.3% | 36.6% | 33.0% | 25.0% | 25.0% |
| % in poor condition^ | 1.0% | 0.6% | 0.9% | 0.4% | 0.9% | 0.1% | 0.8% | 0% | 5.0% | 5.0% |
| NHS Bridge Condition (deck area) | | | | | | | | | | |
| % in good condition | 33.7% | 6.6% | 32.6% | 8.4% | 32.1% | 9.3% | 29.4% | 9.5% | 33.5% | 30.5%* |
| % in poor condition | 3.4% | 6.7% | 2.7% | 14.7% | 2.3% | 13.1% | 3.1% | 11.7% | 3.5% | 3.0% |

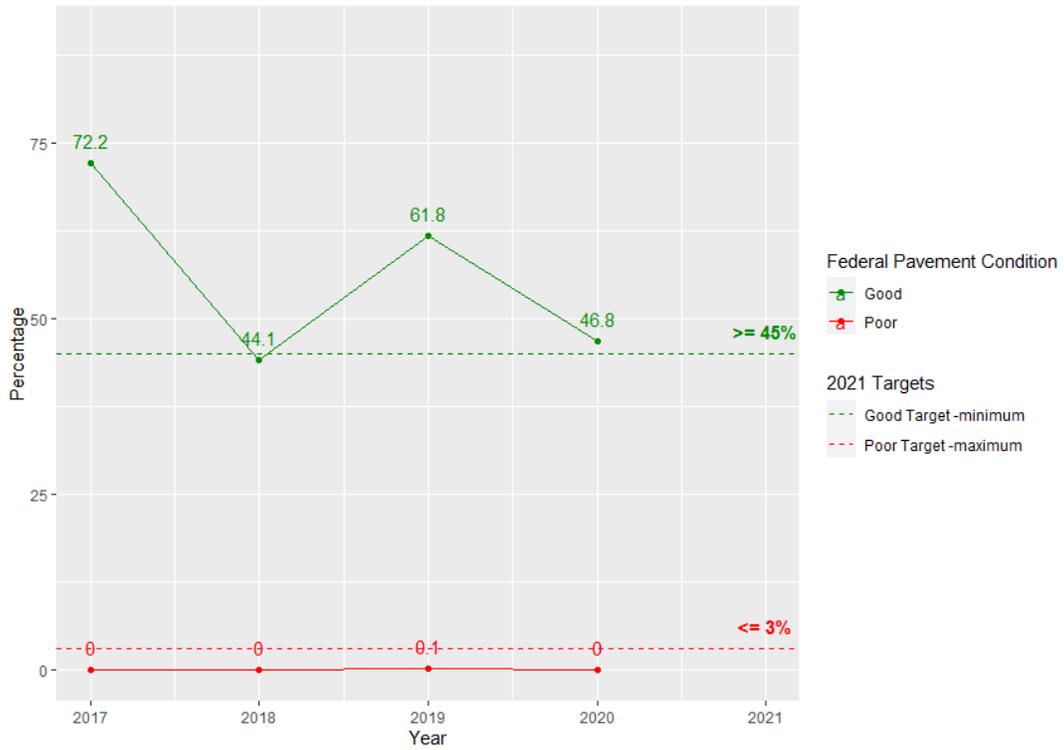
* Note: Four-year target was adjusted downward from 33.5 percent to 30.5 percent in September 2020 to recent and expected performance.

^ Pavement condition was measured using full distress plus IRI metrics.

