

# TRI-LAKES 2040

## Metropolitan Transportation Plan

Amendment # 3

Approved: July 19, 2018



September 2015

Developed for:



Developed by:



# PERFORMANCE MEASURES



## Introduction

In accordance with 23 CFR 450.218, the State shall develop a statewide transportation improvement program (STIP) for all areas of the State. A STIP shall include, to the maximum extent practicable, a discussion of the anticipated effect of the STIP toward achieving the performance targets identified by the State in the statewide transportation plan or other state performance-based plan(s), linking investment priorities to those performance targets.

Below is a description of each of the performance areas and the anticipated effect of the STIP toward achieving the performance targets.

## Safety

Arkansas has adopted an ultimate vision of Toward Zero Deaths (TZD) since 2013. With this vision, the Strategic Highway Safety Plan (SHSP) was developed that integrates the four “E’s” – engineering, education, enforcement, and emergency services. It is a performance-based, data-driven, comprehensive plan that establishes statewide goals, objectives, and strategies to address safety in Arkansas. This vision and strategy is consistent with the TZD National Strategy on Highway Safety sponsored by the Federal Highway Administration (FHWA), the National Highway Traffic Safety Administration (NHTSA), the American Association of State Highway and Transportation Officials (AASHTO), and the Governor’s Highway Safety Association (GHSA).

The latest SHSP was developed in 2017, which identified five critical emphasis areas ranging from driver behavior, special and vulnerable road users to infrastructure and operational improvements. Performance goals can be found in the [SHSP](#) for the following performance measures.

Federally mandated performance measures are:

- Number of fatalities
- Fatality rate
- Number of serious injuries
- Serious injury rate
- Number of non-motorized fatalities and serious injuries

In addition, the Department develops annual performance targets to support the SHSP goals in accordance with 23 U.S.C. 150. The targets are developed in coordination with the Arkansas State Police – Highway Safety Office, Metropolitan Planning Organizations (MPOs), and other stakeholders. They are submitted to FHWA in the Highway Safety Improvement Program (HSIP) report by August 31 each year.

Relevant primary emphasis areas under Infrastructure and Operational Improvements include roadway departure, intersections, work zones, railroad crossings as well as incident management and data

collection and analysis. Safety projects included in the STIP were identified to address the critical and primary emphasis areas in support of the SHSP performance goals. They were identified through a data-driven process, and are in conformance with the HSIP requirements. The data-driven process includes:

- Evaluation of the safety performance of an area
- Identification of appropriate countermeasures that would address one or more SHSP primary emphasis areas
- Determination of benefits vs. cost

These projects are intended to have a positive effect on the State's highway safety performance and moving toward achieving the performance goals identified in the SHSP. The evaluation of safety effectiveness for these projects is conducted annually through the annual HSIP report.

## Transit

The Department is in the process of developing the Arkansas Statewide Transit Asset Management Plan for all rural transit agencies around the state. A similar transit asset management framework is being used to develop the urban transit asset management plans with the exception of Rock Region Metro (RRM). Due to the rail component of its system, RRM is classified as a Tier 1 transit provider who is also in the process of developing its transit asset management plan. The transit asset management plans will assist agencies in identifying rolling stock, equipment, and facility needs based on the identified performance targets.

Federally mandated performance measure is:

- Useful Life Benchmark (ULB)

## Infrastructure Condition

The Department currently manages the 12<sup>th</sup> largest State Highway System in the country. In order to maintain the system, the Department has developed the Transportation Asset Management Plan (TAMP) compliant with 23 CFR 515 with the goal of maintaining the system in the best possible condition for the given amount of funding available. The TAMP is risk-based and it describes the inventory and condition of the highways and bridges located on the National Highway System (NHS) in Arkansas. It also describes how the Department is managing these assets using TAM principles. Utilizing the life-cycle planning information, the TAMP assists the Department in identifying the right projects at the right times to reduce the overall cost of our assets while maintaining a safe and efficient system.

Federally mandated performance measures are:

- Percent of Interstate pavements in Good condition
- Percent of Interstate pavements in Poor condition
- Percent of non-Interstate NHS pavements in Good condition
- Percent of non-Interstate NHS pavements in Poor condition

- Percent of NHS bridges by deck area classified as Good condition
- Percent of NHS bridges by deck area classified as Poor condition

## System Reliability and CMAQ

System reliability on the Interstate and non-Interstate NHS is assessed using FHWA's National Performance Management Research Data Set (NPMRDS) for travel time reliability and freight movement. Travel time reliability is defined as the ratio of the longer travel time (80<sup>th</sup> percentile) to a normal travel time (50<sup>th</sup> percentile). Roadway segments that have a travel time reliability greater than 1.5 are considered unreliable. Freight reliability is based on the truck travel time reliability index that is defined as the 95<sup>th</sup> percentile truck travel time divided by the 50<sup>th</sup> percentile truck travel time.

