Agency Priority Goal Action Plan

Improve America's Transportation-Related Infrastructure

Goal Leaders:

Kirk Shaffer, Associate Administrator for Airports, Federal Aviation Administration (FAA)

Winsome A. Lenfert, Deputy Associate Administrator for Airports (FAA)

Nicole R. Nason, Administrator, Federal Highway Administration (FHWA)

Robert J. Tuccillo, Associate Administrator for Budget and Policy, Federal Transit Administration (FTA)

Overview

Goal Statement

Improve the conditions of the Federally-funded portions of the Nation's transportation systems.

By September 30, 2021, the percentage of Interstate Pavement in Good or Fair Condition will be maintained at 95 percent. The percentage of deck area on National Highway System (NHS) bridges in Good or Fair Condition will be maintained at or above 95 percent. The percent decrease in the Reliability of Interstate Person-Miles Traveled will be no more than 0.7 percent from the 2018 baseline. The percent of paved runways in the National Plan of Integrated Airport Systems (NPIAS) in Excellent, Good, or Fair condition will be maintained at 93 percent.

Challenges

- Highway pavement and bridges that are considered to be in poor condition directly impact the lives of ordinary citizens by increasing the wear and tear on vehicles, driving up repair costs, inflating travel times, and sometimes introducing new safety concerns.
- For freight users, poor conditions can increase the cost of doing business and delay the delivery of millions of tons of goods and agricultural products across the country. As trucks transport the majority of U.S. freight, keeping roads and bridges in good condition is critical to the Nation's competitiveness.
- Reliability of travel times on the Interstate system can be impacted by a wide variety of events (i.e., weather, work zones, traffic incidents, volume fluctuation, and others).
- The Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) expect to complete the 24th edition of the biennial Conditions and Performance (C&P) Report in Q2 of FY 2021.. This report focuses on the same National performance measures reflected in this action plan. The current edition is based on FY 2014 data sources. The 24th edition is based on FY 2016 data, and will include a discussion of the performance indicators for bridge, pavement, reliability, and transit conditions, as they are presented in Agency Priority Goal (APG) action plans.

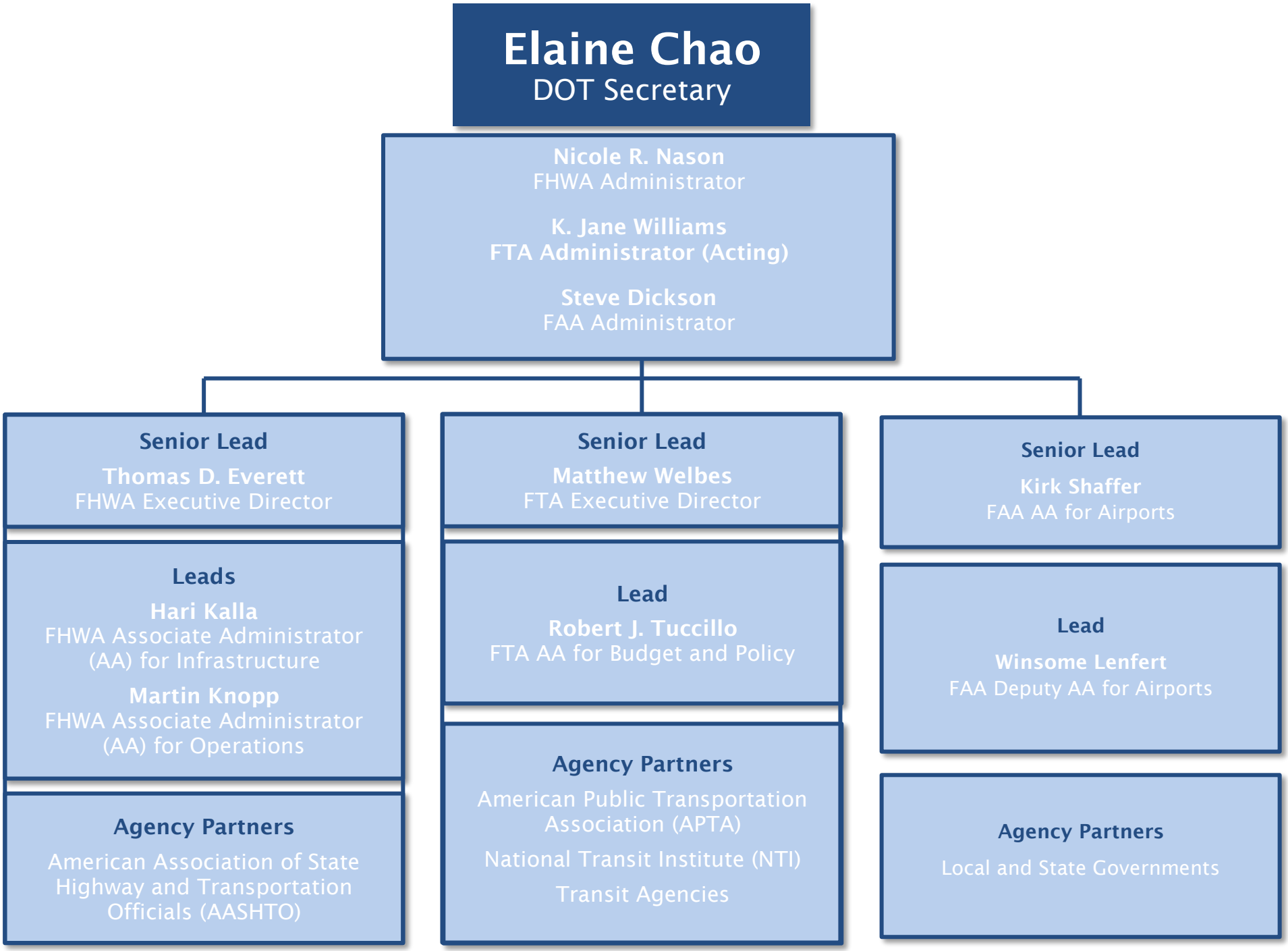
Overview

- Airfield pavement needs regular preventive maintenance to seal cracks and repair damage, decreasing the frequency of major rehabilitation cycles. Preventive maintenance (e.g., seal coat surface treatment) or more significant rehabilitation may be needed on a four- to seven-year cycle or a 15- to 25-year cycle, respectively, to remedy the effects of age, use, and exposure. Runway pavement in a state of good maintenance minimizes damage to aircraft and avoids unnecessary higher costs for major rehabilitation (e.g., full-depth reconstruction).