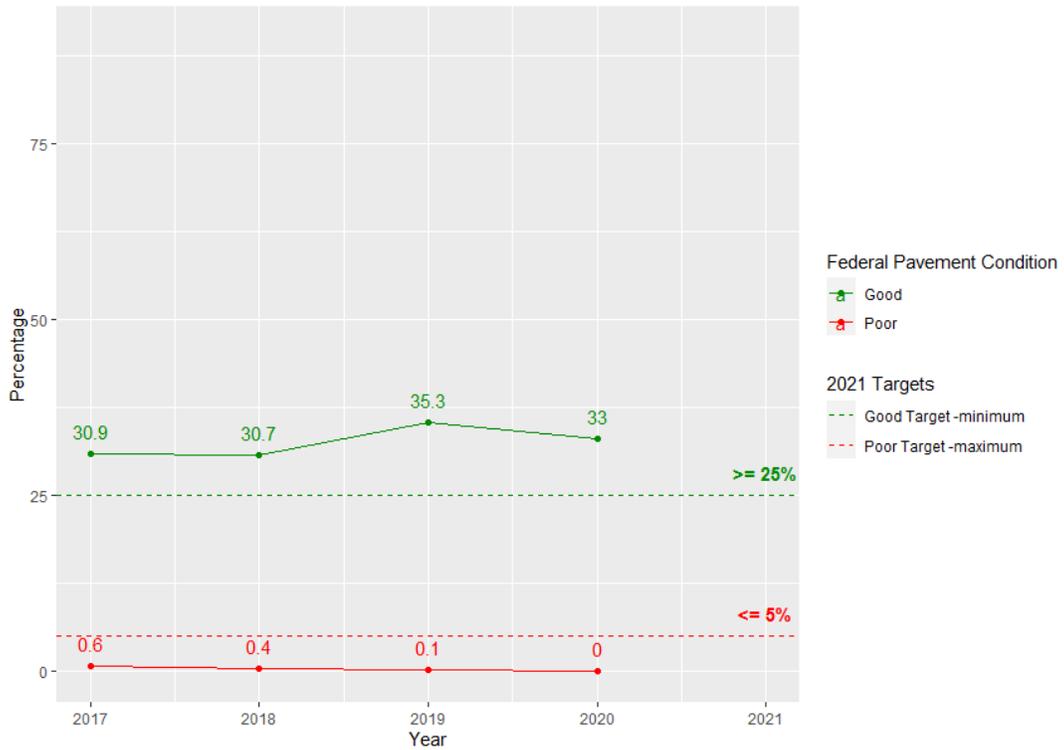
Fredericksburg Area MPO - NBI NHS VA Responsible Bridges by Condition by % Deck Area
Federal Performance and Targets



Fredericksburg Area MPO - Interstate Pavement Condition
Federal Performance



Fredericksburg Area MPO - Non-Interstate NHS Pavement Condition
Federal Performance



Bridge Performance: Federal performance management rules require that states include the deck area of federally owned bridges and bridges owned by adjacent states when calculating bridge performance. The performance data for 2017 through 2020 in the above table and charts reflect only the portion of the NHS that Virginia is responsible for and do not include the federally owned bridges in the Commonwealth and bridges owned by adjacent states, so there are slight differences in the yearly performance values. The 2019 and 2021 targets in the table are inclusive of the deck area of bridges owned by the Federal government or adjacent states.

Bridge performance between 2017 and 2020 showed mixed results. The percent of bridge deck area in good condition decreased (worsening performance) from 33.7 percent to 29.4 percent over this period. The percent of NHS bridge deck area in poor condition decreased (improved performance) from 3.4 percent to 3.1 percent. Virginia did not meet its 2019 target of 33.5 percent of bridge deck area in good condition. Virginia did meet its 2019 target for bridges in poor condition.

These performance trends and targets were presented to the CTB in July 2020 and a revised four-year good condition target for bridges was adopted through a CTB resolution in September 2020. OIPI, VDOT and the CTB decided to adjust the four-year target from 33.0 percent to 30.5 percent for several reasons:

- Virginia's primary funding source for bridge maintenance, the State of Good Repair Program, is only available for bridges in poor condition, limiting VDOT's ability to maintain bridges in fair and good condition and prevent those structures from falling into worse condition.
- VDOT's investment strategy has prioritized reducing the number of bridges in poor condition, lessening emphasis on maintaining bridges in good condition. The results of this are reflected in the improved performance data shown above.
- Data issues in VDOT's bridge condition database, combined with a fuller accounting of border and federal bridges, contributed to inflated bridge condition performance for the baseline year. This, in turn, influenced the selection of two- and four-year targets.

Bridge condition in the FAMPO region is considerably worse than statewide performance, with only 9.5 percent of deck area rated as good and 11.7 percent rated as poor in 2020.