Federally mandated performance measures are:

- Percent of person-miles traveled on the Interstate that are reliable
- Percent of person-miles traveled on the non-Interstate NHS that are reliable
- Truck travel time reliability on the Interstate System
- Annual hours of peak hour excessive delay per capita (only applicable in the WMATS)
- Percent non-single occupancy vehicle travel (only applicable in the WMATS)
- On-Road Mobile Source Emission (only applicable in the WMATS)

# Safety



## PERFORMANCE MEASURES

**Number of Fatalities** 555.0

**Describe the basis for established target, including how it supports SHSP goals.**

The target for number of fatalities is same as the goal of SHSP: 555 for 2018. This target has been set using the methodology adopted by the safety stakeholders which is the average of five values for 5-year moving averages of 2011 to 2015. See the section of "additional comments" for supporting information.

**Number of Serious Injuries** 3470.0

**Describe the basis for established target, including how it supports SHSP goals.**

The target for number of serious injuries is higher than the goal of SHSP (3,245 for 2018). This target has been set using the methodology adopted by the safety stakeholders which is the average of five values for 5-year moving averages of 2011 to 2015. Due to recent spike in 2015 serious injury crashes and the factors described in the "additional comments", the statistical output has been increased by 5 percent.

**Fatality Rate** 1.660

**Describe the basis for established target, including how it supports SHSP goals.**

The target for fatality rate is same as the goal of SHSP (1.66 for 2018). This target has been set using the methodology adopted by the safety stakeholders which is the average of five values for 5-year moving averages of 2011 to 2015. See the section of "additional comments" for supporting information.

**Serious Injury Rate** 10.419

**Describe the basis for established target, including how it supports SHSP goals.**

The target for serious injury rate is higher than the goal of SHSP (9.92 for 2018). This target has been set using the methodology adopted by the safety stakeholders which is the average of five values for 5-year moving averages of 2011 to 2015. Due to recent spike in 2015 serious injury crashes and the factors described in the "additional comments", the statistical output has been increased by 5 percent.

**Total Number of Non-Motorized Fatalities and Serious Injuries** 149.0

**Describe the basis for established target, including how it supports SHSP goals.**

The target for non-motorized fatalities and serious injuries is higher than the goal of SHSP (139 for 2018). This target has been set using the methodology adopted by the safety stakeholders which is the average of five values for 5-year moving averages of

2011 to 2015. Due to recent spike in 2015 serious injury crashes and the factors described in the "additional comments", the statistical output has been increased by 5 percent.

**Enter additional comments here to clarify your response for this question or add supporting information.**

To set targets for 2018 safety performance measures, the most recent crash data available is used based on the 5-year rolling average. The most significant internal and external factors considered were those that included the following: the recent upward trend in fatalities and serious injuries, increase in VMT in conjunction with decreasing gas prices, increase in vehicle registration, impact of accurate data for serious injuries due to the transition to eCrash in 2015, change to serious injury definitions, passage of new legislations - legalizing medical marijuana and a study to increase the speed limit, trucks speed limit increase in 2015, and increase in number of work zones due to Interstate Rehabilitation Program and Connecting Arkansas Program.

**Describe efforts to coordinate with other stakeholders (e.g. MPOs, SHSO) to establish safety performance targets.**

The Arkansas Highway Safety Steering Committee not only updated the State SHSP but also set the 2018 safety performance targets through extensive coordination with the Arkansas Highway Safety Office, FHWA, NHTSA, all MPOs, and other safety stakeholders. The committee had an opportunity to attend the workshop for establishing safety performance targets arranged by FHWA Division office. The Steering Committee formed a sub-committee comprising of key stakeholders to establish targets and multiple meetings were held to achieve it. Different stakeholders' specialized in different areas provided their input in the process and considered the SHSP goals when establishing the safety targets. Finally the recommendations were approved by the Steering Committee.

**Does the State want to report additional optional targets?**

No

**Enter additional comments here to clarify your response for this question or add supporting information.**

Arkansas does not have any additional targets other than the targets for the five HSIP performance measures.

***Applicability of Special Rules***

**Does the HRRR special rule apply to the State for this reporting period?**

No

**Enter additional comments here to clarify your response for this question or add supporting information.**

**\*2017 Arkansas Highway Safety Improvement Program\***

# BRIDGE PERFORMANCE MEASURES



In accordance with 23 CFR 490, the Federal Highway Administration (FHWA) established performance measures for State Departments of Transportation (DOTs) to use in managing bridge performance on the National Highway System (NHS). The following is a list of the required performance measures for bridges.

Performance Measures
Percent of NHS bridges by deck area classified as Good condition
Percent of NHS bridges by deck area classified as Poor condition

## CONDITION BASED PERFORMANCE MEASURES

- Measures are based on deck area.
- The classification is based on National Bridge Inventory (NBI) condition ratings for deck, superstructure, substructure, and bridge length culverts.
- Condition is determined by the lowest rating of deck, superstructure, substructure, or culvert.
  - If the lowest rating is greater than or equal to 7, the structure is classified as good.
  - If it is less than or equal to 4, the classification is poor.
  - Structures rated below 7 but above 4 will be classified as fair.
- Deck area is computed using structure length, and deck width or approach roadway width (for bridge length culverts).