Opportunities

- By requiring States and Metropolitan Planning Organizations (MPOs) to develop management plans for highway and transit facilities respectively, the Department is encouraging regional, State, and local partners to more effectively and efficiently manage transportation assets.
- Working with State and local partner agencies, the Department has established a new framework of National performance measures for infrastructure (i.e., pavement and bridge) conditions and interstate system reliability. As part of this new approach, States are required to make significant progress towards achieving targets for these performance measures, with the State-by-State results reported Nationally.
- The Department will assist stakeholders in maintaining good conditions of airport runway surfaces, NHS bridges, and NHS pavement, as well as reverse the trend of the growing transit state of good repair (SGR) backlog through FY 2019. The Department will develop improved ways of tracking transportation infrastructure condition and, in the near term, focus on data available for roadway, runway, and transit infrastructure.
- Travel time reliability can be positively affected through the implementation of operational strategies on the Interstate. FHWA is working with State DOTs and other partners to provide new operational strategies and support the implementation of proven strategies.

Leadership & Implementation Team



Goal Structure & Strategies

This FY 2020-2021 APG aligns with the Infrastructure strategic goal in the FY 2018-2022 DOT Strategic Plan and two of the Department's four strategic objectives under that goal (*Life Cycle and Preventative Maintenance* and *System Operations and Performance*). As illustrated in the figure below, the Department will implement four key strategies to accomplish this objective: Rebuild, Risk Management, System Reliability, and Performance.

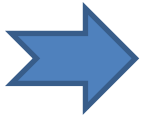
Key Strategies

Rebuild: Restore transportation infrastructure and assets to an SGR asset-management planning and innovative maintenance strategies that take into account long-term operational and financial considerations.

Risk Management: Provide research, technical assistance, and targeted funding to ensure that transportation infrastructure is planned, constructed, and maintained using best operational and risk management practices.

System Reliability: Improve the reliability and efficiency of passenger travel and freight movement on the Nation's transportation systems by working with State DOTs and other stakeholders.

Performance: Measure the performance of transportation systems and support targeted investments to improve the experience of the traveling public.



Strategic Objectives

#2: Keep the Nation's transportation infrastructure secure and in a state of good repair by maintaining and upgrading existing systems in rural and urban communities.

#3: Enhance reliable and efficient movement of people and goods by promoting effective management and ensuring leadership in securing data and in sharing information across the transportation system.

Performance Goals[1]

- Maintain or increase the percentage of interstate pavements, in lane miles, in good or fair condition
- Maintain or increase the percentage of NHS bridge deck area in good or fair condition
- Minimize decrease in interstate travel time reliability, in person-miles traveled

[1] For more information on these performance goals and their supporting indicators, refer to DOT's FY 2021 Annual Performance Plan/FY 2019 Annual Performance Report at https://www.transportation.gov/mission/budget/fy-2019-performance-report-and-fy-2021-performance-plan-main-document

Goal Structure & Strategies

- Reduce the National transit infrastructure SGR backlog
- Increase grants to rural and small urban areas
- Maintain percent of paved runways in the NPIAS in excellent, good, or fair condition

The **Rebuild** strategy directly contributes to keeping the Nation's transportation infrastructure secure and in an SGR by maintaining and rehabilitating existing systems. FHWA and FTA distribute grants from the Highway Trust funds by formula to sustain existing highway infrastructure and public transportation services.

The **System Reliability** strategy directly contributes to improving the reliability and efficiency of passenger travel and freight movement on the Nation's transportation system. FHWA program initiatives (e.g., Traffic Incident Management training) promote the use of effective operational strategies and technologies to increase reliability and optimize the use of existing highway capacity. This helps partner agencies mitigate or minimize the impact of system disruptions in anticipated travel times from recurring problems such as traffic bottlenecks, as well as non-recurring incidents, work zones, or adverse weather over the long-term.

DOT's **Systems and Operations Performance** strategy is to enhance reliable and efficient movement of people and goods by promoting effective management and ensuring leadership in securing data and in sharing information across the transportation system. FTA contributes to this strategy by requiring its grantees to implement Transit Asset Management (TAM) plans that will make the most use of scarce funding resources to prioritize investments towards an SGR. FTA grantees are required to set performance targets in support of FTA's goals to improve the number of transit assets within their useful life benchmarks over time. FTA is also seeking to continually increase the dollar amounts awarded for public transportation in rural and small urban areas through its discretionary programs, on top of those already awarded through its formula programs.

The Department engages in research, development, and deployment activities related to lifecycle management and infrastructure preservation. FHWA provides training, education, and technical assistance to assist State and local partners in implementing Transportation Performance Management and asset management

principles and practices. FTA adopted TAM metrics and is monitoring them closely over the second reporting cycle to achieve its infrastructure goals.