Highway System Performance

FHWA established six measures to assess performance of the National Highway System, freight movement on the Interstate system, and the Congestion Mitigation and Air Quality Improvement (CMAQ) Program:

National Highway System Performance

1. Percent of person-miles on the Interstate system that are reliable

2. Percent of person-miles on the non-Interstate NHS that are reliable

Freight Movement on the Interstate

3. Truck Travel Time Reliability Index (TTTR)

Congestion Mitigation and Air Quality Improvement (CMAQ) Program

4. Annual hours of peak hour excessive delay per capita (PHED)
5. Percent of non-single occupant vehicle travel (Non-SOV)
6. Cumulative two-year and four-year reduction of on-road mobile source emissions for CMAQ funded projects (CMAQ Emission Reduction)

The two system performance measures assess the reliability of travel times on Interstate and non-Interstate NHS roads. Reliability is an assessment of the difference in travel times on a given route from day to day. Travel that is reliable will usually take about the same amount of time on any given day, while travel that is unreliable means the amount of time required to complete a trip will vary widely, usually due to non-recurring bottlenecks, crashes and other incidents, or weather. These two measures are expressed in person-miles, which considers the number of people traveling in vehicles on these roads. A higher percentage for these measures means better performance.

The freight movement performance measure, similar to the first two measures, assesses the reliability of truck travel times on the Interstate, but is expressed as an index. A TTTR index is generated based on the ratio of actual truck travel times to normal travel times. A lower TTTR value means better performance, i.e., more reliable truck travel.

The CMAQ Emission Reduction measure assesses performance of the CMAQ Program through measurement of total cumulative reductions of on-road mobile source PM2.5 and PM10 emissions resulting from CMAQ funded projects. The PHED measure quantifies the hours of delay resulting from excessive traffic congestion on the NHS during peak travel times, on a per capita basis. The non-SOV travel measure quantifies the percent of travel that occurs by any mode other than driving alone in a motorized vehicle. Currently, the CMAQ measures do not apply to the FAMPO region and are therefore not addressed in this System Performance Report.

These federal reliability measures are aligned with **Goal 1 of the 2050 LRTP: Have an efficient, convenient, and interconnected multi-modal transportation system.** Objectives under this goal focus on examining and implementing transportation alternatives and physical and operational roadway improvements that will lessen vehicle congestion; and developing a regional freight plan to better move the items we need.

System Performance and Targets

Travel time data is collected and used to calculate and report reliability. This data is also used as the basis for establishing two-year and four-year targets and for tracking performance and progress toward the targets. The table and charts below present statewide performance for the 2017 baseline year

through 2020, the most recent year of available data. Also shown are the 2019 and 2021 statewide targets that Virginia established on May 18, 2018.

FAMPO agreed to support the statewide targets on October 15, 2018. By doing so, FAMPO agrees to plan and program projects that will help VDOT make progress toward achieving the targets. In determining whether to support the statewide targets or establish its own targets for the MPO region, FAMPO considered the following information:

- In the FAMPO region in 2017, reliability on the Interstate and TTTR performance significantly lagged statewide performance, as shown in the table. Reliability on the non-Interstate NHS in the FAMPO region was slightly below performance statewide.
- Interstate reliability – Only 55.3 percent of passenger miles traveled on the Interstate were reliable in 2017 compared to 82.5 percent statewide.
- TTTR – In 2017, the Truck Travel Time Reliability index was 2.75 in the FAMPO region, compared to 1.54 statewide.

This level of performance was not unexpected, given the federal definition of reliable travel and the performance of I-95 within the FAMPO region. FAMPO reviewed the performance trend for the entire I-95 corridor and on individual segments and reviewed programmed projects within the corridor that may impact future reliability. The conclusion from this assessment was that near-term investments within the I-95 corridor will create an opportunity for significant performance improvements post-2021, however in the short-term, performance would likely continue to degrade as a result of work zones throughout the corridor (as the majority of the projects, including the Rappahannock River Crossing SB and NB projects and the I-95 Express Lane extension will not be complete by 2021).