## TARGET SETTING REQUIREMENTS

### State DOTs:

- Must establish targets for all bridges carrying the NHS, which includes on-ramps and off-ramps connected to the NHS, and bridges carrying the NHS that cross a State border, regardless of ownership.
- Must establish statewide 2- and 4-year targets by May 20, 2018 and report targets by October 1, 2018 in the Baseline Performance Period Report.
- May adjust 4-year targets at the Mid Performance Period Progress Report (October 1, 2020).
- State DOTs shall coordinate with relevant MPOs on the selection of targets to ensure consistency, to the maximum extent practicable.

### Metropolitan Planning Organizations (MPOs):

- Shall support the relevant State DOT 4-year target or establish their own within 180 days after the State DOT target is established.
- Shall report their established targets to their respective State DOT in a manner that is documented and mutually agreed upon by both parties.
- Shall report baseline condition/performance and progress toward the achievement of their targets in the system performance report in the metropolitan transportation plan.

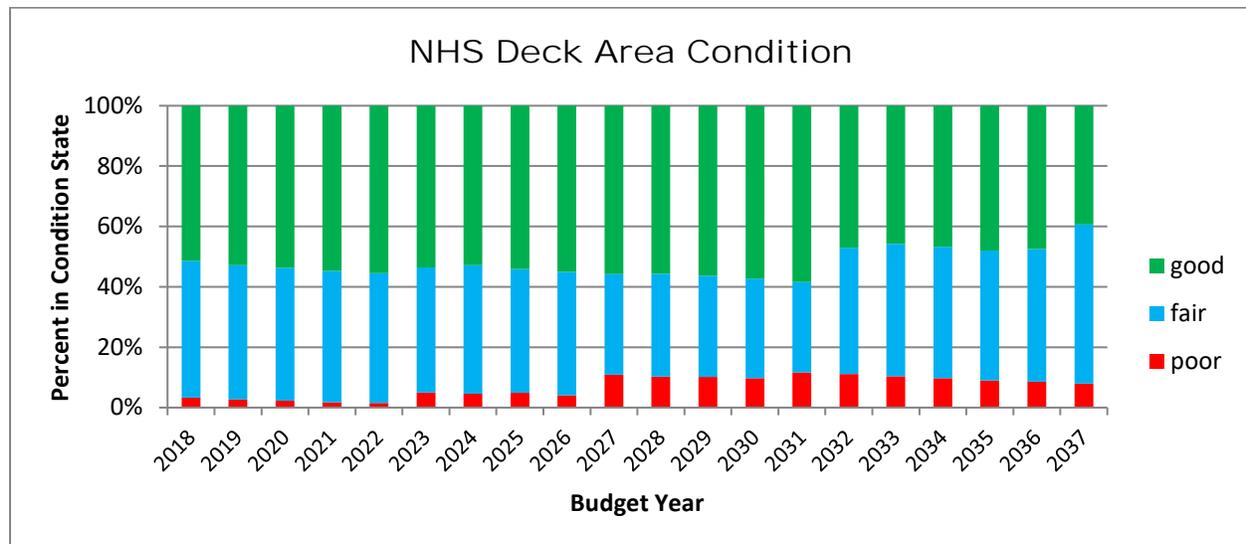
### Other Information:

- State DOT targets should be determined from asset management analyses and procedures. The targets reflect investment strategies that aim to achieve a state of good repair over the life cycle of assets at minimum practicable cost.
- If for three consecutive years more than 10% of a State DOT’s NHS bridges total deck area is classified as Poor, the State DOT must obligate and set aside National Highway Performance Program (NHPP) funds to eligible bridge projects on the NHS.

## METHODOLOGY

In order to develop the performance targets, a bridge model is required to forecast future conditions based on anticipated funding. In October of 2015, Heavy Bridge Maintenance (HBM) entered into an agreement to use Deighton’s dTIMS software as ARDOT’s bridge modeling platform<sup>1</sup>.