The Federal Aviation Administration (FAA) implements a variety of data collection and analysis strategies to maintain the percent of paved runways in the NPIAS in excellent, good, or fair condition at 93 percent. It uses both scheduled and unscheduled surveillance safety inspections at certificated airports to assess pavement conditions and collects safety and pavement condition data under a contract program to inspect non-certificated public use airports every three years. It also maintains a five-year, forward-looking analysis of airport capital requirements that includes runway rehabilitation requirements, published in the biennial NPIAS report, and it enforces requirements to have preventive maintenance pavement programs at Federally obligated airports.

Summary of Progress – FY 2020 Q1-Q4

Federal Highway Administration (FHWA)

- Continues to provide technical assistance and educational workshops to State DOTs and MPOs as they set targets and report on their performance. State performance dashboards were updated for infrastructure condition, travel time reliability (including freight), and traffic congestion measures.
- Delivered the virtual Road Weather Management Stakeholder Meeting, bringing together over 250 practitioners from State DOTs, the National Weather Service, academia, private vendors and other groups, to discuss a myriad of road weather management topics to assist in the mitigation of adverse weather's impacts to mobility and safety. A sampling of topics included: EDC-5 Weather Responsive Management Strategies, automated vehicles and adverse weather, road weather data, tools and environments for traffic management decisions, and mitigating flooded roadways.
- Delivered five bridge management workshops to help States use asset management principles to support decision making for highway bridges in need of replacement, rehabilitation, or preservation.
- Promoted innovative technologies and shared best practices on maintaining the condition of highway bridges and pavements through effective preservation practices.
- Hosted webinars for States to share best practices for collecting pavement condition data and maintaining the condition of pavements through effective pavement preservation practices. A data equipment certification demonstration workshop is being planned for 2021 to assist States in improving data collection practices and quality.
- Initiated efforts to update the NHI Pavement Management course and 2010 Pavement Management Roadmap that will be used to identify research gaps and address training needs related to maintaining pavements in good condition. Collaborated with State DOTs during the COVID-19 pandemic. This proactive partnership resulted in States reporting performance data for NHS non-interstate pavements by the June 15 deadline. Additionally, all State DOTs reported progress in achieving all of their targets through FHWA online systems.

Summary of Progress – FY 2020 Q1-Q4

Federal Transit Administration (FTA)

- **Record Year for Grant Making:** In FY 2020, FTA awarded 2,679 grants and cooperative agreements for a total of more than $39 billion, an unprecedented figure more than two and one-half times the prior record (156 percent greater than in FY 2019). FTA awarded 11 Capital Investment Grants project funding agreements through the end of the fiscal year, totaling $4.5 billion. In addition, FTA allocated funding to 13 new projects moving toward funding agreements. FTA also announced awards for $1.1 billion in funding from other competitive grant programs. The ROUTES initiative for rural areas has been included in all competitive grant solicitations. Overall, the agency successfully managed a portfolio of $115.8 billion in 7,945 active awards, also a record.

	FY 2020	FY 2019
Total Funds Awarded ($)	$39,022,703,402	$15,268,384,877
Total Grants Awarded	2,679	2,006

- **Expedited Project Delivery Pilot Program:** On August 28, 2019, FTA announced the allocation of $125 million to the Santa Clara Valley Transportation Authority for the Bay Area Rapid Transit Silicon Valley Phase II project.

- **COVID-19 Response:** The COVID-19 pandemic has devastated transit ridership across the country. Transit ridership at the end of FY 2020 was estimated to have fallen by 63 percent from pre-pandemic levels, which was an improvement from the more than 80 percent decrease in transit ridership during the spring peak of the pandemic. In response to reduced ridership and unprecedented declines in fare revenue, transit providers have reduced services in many areas. Service reductions peaked in May 2020, when 158 transit services had suspended services and another 758 transit systems reduced services.

Summary of Progress – FY 2020 Q1-Q4

- **Coronavirus Aid, Relief, and Economic Security (CARES) Act:** The CARES Act, signed on March 27, 2020, provided $25 billion to FTA to allocate to transit systems to respond to and mitigate the negative impacts of the COVID-19 pandemic. Funds are provided at a 100 percent Federal share with no local match required. Funds are available to support planning, capital investment, maintenance, operating expenses, and any other expenses generally eligible under FTA programs. During FY 2020, FTA awarded 758 CARES Act grants and obligated $23.3 billion, 93 percent of total CARES Act grant funding of $24.9 billion.

- **FTA Program Support for COVID-19 Response:** Highlights of FTA support to transit systems for COVID-19 response during FY 2020 have included the following:
  - Used flexibilities under FTA's Emergency Relief Program to allow $12 billion in annual formula funding to be used by transit providers at 100 percent Federal share for COVID-19 related expenses, including certain operating expenses such as sanitation, disinfection, and the purchase of personal protective equipment.
  - Extended the period of availability of funds scheduled to lapse on October 1, 2020 to October 1, 2021.
  - Provided administrative relief to transit providers by extending deadlines for competitive grant applications and due dates for grant reporting, postponing onsite oversight reviews until FY 2021, and postponing certain National Transit Database reporting requirements.
  - Published a COVID-19 Resource Tool with weekly updates; held monthly COVID-19 Recovery Listening Sessions; and established an online COVID-19 Recovery Discussion Forum for transit stakeholders to encourage peer exchange of information about recovery best practices.
  - Monitored COVID-19 impacts on the transit frontline workforce, issued Safety Advisory 20-1 (Recommended Actions to Reduce the Risk of COVID-19 Among Transit Employees and Passengers), and distributed more than 14 million cloth face coverings for transit workers and riders.