Reliability Performance: As shown in the table and charts above, reliability in 2020 was significantly above the 2017 baseline for all three measures due to the travel-related impacts of the pandemic that reduced the amount of driving. Prior to the pandemic, the percent of person-miles traveled in reliable conditions statewide increased slightly between 2017 and 2019, reflecting a minor improvement in performance. Virginia met its 2019 target for Interstate reliability and is positioned to achieve the four-year targets on the Interstate system and Non-Interstate NHS. TTTR increased slightly between 2017 and 2019 from 1.54 to 1.55, reflecting a very small decrease in performance. Virginia did not meet its 2019 TTTR target of 1.53.

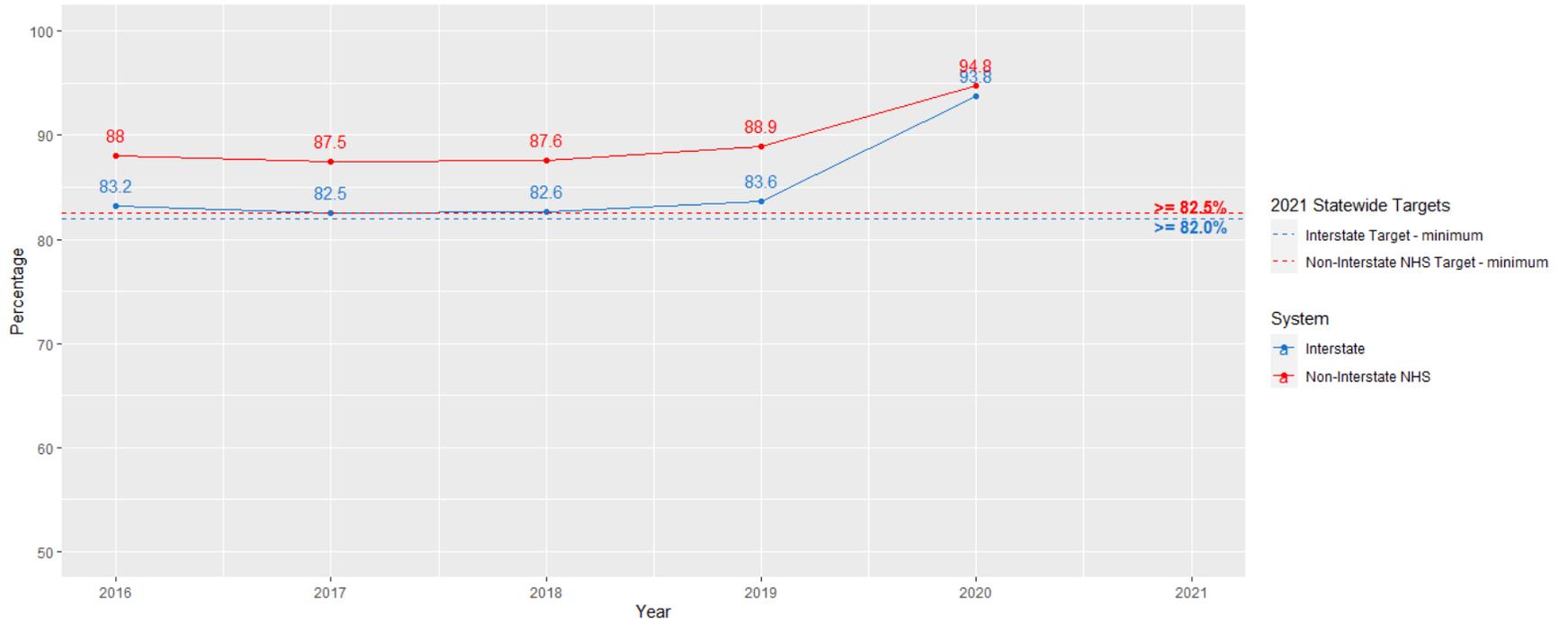
In the FAMPO region, travel is significantly less reliable on the Interstate system than it is statewide, and somewhat less reliable on the non-Interstate NHS. Northern Virginia congestion hot spots include I-95 between Fredericksburg and Washington D.C. This corridor was unreliable in 2017 and remains generally unreliable in 2019, with some slight improvements. On I-95 southbound in Stafford County, reliability has improved near the Garrisonville Road interchange likely due to the extension of the Express Lanes approximately 2 miles further south. This reduces the spillback queue into the general-purpose lanes as the Express Lanes end and merge into the general flow. Additional improvements are anticipated as the Express Lanes are extended to Route 17 in Fredericksburg. Although TTTR in the