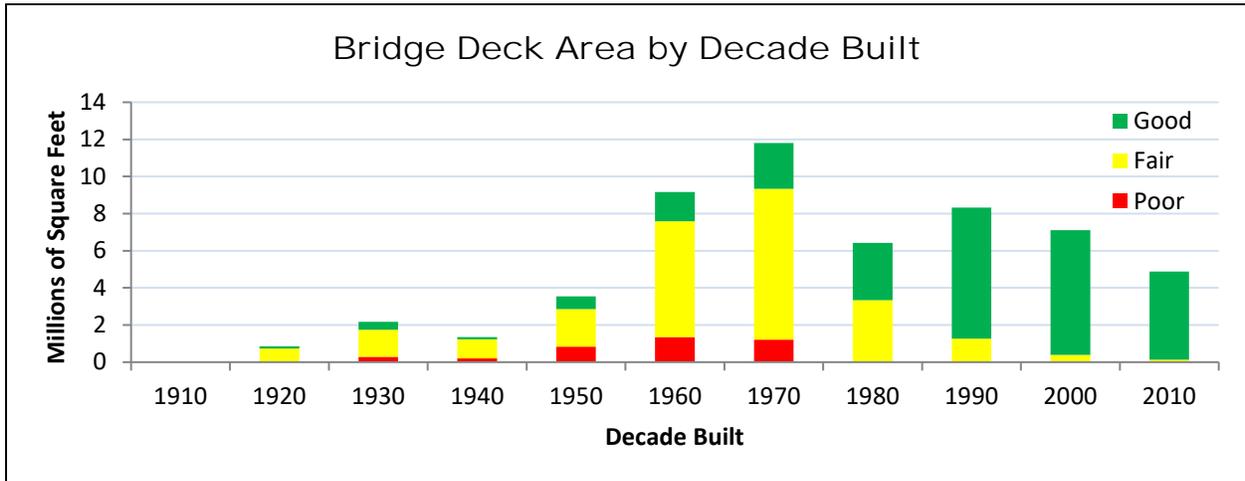
Based on a \$90-million budget for all state-owned bridges, the model provides a 20-year condition forecast<sup>2</sup> for NHS bridges as shown below:



<sup>1</sup> While the model is still being refined, the projections seem reasonable and the proposed performance targets are based on those projections.

<sup>2</sup> The bridge model does not consider the additional funding made available for the 30 Crossing project. The 30 Crossing project will address over one percent of the poor deck area currently in the NHS bridges.

As shown in the 20-year condition forecast chart, the poor deck area is currently at 3.3 percent while the good deck area is at 51.3 percent. There is a jump in percent poor deck area in 10 years. This jump can be explained by the large inventory of bridges that were built in the 1960s and 1970s (as shown in the following figure) and will reach the end of their 50-year design life within the next 10 years. With additional planned model calibration, the jump may be less severe. However, additional deck area could be rated poor earlier than year 2027.



## TARGETS

The proposed targets are not intended to be “aspirational”, but rather reflect a “realistic” approach to minimizing deterioration of the existing bridge infrastructure in an environment where available resources are less than optimal. The targets represent what is attainable if the strategies and funding estimates in the Transportation Asset Management Plan (TAMP) are implemented.

Performance Targets		
	2-year	4-year
Percent of NHS bridges by deck area classified as Good condition	50%	50%
Percent of NHS bridges by deck area classified as Poor condition	4%	6%

It should be noted that the shift toward bridge preservation in the last couple of years should enabled the Department to stay below 10 percent of NHS bridges classified as poor for the state-wide bridge inventory at the anticipated 90-million funding level according to the model. Future model calibrations will allow better performance forecasting, which would enable ARDOT to make adjustments in funding and/or strategies to stay below the penalty threshold for NHS bridges.

### Final Rulemaking

The Federal Highway Administration (FHWA) published in the *Federal Register* (82 FR5886) a [final rule](#) establishing performance measures for State Departments of Transportation (DOTs) to use in managing pavement and bridge performance on the National Highway System (NHS). The National Performance Management Measures; Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program Final Rule addresses requirements established by the Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) and reflects passage of the Fixing America's Surface Transportation (FAST) Act. The rule is effective **May 20, 2017**.

#### Performance Measures

✓ % of NHS bridges by deck area classified as in Good condition

✓ % of NHS bridges by deck area classified as in Poor condition

#### Condition-Based Performance Measures

- Measures are based on deck area.
- The classification is based on National Bridge Inventory (NBI) condition ratings for item 58 - Deck, 59 - Superstructure, 60 - Substructure, and 62 - Culvert.
- Condition is determined by the lowest rating of deck, superstructure, substructure, or culvert. If the lowest rating is greater than or equal to 7, the bridge is classified as good; if is less than or equal to 4, the classification is poor. (Bridges rated below 7 but above 4 will be classified as fair; there is no related performance measure.)
- Deck area is computed using NBI item 49 - Structure Length, and 52 - Deck Width or 32 - Approach Roadway Width (for some culverts).

#### Target Setting

##### State DOTs:

- Must establish targets for all bridges carrying the NHS, which includes on- and off-ramps connected to the NHS within a State, and bridges carrying the NHS that cross a State border, regardless of ownership.
- Must establish statewide 2- and 4-year targets by May 20, 2018, and report targets by October 1, 2018, in the Baseline Performance Period Report.
- May adjust 4-year targets at the Mid Performance Period Progress Report (October 1, 2020).