Summary of Progress – FY 2020 Q1-Q4

FTA CARES ACT OBLIGATIONS AND DISBURSEMENTS[1]						
Type of Grant	**Total Funds Allocated**	**# of Awards**	**Obligated Amount**	**Percent Obligated**	**Disbursement Amount**	**Percent Disbursed**
5307 Urbanized Area Formula	$22,696,291,664	614	$21,443,046,609	94.5%	$11,693,288,805	54.0%
5311 Rural Area Formula[2]	$2,198,708,336	76	$1,837,516,767	83.6%	$269,571,226	14.7%
5311 Tribal Formula	$30,000,000	82	$21,583,928	71.9%	$2,728,439	12.6%
TOTAL	**$24,925,000,000**	**758[3]**	**$23,302,147,304**	**93.49%**	**$11,965,588,470**	**51.3%**

[1] Current as of 09/30/2020.

[2] Includes 5311 Appalachian Development Formula.

[3] Not additive as some grants included more than one source of funding.

Federal Aviation Administration (FAA)

- For FY 2020 Q4, the status condition of runways in excellent, good, or fair condition was 97.9 percent, which has remained unchanged from the previous quarter.

Federal Highway Administration (FHWA)

Summary of Progress – FY 2020 Q1-Q4

- In 2017, the Department published a Final Rule establishing national performance measures for pavement and bridge conditions and travel time reliability. State DOTs and MPOs set targets for these measures. State's targets are reviewed for significant progress towards target achievement biennially.
- First established in1971, the National Bridge Inspection Standards (NBIS) require the inspection of all highway bridges located on public roads and the submission of bridge inventory and inspection data to FHWA for inclusion in the National Bridge Inventory (NBI). FHWA monitors the condition of the Nation's bridges, which includes identifying those bridges that are in Good or Fair Condition. FHWA division offices annually evaluate the quality of each State's and agency's bridge inspection program using 23 different metrics, two of which pertain to data quality and timely submission. A written annual evaluation is provided to each State and agency to document problems and require corrective actions.
- Pavement condition is also monitored by FHWA and includes identifying pavements in Good or Fair condition. Each year, States collect and submit pavement condition data to the FHWA Highway Performance Monitoring System (HPMS) such as ride quality, rutting, cracking, and faulting. This information is then reviewed and used by FHWA to calculate the percent of interstate pavements in Good and Poor condition.
- Travel time reliability is a key measure of transportation system performance. A Final Rule, effective January 2017, established a new indicator, Interstate Travel Time Reliability as Percentage of Person-Miles Traveled that are Reliable, to monitor system performance on the Interstate system. The level of travel time reliability is the ratio of longer travel times (i.e., the 80th percentile of the travel time distribution) to the normal travel time (i.e., 50th percentile) over the course of a year. The 80th percentile is roughly equivalent to the worst travel times for one day during a week of commuting times. State DOTs and MPOs set targets for these measures. States' targets are reviewed for significant progress towards target achievement biennially. The baseline measure for 2018 was calculated based on data submitted by State DOTs in June of each year. The percentage of person miles traveled on the Interstate system that was reliable was calculated to be 83.7 percent. In 2019, the average was 83.4 percent,

indicating that reliability had declined slightly. The final number for 2020 is 83.8 percent, which would indicate an improvement in reliability.

Federal Transit Administration (FTA)

FTA continued implementation of the Transit Asset Management Rule and hosted its annual industry roundtable on asset management virtually this year due to the public health emergency. The agency also published SGR performance targets for the industry for the first time. Early in FY 2021, FTA will publish updated asset inventory data to which those targets can be compared. The performance target reporting process is an integral part of FTA's innovative strategy for encouraging the transit industry to raise the bar for SGR, even in the absence of significant additional funding.

Key Milestones

Milestone Summary					
Milestone	**Deadline**	**Status**	**Change from Previous Quarter**	**Owner**	**Notes**
FTA: Reviewed infrastructure performance measure (SGR) and the TAM data with Executive Management Team (EMT)	FY 2020 Q1	Completed	Began Process to Update FTA Performance Measures	FTA Office of Budget and Policy	
FHWA: State DOTs report infrastructure condition and system reliability, including freight performance measures' targets	FY 2020 Q1	Completed	Not Applicable	FHWA AA for Infrastructure	
FHWA: Update and publish State performance dashboards	FY 2020 Q3	Completed	Action Implemented	FHWA AA for Infrastructure	https://www.fhwa.dot.gov/tpm/reporting/state/index.cfm FHWA online dashboards are now updated every year to show actual conditions and performance from data submitted by States. The safety dashboards are updated annually to report on targets and progress and biennially for all other measures.

Key Milestones

FHWA: State DOTs report interstate pavement condition via HPMS	FY 2020 Q3	Completed	Not Applicable	FHWA AA for Infrastructure	By April 15 of each year, State DOTs must submit their Interstate Pavement Condition data to HPMS for determining the Condition of Interstate Pavements penalty (23 U.S.C.119(f)(1)). 100 percent of State DOTs reported by the due date in the midst of the COVID-19 pandemic. For FY 2020, Interstate pavements in good or fair condition was 99.1 percent, which has remained unchanged from the last year.
FTA/FHWA: Complete the 24th Edition of the Conditions & Performance Report, documenting condition of highways, transit, and bridges	Due Q3 FY 2019; expected to Congress, FY 2021 Q2	Not completed	Not Applicable	Joint report between FTA Office of Budget and Policy and FHWA Office of Policy	
FTA: Implement new infrastructure performance measures based on TAM data.	FY 2022 Q1	Not completed	Not Applicable	FTA Office of Budget and Policy	Pending data reported from transit agencies on the condition of transit assets. Data expected Q1 FY 2021.
FHWA: Updates and publishes State performance dashboards	FY 2021 Q2	Not completed	Not Applicable	FHWA AA for Infrastructure	
FAA: Maintain at least 93 percent target of runway pavement in excellent,	FY 2020 Q4	In Progress (FY 2020	No change in percentage	Kirk Shaffer, Associate	Evaluation of the network level of inspection of over 4,300 runways is reviewed and reported monthly. For

Key Milestones

good, or fair condition for the paved runways in the NPIAS.		Q1-Q3 completed)		Administrator for Airports	Q4 FY 2020, the status condition of runways in excellent, good or fair condition was 97.9 percent, which has remained unchanged from the previous quarter.