FAMPO region improved slightly from 2017 to 2019, dropping from 2.75 to 2.71, truck travel on the Interstate in the region remains highly unreliable.

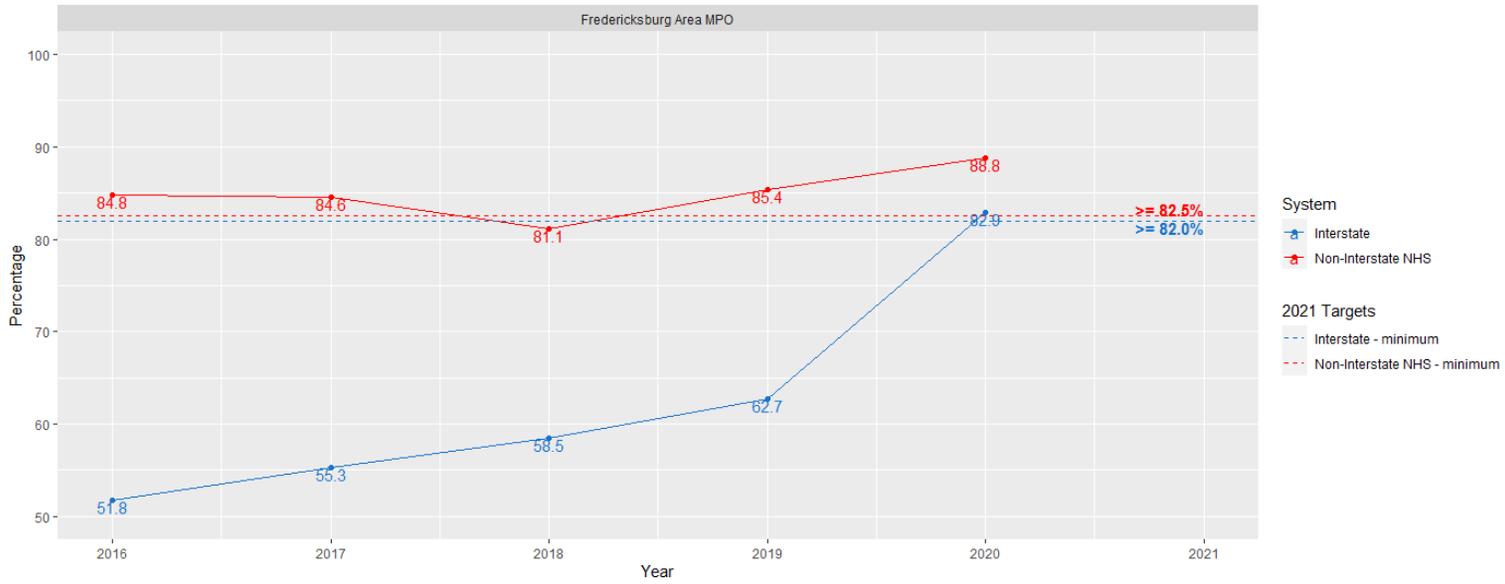
Future efforts will focus on safety, operational, and demand management strategies to minimize the impact of work zones, crashes, and other incidents on travel time variability. Additional projects will be completed after the end of 2021 and their positive impact on reliability will be felt in future years.