##### Metropolitan Planning Organizations (MPOs):

- Support the relevant State DOT(s) 4-year target or establish their own by 180 days after the State DOT(s) target is established. 7/20/18

# BRIDGE

## PERFORMANCE MEASURES



### Key Dates

<b>May 20, 2017</b>	Final rule effective date.
<b>January 1, 2018</b>	1st 4- year performance period begins.
<b>May 20, 2018</b>	Initial 2- and 4-year targets established.
<b>October 1, 2018</b>	Baseline Performance Period Report for the 1 <sup>st</sup> Performance Period due. State DOTs report 2-year and 4-year targets; etc.
<b>Within 180 days of relevant State DOT(s) target establishment</b>	MPOs must commit to support State target or establish separate quantifiable target.
<b>October 1, 2020</b>	Mid Performance Period Progress Report for the 1 <sup>st</sup> Performance Period due. State DOTs report 2-year condition/performance; progress toward achieving 2-year targets; etc.
<b>December 31, 2021</b>	1st 4-year performance period ends.
<b>October 1, 2022</b>	Full Performance Period Progress Report for 1 <sup>st</sup> performance period due. State DOTs report 4-year condition/performance; progress toward achieving 4-year targets; etc. Baseline report due for 2 <sup>nd</sup> performance period due. State DOTs report 2- and 4-year targets; baseline condition, etc.

### Other Specifics

- State DOT targets should be determined from asset management analyses and procedures and reflect investment strategies that work toward achieving a state of good repair over the life cycle of assets at minimum practicable cost. State DOTs may establish additional measures and targets that reflect asset management objectives.
- The rule applies to bridges carrying the NHS, including bridges on on- and off-ramps connected to the NHS.
- If for 3 consecutive years more than 10.0% of a State DOT's NHS bridges' total deck area is classified as Structurally Deficient, the State DOT must obligate and set aside National Highway Performance Program (NHPP) funds for eligible projects on bridges on the NHS.
- Deck area of all border bridges counts toward both States DOTs' totals.

Visit [www.fhwa.dot.gov/tpm/](http://www.fhwa.dot.gov/tpm/) to learn about training, guidance, and other implementation-related information.

# PAVEMENT PERFORMANCE MEASURES



In accordance with 23 CFR 490, the Federal Highway Administration (FHWA) established performance measures for State Departments of Transportation (DOTs) to use in managing pavement performance on the National Highway System (NHS). The following is a list of the required performance measures for pavements.

Performance Measures
Percent of Interstate pavements in Good condition
Percent of Interstate pavements in Poor condition
Percent of non-Interstate NHS pavements in Good condition
Percent of non-Interstate NHS pavements in Poor condition

## CONDITION BASED PERFORMANCE MEASURES

### Data Collection Requirements:

- Starting January 1, 2018, pavement data collected on the Interstate must include International Roughness Index (IRI), percent cracking, rutting, and faulting. This data must be reported in the Highway Performance Monitoring System (HPMS) by April 15, 2019. This data will be gathered and re-submitted every year on a full extent basis.
- The same requirements become effective for non-Interstate NHS pavement data beginning January 1, 2020 with a HPMS report date of June 15, 2021. This data will be gathered and re-submitted at least every two years on a full extent basis.

### Pavement Condition Determination:

Asphalt Pavement	Jointed Concrete Pavement (JCP)	Continuously Reinforced Concrete Pavement (CRCP)
IRI	IRI	IRI
Rutting	Faulting	--
Cracking %	Cracking %	Cracking %

- Good: All measures are in good condition
- Poor: 2 or more measures are in poor condition
- Fair: Everything else

### Pavement Condition Thresholds:

	<b>Good</b>	<b>Fair</b>	<b>Poor</b>
IRI (inches/mile)	<95	95-170	>170
Rutting (inches)	<0.20	0.20-0.40	>0.40
Faulting (inches)	<0.10	0.10-0.15	>0.15
Cracking (%)	<5	5-20 (asphalt) 5-15 (JCP) 5-10 (CRCP)	>20 (asphalt) >15 (JCP) >10 (CRCP)

## TARGET SETTING REQUIREMENTS

### State DOTs:

- Must establish targets, regardless of ownership, for the full extent of the Interstate and non-Interstate NHS.
- Must establish statewide 2- and 4-year targets for the non-Interstate NHS and 4-year targets for the Interstates by May 20, 2018 and report targets by October 1, 2018 in the Baseline Performance Period Report.
- May adjust 4-year targets at the Mid Performance Period Progress Report (October 1, 2020).
- State DOTs shall coordinate with relevant MPOs on the selection of targets to ensure consistency, to the maximum extent practicable.

### Metropolitan Planning Organizations (MPOs):

- Shall support the relevant State DOT 4-year target or establish their own within 180 days after the State DOT target is established.
- Shall report their established targets to their respective State DOT in a manner that is documented and mutually agreed upon by both parties.
- Shall report baseline condition/performance and progress toward the achievement of their targets in the system performance report in the metropolitan transportation plan.

### Other Information:

- State DOT targets should be determined from asset management analyses and procedures. The targets reflect investment strategies that aim to achieve a state of good repair over the life cycle of assets at minimum practicable cost.
- The minimum acceptable condition for interstate pavements is no more than 5% in poor condition. FHWA will make this determination using the data in HPMS by June 15 of each year. Any State DOT that does not meet the minimum condition will be required to obligate a portion of its National Highway Preservation Program (NHPP) and Surface Transportation Program (STP) funds to address interstate pavement conditions. The first assessment will occur in June 2019.