Key Indicators

Key Infrastructure Indicators	FY 2018 Target	FY 2018 Actual	FY 2019 Target	FY 2019 Actual	FY 2020 Target	FY 2020 Actual	FY 2021 Target	FY 2021 Actual
FTA: National Transit Infrastructure SGR Backlog, in Current Dollars	$105B	$98B[1]	$107B	$98[1]	$109B	$98B[1]	$109B	NA
FTA: Grant Dollars Allocated to Rural and Small Urban Areas	$1.56B	$1.79B	$1.59B	$1.6B	$1.62B	$6.07B[2]	$1.62B	NA
FAA: Paved Runways in the NPIAS in Excellent, Good, or Fair Condition	93.0%	97.9%	93.0%	97.9%	93.0%	97.9%(p)	93.0%	NA

NA: Not Available.

[1] The most recent backlog published estimate is $98 Billion, from the 23rd edition of the Conditions and Performance Report to Congress, (using 2014 data), which was sent to Congress in November 2019. FTA State of Good Repair backlog targets for FY 2018, 2019, and 2020 are based on the 24thd Edition of the C&P Report, which is expected to go to Congress in Q2 of Fiscal Year 2021. At that point, FTA will update its actuals based on more current data. (The 24th edition of the C&P Report will estimate an SGR of $105 B.)

[2] Grant dollars allocated to rural and small urban areas, as of September 30, 2020.
(p): projected. Final FY 2020 data will be available after Q4.

Key Indicators

Key Infrastructure Indicators	CY 2018 Target	CY 2018 Actual*	CY 2019 Target	CY 2019 Actual	CY 2020 Target	CY 2020 Actual	CY 2021 Target	CY 2021 Actual
FHWA: Percentage of Interstate Pavements, in Lane Miles, in Good or Fair Condition	95.0%	--	95.0%	99.1%	95.0%	99.1%	95.0%	NA
FHWA: Percentage of NHS Bridge Deck Area in Good or Fair Condition	95.0%	95.5%	95.0%	95.4%	95.0%	95.7%*	95.0%	NA
FHWA: Interstate Travel Time Reliability, in Person-Miles Traveled	83.7%	83.7%	83.7%	83.4%	83.1%	83.8%	82.8%	NA

NA: Not Available

FHWA recently revised the measure it uses to track and report roadway conditions; therefore, CY 2018 served as the baseline year.

** Tentative until the actual is archived on December 31, 2020. Although unlikely, States have the option of updating bridge condition data until the end of the year.*

Data Accuracy and Reliability

Federal Highway Administration (FHWA)

Measure #1

Percentage of Interstate Pavements in Good or Fair Condition

Scope

This measure serves as an indicator of trends in pavements in Good or Fair conditions on the interstate system. Effective May 2017, a Department-issued Final Rule established a new framework of National performance measures for pavement and bridge conditions. States are required to make significant progress towards achieving targets for their individual performance measures for pavements and bridges. Per the regulation, the performance of highway pavements is reported Nationally as the percentage of the interstate system in Good and Poor condition.

The pavement condition measure is based on a classification system of Good, Fair, and Poor. Data used to determine the measure include mainline lane-miles of interstate system and full-extent international roughness index and distress data (i.e., cracking percent, rutting, and faulting) that are reported by State in the HPMS. The information in the HPMS contains pavement condition and inventory data items for 0.1-mile sections of the entire NHS as required by the HPMS Field Manual. From the data provided, FHWA monitors the condition of the Nation's pavements, which includes identifying those pavements that are in Good and Fair condition.

Sources

Data used to determine if pavements are in Good and Fair condition are contained in the HPMS file assembled from annual data submittals from States. The percentage is calculated from mileage and pavement condition data reported to the HPMS.

Statistical Issues

Data Accuracy and Reliability

None.

Completeness

States are required to report their data by April 15 each year. However, updates are accepted until June 15, after which the data are extracted and measures are calculated and published.

Reliability

To ensure reliability, FHWA provides guidelines for data collection in the HPMS Field Manual and 23 CFR 490.309. Adherence to these guidelines varies by State; however, States are required to develop data quality management plans that define the acceptable level of data quality and describe how the data collection process will ensure this level of quality in its deliverables and processes per 23 CFR 490.319c.

Verification and Validation

An annual review of reported data is conducted by FHWA, both at headquarters and in the Division offices in each State. The reported data are subject to comparisons with previously reported data and other reasonability checks. A written annual evaluation is provided to each State to document potential problems and to encourage corrective actions. Data resubmittal is requested in cases where major problems are identified.

Data Accuracy and Reliability

Measure #2

Percent of Deck Area on NHS bridges in Good or Fair Condition.

Scope

This measure serves as an indicator of trends in bridge conditions on the NHS. The surface area (i.e., length multiplied by width) of bridge decks is viewed as a more meaningful measure than simply a count of bridges in Good or Fair condition. The area measure recognizes the size difference among bridges and avoids the pitfall associated with counting bridges where every bridge is treated the same regardless of size.