| Performance Measure | Virginia Baseline (2017) | FAMPO Baseline (2017) | Virginia 2018 | FAMPO 2018 | Virginia 2019 | FAMPO 2019 | Virginia 2020 | FAMPO 2020 | Virginia 2-year Target (2019) | Virginia 4-year Target (2021) |
|---|--------------------------|-----------------------|---------------|------------|---------------|------------|---------------|------------|-------------------------------|-------------------------------|
| % of person-miles on the Interstate that are reliable | 82.5% | 55.3% | 82.6% | 58.5% | 83.6% | 62.7% | 93.8% | 82.9% | 82.2% | 82.0% |
| % of person-miles on the non-Interstate NHS that are reliable | 87.5% | 84.6% | 87.6% | 81.1% | 88.9% | 85.4% | 94.8% | 88.8% | n/a | 82.5% |
| Truck Travel Time Reliability Index (Interstate system) | 1.54 | 2.75 | 1.59 | 2.54 | 1.55 | 2.71 | 1.32 | 1.82 | 1.53 | 1.56 |

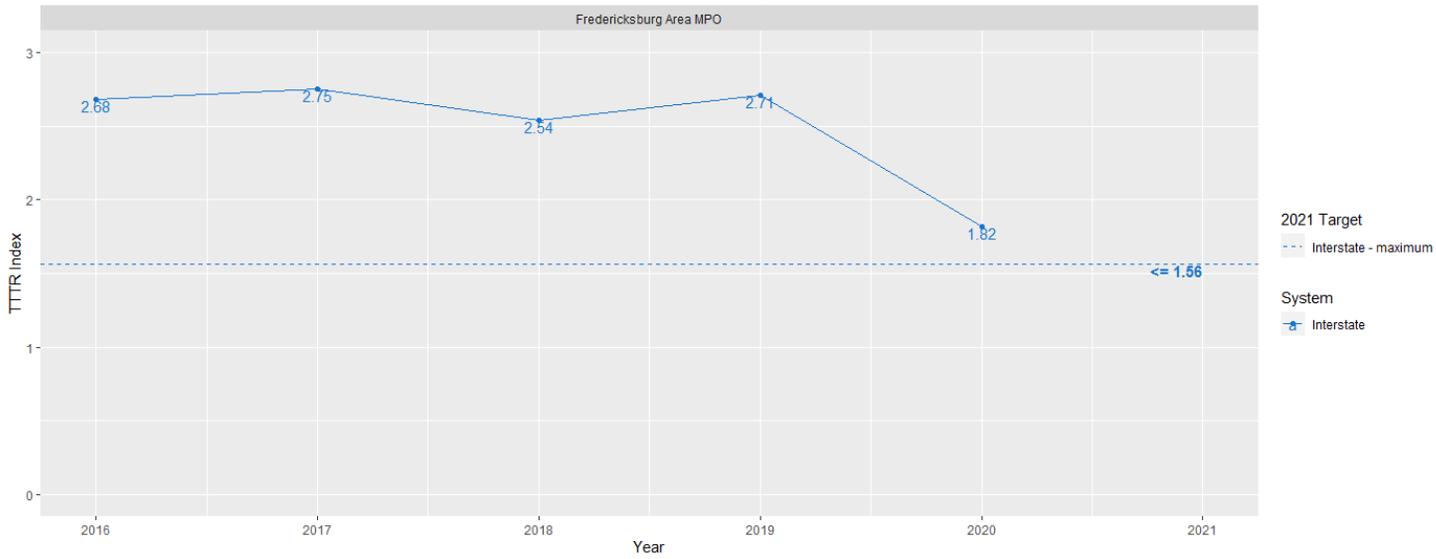
Virginia Percent Person Miles Traveled that are Reliable
Statewide Federal Performance and Targets



Fredericksburg Area MPO - Percent Person Miles Traveled that are Reliable
Federal Performance and Targets



Fredericksburg Area MPO - Truck Travel Time Reliability Index
Federal Performance and Target



Transit Asset Management

Public transportation providers that receive Federal Transit Administration (FTA) funding are required to develop Transit Asset Management (TAM) plans to maintain transit assets, such as vehicles, equipment, railways, and infrastructure, in a state of good repair. FTA created TAM performance measures for four categories of transit assets:

- Rolling Stock: percent of revenue vehicles exceeding useful life benchmark (ULB)
- Equipment: percent of non-revenue service vehicles exceeding ULB
- Facilities: percent of facilities rated under 3.0 on FTA's Transit Economic Requirements (TERM) scale
- Infrastructure: percent of track segments under performance restrictions

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.