## METHODOLOGY

The Current Condition and 2- and 4-Year Pavement Performance Targets for the non-Interstate NHS pavements were developed in accordance with the methodology presented in Appendix C of *FHWA*

*Computation Procedure for the Pavement Condition Measures (FHWA-HIF-18-022)* for use during the “transition” period. This methodology was also used to establish the Current Condition for Interstate pavements in Arkansas. Based on the *Discussion of Section 490.105(e)(7) Phase-in Requirements for Interstate Pavement Measures* the 4-Year Pavement Performance Target for Arkansas’ Interstate pavements was estimated. Factors that were taken into consideration as part of this estimation included the calculated Current Condition, Interstate projects that are anticipated to be completed by 2021, estimated deterioration rates for Interstate pavements, and the anticipated level of available funding.

<b>Performance Rating</b>	
	<b>Current*</b>
Percent of Interstate pavements in Good condition	77%
Percent of Interstate pavements in Poor condition	4%
Percent of non-Interstate NHS pavements in Good condition	52%
Percent of non-Interstate NHS pavements in Poor condition	8%
* Condition rating based on ARDOT’s 2017 HPMS pavement dataset.	

## **TARGETS**

The proposed targets are not intended to be “aspirational”, but rather reflect a “realistic” approach to minimizing deterioration of the existing pavements on the Interstate and non-Interstate NHS in an environment where available resources are less than optimal. The targets represent what is attainable if the strategies and funding estimates in the Transportation Asset Management Plan (TAMP) are implemented.

<b>Performance Targets</b>		
	<b>2-year</b>	<b>4-year</b>
Percent of Interstate pavements in Good condition	N/A	79%
Percent of Interstate pavements in Poor condition	N/A	5%
Percent of non-Interstate NHS pavements in Good condition	48%	44%
Percent of non-Interstate NHS pavements in Poor condition	10%	12%

# TRAVEL TIME RELIABILITY PERFORMANCE MEASURES



In accordance with 23 CFR 490, the Federal Highway Administration (FHWA) established performance measures for State Departments of Transportation (DOTs) to use in assessing system performance on the Interstate and non-Interstate National Highway System (NHS). The following is a list of the required performance measures for travel time reliability.

Performance Measures
Percent of Person-Miles Traveled on the Interstate that are Reliable
Percent of Person-Miles Traveled on the non-Interstate NHS that are Reliable

## CONDITION BASED PERFORMANCE MEASURES

- Measures are based on the Level of Travel Time Reliability (LOTTR) which is defined as the ratio of the longer travel time (80<sup>th</sup> percentile) to a “normal” travel time (50<sup>th</sup> percentile) using data from FHWA’s National Performance Management Research Data Set (NPMRDS) or equivalent.
- A LOTTR will be calculated for each of the following time periods for each segment of highway, known as a Traffic Message Channel (TMC):
  - 6:00 AM-10:00 AM Weekday
  - 10:00 AM-4:00 PM Weekday
  - 4:00 PM-8:00 PM Weekday
  - 6:00 AM-8:00 PM Weekends
- If any one of the four time periods has a LOTTR above 1.5, then the TMC will be considered unreliable.
- All TMCs will have their length multiplied by the average daily traffic and a vehicle occupancy factor of 1.7 (released by FHWA on 4/27/2018) to determine the person-miles traveled on that TMC. Then the reliable TMCs will be summed and divided by the total person-miles traveled.

## TARGET SETTING REQUIREMENTS

### State DOTs:

- Must establish targets for the Interstate and non-Interstate NHS.
- Must establish statewide 2- and 4-year targets by May 20, 2018 and report targets by October 1, 2018 in the Baseline Performance Period Report.
- May adjust 4-year targets at the Mid Performance Period Progress Report (October 1, 2020).
- State DOTs shall coordinate with relevant MPOs on the selection of targets to ensure consistency, to the maximum extent practicable.

### **Metropolitan Planning Organizations (MPOs):**

- Shall support the relevant State DOT 4-year target or establish their own targets within 180 days after the State DOT target is established.
- Shall report their established targets to their respective State DOT in a manner that is documented and mutually agreed upon by both parties.
- Shall report baseline condition/performance and progress toward the achievement of their targets in the system performance report in the metropolitan transportation plan.