First established in 1971, the NBIS requires the inspection of all highway bridges located on public roads and the submission of bridge inventory and inspection data to FHWA for inclusion in the NBI. FHWA maintains the NBI, which contains data on more than 615,000 highway bridges.

The information in the NBI contains 95 data items for each of the bridges as required by the Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges. From the data provided, FHWA monitors the condition of the Nation's bridges, which includes identifying those bridges that are in Good or Fair condition.

Sources

Data used to determine if a bridge is in Good or Fair condition are contained in the NBI and are currently assembled from annual data submittals from States, Federal agencies, and tribal governments. The deck area is calculated from length and width data also reported to the NBI.

Statistical Issues

Further research is needed to identify any statistical issues.

Data Accuracy and Reliability

Completeness

The NBI is the world's most comprehensive database of bridge information. States, Federal agencies, and Tribal governments are required to report their previous calendar year data by March 15 of each year. However, updates are accepted until end of year, at which time the full data set is archived and published.

Reliability

Because the performance measure relies on data associated with more than 143,000 NHS bridges, the impact of any differences in reporting across States is minimized in the overall National analysis.

Verification and Validation

The NBIS requires annual submittal of bridge inventory and inspection data collected and submitted by 50 States, the District of Columbia, and Puerto Rico in cooperation with local governments. In addition, 19 Federal agencies and a growing number of tribes submit data for Federally and tribally owned bridges. Through the NBIS Program Oversight Process, FHWA Division offices annually evaluate the quality of each State's and agency's bridge inspection program using 23 different metrics, two of which pertain to data quality and timely submission.

The inspection programs are evaluated comprehensively using statistical sampling methods, file reviews, field reviews, and data analysis. A written annual evaluation is provided to each State and agency to document problems and require corrective actions.

Upon annual submittal of the NBI data to FHWA headquarters, additional safety and reasonableness checks are performed on the data prior to acceptance, including comparisons with previously reported data. Data re-submittal is required in cases where significant or safety-related problems are identified. The accuracy and reliability of the submitted NBI information are evaluated through data checks by both FHWA headquarters and division office personnel, and as part of FHWA's annual NBIS compliance reviews.

Data Accuracy and Reliability

Measure #3

Interstate Travel Time Reliability, as a Percent of Person-Miles Traveled that are Reliable

Scope

The interstate travel time reliability measure examines the reliability of travel (i.e., consistency from day-to-day and/or hour-to-hour) on the interstate system from the perspective of the user as reported as the percent of person-miles traveled (PMT) that are reliable. National targets may be adjusted further after additional data are available in 2019.

Sources

Data sources include average travel time data for interstates from the National Performance Management Research Data Set (NPMRDS). The data reflect actual, observed travel times on the interstates, reported as an average every 15 minutes. Data are collected by INRIX and provided by the Center for Advanced Transportation Technology Laboratory at the University of Maryland to FHWA as the NPMRDS. The vehicle probe data can be from cell phones, in-vehicle navigation units, and/or fleet (e.g., truck, delivery vehicles, taxi) management systems. Related volume data for weighting the measure are found in HPMS.

Statistical Issues

PMT estimation requires information on the number of vehicle occupants that is not available in the monthly travel data. Additionally, the monthly VMT data does not distinguish between passenger and freight vehicle-miles traveled.

Completeness

Missing data points in the NPMRDS do occur where there are low volumes and no probe vehicles traveling through during a five-minute period, especially overnight and in some rural areas. FHWA accounts for missing data in part by using average travel times for every 15 minutes.

Data Accuracy and Reliability

Reliability

Reliability for these measures is excellent. All metric submissions, as well as all targets and other reporting, are reviewed by FHWA. Data re-submittal is requested in cases where major problems are identified. As many as 35 States have access to an analysis tool developed by the Transportation Performance Management Capacity Building pooled fund study, which provides consistent and reliable results.

Verification and Validation

NPMRDS data are validated quarterly in limited locations by comparing to ground truth travel time data. Results are within specifications of the contract. Recently available volume data from HPMS are used to calculate the results. Typically, there is a lag in data availability and of conflation to the NPMRDS location-referencing network. The 2019 travel time data were conflated with 2017 HPMS data.

Data Accuracy and Reliability

Federal Transit Administration

Measure #1

SGR Backlog, in Current-Year Dollars (Formerly Known as Transit Capital Assets Backlog)

Scope

This measure includes all capital assets of the U.S. transit industry and, as such, incorporates all transit systems in the country, both urban and rural. The replacement value of all United States transit assets is estimated at $894 billion.

Sources

The size of the National SGR backlog is estimated by the Transit Economic Requirements Model (TERM), based on capital asset data from the NTD and other ad hoc capital asset surveys.

Statistical Issues

An inventory of revenue vehicles is reported to the NTD annually. Data on all other capital assets are based on ad hoc surveys that are updated periodically and on estimates created by TERM.

During FY 2016, FTA took substantial steps towards implementing the National TAM System by issuing a Final Rule. The Rule includes FTA's first-ever definition of SGR, requirements for each FTA grantee to establish a transit asset management plan, and a suite of SGR performance measures against which each of FTA's grantees is required to set targets. Concurrently, FTA expanded the NTD to collect additional capital asset inventory information, as well as condition data, towards the SGR performance measures in the Rule. The expanded NTD data collection took effect in September 2018, with the data first becoming available in the fall of 2019, and updated backlog estimates based on the new data available in 2020.

Data Accuracy and Reliability

The most recently published edition of the Conditions and Performance Report is the 23rd Edition, based on 2014 data, which was delivered to Congress on November 22, 2019.

FTA is planning to discontinue this measure in FY 2023 and replace it with another measure that is based on TAM data reported directly to the NTD from transit agencies.