To implement the TAM requirements, FTA defines two tiers of public transportation providers based primarily 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 vehicles or less in one non-fixed route mode.

A Tier I provider must establish its own TAM Plan and transit asset targets. A Tier II provider has the option to establish its own TAM plan and targets, or to participate in a Group TAM Plan with other Tier II providers. A plan sponsor, typically a state DOT, develops a group plan for Tier II providers.

These federal transit asset management measures are aligned with **Goal 2 of the 2050 LRTP: Strategically develop, manage, and preserve the transportation system**. Objectives under this goal focus on improving the effectiveness of public transit service, active transportation routes, and roadways; ensuring public transportation infrastructure is able to support a full level of performance; and ensuring transportation infrastructure is in a state of good repair and maintenance costs are reduced through proper maintenance planning.

Transit Asset Performance and Targets

Public transportation providers set and report TAM targets annually for the following fiscal year. They are required to provide their asset conditions and TAM targets to each MPO in which the transit provider's projects and services are programmed in the MPO's TIP. MPOs must then establish transit asset targets within 180 days of the date that the provider of public transportation established initial targets. Unlike with the highway safety, highway asset, and system performance measures developed by FHWA, FTA does not require MPOs to establish new transit asset targets annually each time the public transportation provider establishes targets. Instead, subsequent MPO targets must be established when the MPO updates its LRTP.

MPOs can either agree to program projects that will support the transit provider’s targets or set their own separate regional targets for the MPO’s planning area. Regional TAM targets may differ from agency TAM targets, especially if there are multiple transit agencies in the MPO’s planning area, or in the event that one or more transit agencies have not provided TAM targets to the MPO.

In the FAMPO planning area there are two public transportation providers that must establish TAM targets – Fredericksburg Regional Transit (FRED) and Virginia Railway Express (VRE).

VRE is a Tier I provider and established performance targets for each asset class under the four asset categories. The following table summarizes the current State of Good Repair (SGR) backlog for each asset class that was used by VRE to inform setting of performance targets for the upcoming fiscal year. The performance targets represent the goal for SGR backlog for each asset class. VRE reported the performance targets to FTA for 2018. The table also presents the TAM targets used in assessing transit asset performance in the FAMPO planning area. FAMPO adopted/approved transit asset performance targets on MM/DD/YYYY.

| Asset Category Performance Measure | Asset Class | Factor | Performance | 2019 Performance Target | 2019 Performance |
|--|---------------------------------|-------------|---------------------------------------|-------------------------------|---------------------|
| Rolling Stock (Age): % of revenue vehicles within a particular asset class that have met or exceeded their ULB | Commuter Rail Locomotive | 20 year ULB | Average 7 years (Range: 6-8 years) | 0% exceeded ULB | 0% |
| | Commuter Rail Cab Car | 30 year ULB | Average 11 years (Range: 10-12 years) | 0% exceeded ULB | 0% |
| | Commuter Rail Passenger Coach | 30 year ULB | Average 7 years (Range: 1-11 years) | 0% exceeded ULB | 0% |
| Equipment (Age): % of non-revenue service vehicles that have met or exceeded their ULB | Non Revenue/ Service Automobile | 8 year ULB | Average 2 years (Range: 1-3 years) | 0% exceeded ULB | 0% |
| Infrastructure: % of track segments with performance restrictions | Commuter Rail | N/A | | | |
| Facilities: % of facilities with a condition rating below 3.0 on the FTA TERM Scale | Passenger Facilities | TERM | 4 average | 0% rated below 3 | 0% |
| | Passenger Parking Facilities | TERM | 3.7 average | 0% rated below 3 | 0% |
| | Maintenance Facilities | TERM | 4 average | 0% rated below 3 | 0% |
| | Administrative Facilities | TERM | 4 average | 0% rated below 3 | 0% |