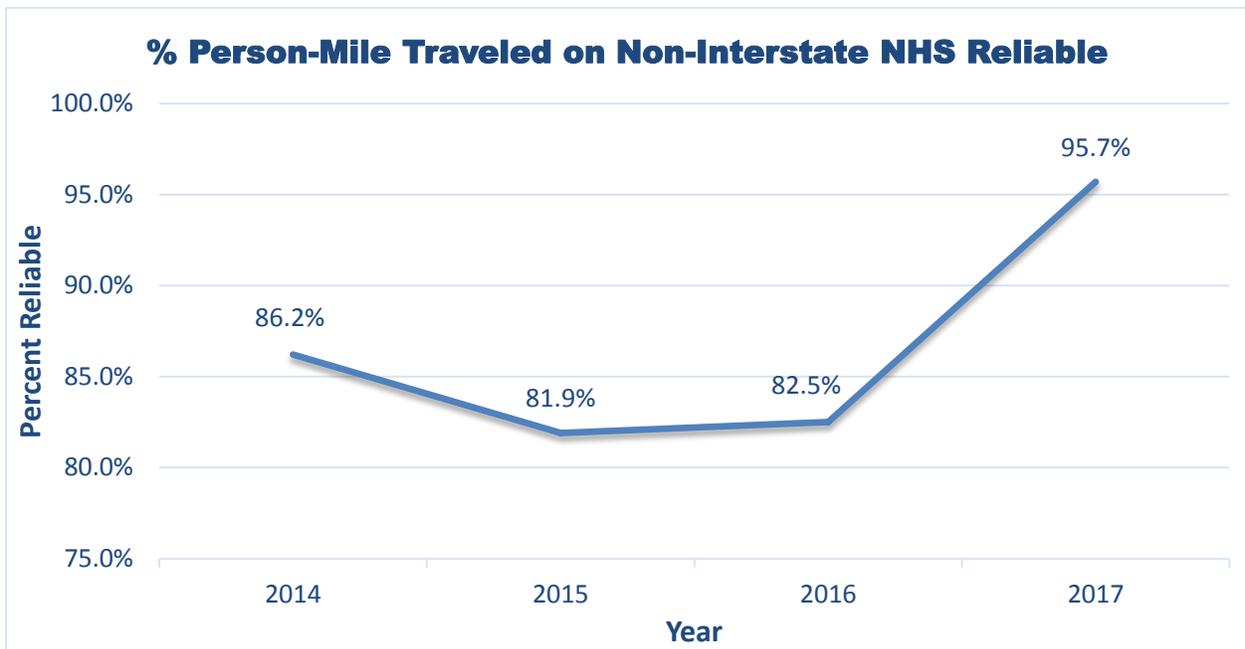
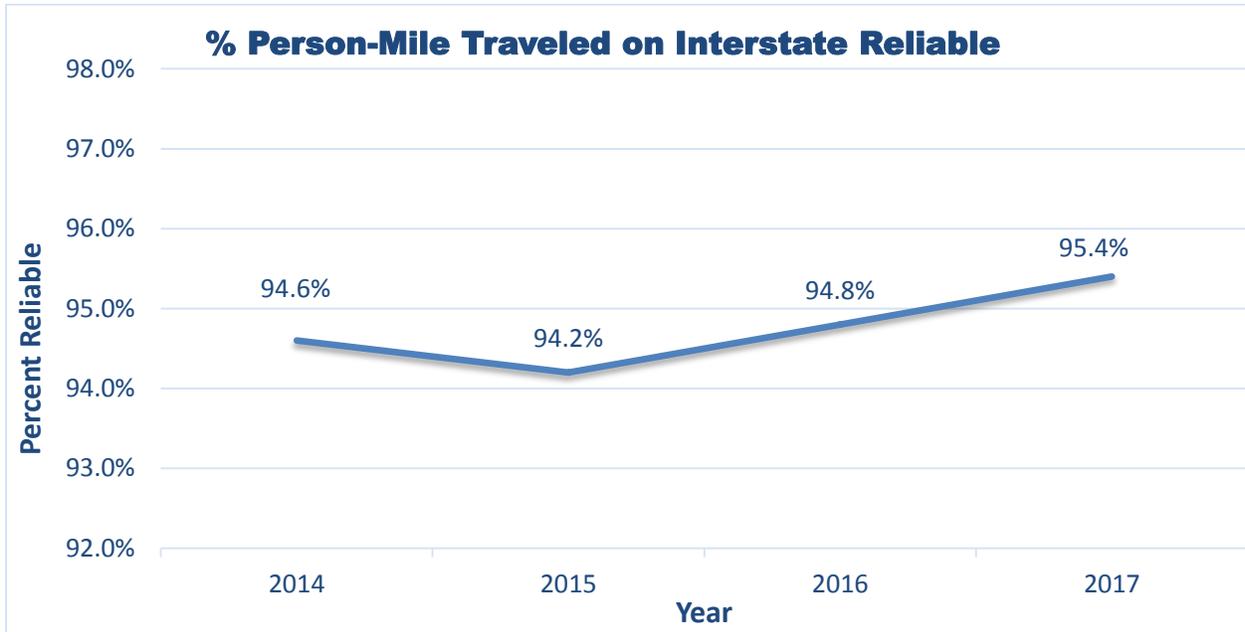
### **Other information**

- FHWA began introducing the NPMRDS provided by HERE in August 2013. The data was considered largely as raw probe data.
- In February 2017, FHWA switched the NPMRDS vendor from HERE to INRIX. Due to different data processing approaches by the vendors, there are inconsistencies in the NPMRDS.
- State DOT targets will be set based on four years of data (2014-2017) and only one year of data (2017) from the current vendor.
- As of March 2018, nationally there is 93 percent data coverage for Interstates and 53 percent for non-Interstate NHS.
- Population growth and increasing travels will affect travel time reliability, particularly in fast growing urban areas.
- A large construction program on the Interstate system could result in multiple major workzones. This scenario would have an effect on the reliability on the Interstates and non-Interstate routes.
- Arkansas is part a pooled fund project organized by AASHTO and led by the Rhode Island DOT to provide technical assistance for transportation performance management. As a member, Arkansas has direct access to the NPMRDS Analytics portal through the Regional Integrated Transportation Information System (RITIS) hosted by the University of Maryland.
- If FHWA determines that a state DOT has not made significant progress toward achieving the target, the State DOT shall document the actions it will take to achieve the NHS travel time targets. There is no financial penalty for not meeting the proposed targets.