Completeness

Most of the large and many medium-sized agencies have provided asset inventory data to the database that are used for this calculation. Assets for smaller systems are estimated by the model. FTA is in the process of expanding the capital asset data collected by the NTD (see Statistical Issues above).

Reliability

The transit agency's Chief Executive Officer (CEO) certifies that the vehicle data reported to the NTD are accurate. These data are reviewed by analysts and compared to trend data for the transit system and to National benchmarks. The other three-quarters of transit assets are updated on an ad hoc basis and do not require a CEO certification. However, these are the best-available data inventories that transit agencies have available and are generally considered to be reliable.

Verification and Validation

Data reported to the NTD are subject to validation for consistency with the rest of the annual report, as well as comparison with the prior year's report. Other capital asset data are collected on an ad hoc basis and cannot be validated against other sources. The parameters of TERM were developed based in part upon independent consultant work done in the transit industry. FTA periodically seeks outside review of TERM, including a recent review conducted by the National Academies of Sciences.

Data Accuracy and Reliability

Measure #1

FTA Grant Dollars Allocated to Rural Areas and Small Urban Areas.

Scope

This measure relates to the total number of grant dollars that are allocated to urbanized areas under 200,000 in population, or to rural areas (areas under 50,000 in population). It includes both formula and discretionary grant programs.

Sources

FTA's full-year apportionments notice provides the allocations of formula dollars to these areas. Amounts allocated to these areas from discretionary programs are announced once the project selections are made from these discretionary grants and published in the Federal Register as being available for obligation.

Statistical Issues

None, this measure is a 100 percent count.

Completeness

No issues. This measure is comprehensive of all FTA grant programs. However, just because FTA makes funding available to these geographical areas does not mean that the announcement will necessarily result in an obligation.

Reliability

These data are reliable, as they are formal records published in the Federal Register.

Verification and Validation

Data Accuracy and Reliability

No verification or validation of these data is needed, as these are formal records published in the Federal Register.

Federal Aviation Administration (FAA)

Measure

- Percent of runways in FAA's National Plan of Integrated Airport Systems (NPIAS) in Good Condition (Formerly known as Runway Pavement)
- Maintain runway pavement in excellent, good, or fair condition for 93 percent of the paved runways in the NPIAS.

Scope

The metric covers all open and paved runways at Federally funded NPIAS airports.

Sources

Data and information are collected through visual inspection of runway pavement in accordance with existing FAA guidance; including Advisory Circulars 150/5380-7 Airport Pavement Management Program and 150/5320-17 Airfield Pavement Surface Evaluation and Rating Manuals. This guidance provides uniformity to field observations made by individuals collecting data for the Airport Master Record (FAA Form 5010). The pavement condition is reported in the 5010 Airport Master Record database and results of the inspections are entered into FAA's NAS Resource.

Statistical Issues

None.

Completeness

Data Accuracy and Reliability

The inspection and reporting of conditions are conducted in accordance with existing FAA guidance. The data are publicly available and therefore can be examined and evaluated by any Federal auditor.

Reliability

Not Applicable.

Verification and Validation

Runway pavement condition data are collected annually by FAA Airport Certification Safety Inspectors during their physical inspection of all certified airports in the U.S. and its territories. Other public use airports are inspected by airports or airport safety data inspectors under an FAA contract every three years. Information is collected through visual inspection of runway pavement in accordance with existing FAA guidance, resulting in a condition rating for each runway of excellent, good, fair, poor, or failed. FAA senior leadership reviews the data on a quarterly basis, with more frequent review at the line of business level.

Additional Information

Federal Highway Administration

Pavement and Bridge Condition

This measure serves as an indicator of trends in pavements in good or fair condition on the interstate. Per Federal regulation (23 CFR 490.319c), the performance of highway pavements is reported Nationally as the percentage of the interstate system in good and poor condition. The pavement condition measure is based on a classification system of Good, Fair, or Poor. Data used to determine the measure include mainline lane-miles of interstate system and full-extent IRI and distress data (i.e., cracking percent, rutting, and faulting) reported by State DOTS in the HPMS. The percentage is calculated from mileage and pavement condition data items reported to the HPMS for 0.1-mile sections of the entire NHS. To ensure consistency, FHWA provides guidelines for data collection in the HPMS Field Manual and 23 CFR 490.309. To help States improve data quality, they are required to develop data quality management plans that define the acceptable level of data quality and describe how the data collection process will ensure this level of quality in its deliverables and processes.

Bridges are in Good condition when all component (i.e. deck, superstructure, substructure or culvert) condition rating items are coded seven or above on the NBI rating scale. Bridges are in Fair condition when any component condition rating is a five or six and no other component condition ratings are below a five on the NBI rating scale. Data to determine a bridge's condition are in the NBI, currently assembled from annual data submittals from the States, Federal agencies, and tribal governments.. Data to determine if a bridge is deficient are contained in the NBI, currently assembled from annual data submittals from the States, Federal agencies, and tribal governments. Deck area is calculated from length and width data also reported to the NBI. The surface area (length multiplied by width) of bridge decks is viewed as a more meaningful indicator than simply a count of bridges. Adjustment of the results by deck area recognizes the size difference among bridges and avoids the pitfall associated with counting bridges where every bridge is treated the same regardless of size.

Interstate Truck Travel Time Reliability (TTTR Index)

Additional Information

Travel time reliability is a key indicator of transportation system performance. The TTTR index measures the reliability or consistency of truck travel times on the interstate from day to day over the course of a year. The TTTR index is the ratio of the 95th percentile truck travel time to the 50th percentile truck travel time for each roadway segment, which is then averaged for the entire interstate system to provide National TTTR Index.