FRED participates in the DRPT Group Transit Asset Management Plan developed for Tier II providers in Virginia. The 2018 and 2019 targets for the Tier II providers are available for review, as is the data and rationale supporting the targets, within DRPTs plan, available [here](#). A 2020 Group Plan Addendum, available [here](#), contains 2020 TAM targets. In total, based on data within the Group Plan, the performance targets for 2018, 2019, and 2020 presented in the table below apply to FRED’s revenue vehicle fleet of cutaway buses, minibuses, and three primary facilities (administrative office, maintenance facility, and passenger facilities). For each measure, FRED exceeded the Group Plan performance targets for 2018 and 2019.

| Asset Category Performance Measure | Asset Class | Num. | Factor | Performance | 2018/2019/2020 Performance Targets |
|---|---------------------------|------|-------------|----------------------------------|------------------------------------|
| Rolling Stock (Age): Percentage of revenue vehicles within a particular asset class that have met or exceeded their ULB | Cutaway Bus | 11 | 14 year ULB | Average <2 years (0% exceed ULB) | 10% exceeded ULB |
| | Minibus | 20 | 14 year ULB | Average <6 years (0% exceed ULB) | 20% exceeded ULB |
| Facilities: Percentage of facilities with a condition rating below 3.0 on the FTA TERM Scale | Passenger Facilities | 1 | TERM | 4.6 | 10% rated below 3 |
| | Maintenance Facilities | 1 | TERM | 4.5 | 10% rated below 3 |
| | Administrative Facilities | 1 | TERM | 4.0 | 10% rated below 3 |

Transit Safety

FTA’s Public Transportation Agency Safety Plan (PTSAP) rule requires certain operators of public transportation systems that receive federal financial assistance to develop and implement a PTASP based on a safety management systems approach. Development and implementation of PTSAPs is anticipated to help ensure that public transportation systems are safe nationwide. Transit providers subject to the rule set targets in the PTASP annually based on the following safety performance measures established by FTA:

1. Total number of reportable fatalities and rate of reportable fatalities per total vehicle revenue miles by mode.
2. Total number of reportable injuries and rate of reportable injuries per total vehicle revenue miles by mode.
3. Total number of reportable safety events and rate of reportable events per total vehicle revenue miles by mode.

4. System reliability - Mean distance between major mechanical failures by mode.

Providers initially were 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.

Under the PTASP rule, a state will draft and certify a PTASP on behalf of any small transit provider (fewer than 101 vehicles in peak revenue service and does not operate rail) unless that provider develops its own plan. DRPT is the sponsor for a Statewide Group PTASP Plan, [available here](#), and acts as the plan coordinator for fifteen smaller transit agencies in the Commonwealth. The Tier II group plan documents Safety Management Systems (SMS), Safety Performance Targets and, Employee Reporting Programs for each of the participating agencies. While DRPT is the sponsor of the group plan, each transit agency is responsible for the plan’s implementation and annual review.

These federal transit safety measures are aligned with **Goal 3 of the 2050 LRTP: Improve travel safety for all modes of transportation**. Objectives under this goal focus on reducing the number, frequency, and severity of accidents for all modes of transportation by analyzing transportation projects and involving community safety partners; and improving the physical characteristics and design of transportation infrastructure to optimize safety for all users.

Transit Safety Performance Targets

Within the FAMPO planning area, FRED is subject to the PTASP requirements. FRED is a participant in DRPT’s Group PTASP Plan. VRE, as a commuter rail system, is subject to safety oversight by the Federal Railroad Administration and is therefore not subject to the PTASP requirements. The following table summarizes the current transit safety targets for FRED. FAMPO adopted/approved transit asset performance targets on January 25, 2021.

| Transit Mode | Fatalities | Fatality Rate | Injuries | Injury Rate | Safety Events | Safety Events Rate | Distance Between Major Failures | Distance Between Minor Failures |
|---------------------|------------|---------------|----------|---|---------------|---|---------------------------------|---------------------------------|
| FRED Targets | | | | | | | | |
| Fixed Route | 0 | 0 | 4 | <0.5 injuries per 100,000 vehicle revenue miles | 8 | <1 reportable event per 100,000 vehicle revenue miles | 10,000 miles | 3,200 miles |