The TTTR Index represents a system-wide average of extra time or cushion that needs to be added to typical or average travel time to ensure on-time arrival 95 percent of the time. The TTTR Index is reported as 1.0 or greater. The higher the value above 1.0, the less reliable the roadway; while lower TTTR Index values closer to 1.0 indicate a more reliable roadway. This gives a system-wide indication of how much extra time a motor carrier needs to budget for freight travel on the interstate to account for traffic delays. This additional time results in extra shipping and carrying costs for businesses.

Federal Transit Administration (FTA)

National Transit Infrastructure SGR

The National Transit Database (NTD) is FTA's primary source for information on the transit industry. FTA grantees are required to report to the NTD as a condition of their grant agreements. The NTD collects information on an inventory of all revenue vehicles, all service vehicles, all facilities, and various aspects of rail infrastructure. Transit systems are also required to report a condition rating for each facility, and a metric of slow zones for rail infrastructure. Transit systems also set targets for SGR repair for each asset class. Data are self-reported and self-certified to the NTD by the transit agencies. FTA provides some validation of the data to identify and correct obvious blunders or areas of data inconsistency.

Grants to Rural and Small Urban Areas

FTA set a target to allocate at least $1.62 billion in formula and competitive grants to rural and small urban areas in FY 2020.

Additional Information

In November 2019, Secretary Chao announced $423 million in Nationwide grants for America's bus infrastructure.

In Q1 of FY 2020, FTA awarded $161,616,540 to rural and small urban areas under the 5339 Bus and Bus Facilities program.

Federal Aviation Administration

Runways in the National Plan of Integrated Airport Systems

Runway condition data for the approximately 4,300 runways in the NPIAS are reviewed monthly by FAA. Airports with runway pavement in poor or failed condition must identify rehabilitation projects in their capital improvement plans.

Additional Information

Contributing Programs

Organizations

- **FHWA:** Statutory requirements in Title 23 USC 106, 109, 144, 502, and elsewhere require FHWA to cooperate and/or coordinate with American Association of State Highway and Transportation Officials (AASHTO) in developing bridge, tunnel, and structure-related standards and other materials. FHWA outlines its priorities as a member of the AASHTO Committee on Bridges and Structures – see https://bridges.transportation.org/and 20 technical committees within the Committee on Bridges and Structures. In this role, the agency assists AASHTO in identifying necessary changes to the AASHTO specifications and providing input on needed research areas to advance the bridges and structures program. State DOTs are members of the Committee on Bridges and Structures, which enables FHWA to coordinate with these partners as well.

- **FTA:** Virtually all of FTA's grant programs fund improvements to infrastructure.

- **FAA:**
  - FAA Office of Airports: Federal assistance program: Airport Improvement Program (AIP)
  - Local Airport Authority, FAA: Passenger Facility Charge (PFC) programs
  - State Authority: State Airport funding programs
  - Local governing body: Local Funding programs

Additional Information

Regulations

FHWA

- FHWA National Performance Management Measures - see 23 CFR 490.307;407;507; and 607. DOT is now implementing these rules, offering technical assistance to States and MPOs as they set performance targets and developing public-facing reporting of performance metrics.
- FAST Act § 1106; 23 U.S.C. 119 – see National Highway Performance Program

FTA

- TAM Final Rule
- 49 CFR 625 TAM
- FTA's TAM final rule requires public transportation providers to develop and implement TAM plans. TAM plans must include an asset inventory, condition assessments of inventoried assets, and a prioritized list of investments to improve the SGR of capital assets. TAM's final rule also establishes SGR standards and four SGR performance measures. Transit providers are required to set performance targets for their capital assets based on the SGR measures and report their targets, as well as information related to the condition of their capital assets, to the NTD.

FAA

- Regulations: 14 CFR 139 (Airports with commercial service)
  Policy: 49 USC Chapter 471
- Regulations: 14 CFR 139 (Airports with commercial service)
  Policy: 49 USC Chapter 475

Additional Information

Stakeholder / Congressional Consultations

FHWA: FHWA supports State and local governments in the design, construction, and maintenance of the Nation's highway system and various Federally and tribally owned lands. Through financial and technical assistance to State and local governments, FHWA is responsible for ensuring that America's roads and highways continue to be among the safest and most technologically sound in the world. In addition to its headquarters office, FHWA has offices in each of the 50 States, the District of Columbia, and Puerto Rico that work with State, local, and other Federal transportation agencies. FHWA's key stakeholders and partners include the State DOTs, as well as the respective DOTs for Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and Northern Mariana Islands. Non-governmental stakeholders include National transportation-related stakeholder and professional organizations, such as the AASHTO.

Stakeholder engagement is a critical part of what FHWA does every day to deliver the Federal Highway Program. It is performed via technical assistance, training and educational development and delivery, and serving on technical panels for research, development, and deployment. Programs and resources are developed and enhanced to meet stakeholder and customer needs informed by surveys, data collection and analysis, participation in National and regional conferences, responses to requests for technical assistance, and by the day-to-day conduct of our work.

FTA: FTA conducted extensive industry outreach prior to establishing the TAM Rule. FTA conducted an online dialogue and an advanced notice of proposed rulemaking prior to formally issuing the proposed rule. FTA conducts at least one TAM roundtable each year with industry stakeholders to receive feedback on implementation. FTA has also met on several occasions with Congressional professional staff to discuss progress in implementation of the TAM program.

FAA: FAA incorporates views and suggestions for airport system-wide development from all its stakeholders, including individual airport owners, FAA’s Airports Regional and District Offices, the Air Traffic Organization, the Flight Standards Office, Congress, State aeronautical agencies, State and Local Governments, and other aeronautical user groups.