## **METHODOLOGY**

In order to develop the performance targets, the current and past travel time reliability conditions were reviewed for Interstates and non-Interstate NHS. As shown on the figures on the next page, travel times on Arkansas' Interstates and non-Interstate NHS are largely considered reliable. However, without additional historical data, setting 2- and 4-year targets is difficult. Due to the data variation between vendors, historical trend was not considered appropriate for target setting.

After the review of the travel time reliability condition for 2014-2017, targets were developed by first identifying significant construction projects located on the Interstate and non-Interstate NHS systems. These project limits were identified and all TMCs within the project limits were considered unreliable to account for the workzones. For large construction projects, additional TMCs located near the project or on logical diversion routes were also considered unreliable. To account for the growth of traffic, TMCs located in urban areas that are currently reliable but have a LOTTR of 1.4 or greater (and no improvements planned) were considered unreliable as well.



## TARGETS

The proposed targets are not intended to be “aspirational”, but rather reflect a “realistic” approach to understanding system reliability in an environment where available resources are less than optimal and various additional factors could affect travel such as the economy, trade policies, population growth, and land development patterns.

The proposed targets reflect a best estimate to account for major construction projects, anticipated traffic growth, data quality and availability, and other uncertainties.

<b>Performance Targets</b>		
	<b>2-year</b>	<b>4-year</b>
Percent of Person-Miles Traveled on the Interstate that are Reliable	91%	89%
Percent of Person-Miles Traveled on the non-Interstate NHS that are Reliable	-	90%

# Transit PERFORMANCE MEASURES



## ARKANSAS' TRANSIT ASSET MANAGEMENT (TAM) PERFORMANCE TARGETS

No 5310 recipients are required since they are all closed service.

Based on data provided, the initial targets established for the State TAM plan are as follows:

Equipment	Inventory/Class	Percent (%) met or exceeded FTA ULB (unknown at this time)	State TAM Plan initial TARGETS (% met or exceeded FTA ULB Benchmarks)
Non-revenue support-service and maintenance vehicles (exceeding \$50,000 at purchase)	Not much data in this asset class. I recommend we identify a target of 20% within the FTA ULB		
Rolling Stock* Revenue vehicles by mode	VN, AO, MV, SV (8 year ULB) CU, MB (10 year ULB) BU, RT, BR, Other rubber tire vehicles (14 year ULB)	Less than 20% for all targets	20% 20% 20%
Infrastructure Only rail fixed-guideway, track, signals and systems	Not Applicable	Not Applicable	Not Applicable
Facilities Maintenance and administrative facilities; and passenger stations (buildings) and parking facilities	Condition rating below a 3.0 based on FTA TERM Scale	Limited inventory (on-going collection)	20% with condition rating below 3.0 on FTA TERM Scale

\*Note: Any Rolling Stock that meets or exceeds ULB will be replaced within one (1) year contingent on Federal, State and Local funding.

# Transit Asset Management

## Final Rule Fact Sheet

The Moving Ahead for Progress in the 21<sup>st</sup> Century Act (MAP-21) required the Secretary to develop rules to establish a system to monitor and manage public transportation assets to improve safety and increase reliability and performance, and to establish performance measures, and the Fixing America's Surface Transportation (FAST) Act reaffirmed this requirement. On July 26, 2016, FTA published the Transit Asset Management (TAM) Final Rule. You may view the Final Rule at:

<https://federalregister.gov/a/2016-16883>



### State of Good Repair

The purpose of the Final Rule is to help achieve and maintain a state of good repair (SGR) for the nation's public transportation assets. Transit asset management is a business model that uses transit asset condition to guide the optimal prioritization of funding. Currently, there is an estimated \$85.9 billion transit SGR backlog.

The regulations apply to all Transit Providers that are recipients or subrecipients of Federal financial assistance under 49 U.S.C. Chapter 53 and own, operate, or manage transit capital assets used in the provision of public transportation.

### State of Good Repair

The condition in which a capital asset is able to operate at a full level of performance. A capital asset is in a state of good repair when that asset:

1. Is able to perform its designed function,
2. Does not pose a known unacceptable safety risk, and
3. Its lifecycle investments must have been met or recovered.

### TAM Plans

#### Tier I vs. Tier II Applicability

The Final Rule groups providers into two categories: Tier I and Tier II.

Tier I	Tier II
Operates rail	Subrecipient of 5311 funds
<b>OR</b>	<b>OR</b>
> 100 vehicles across all fixed-route modes	American Indian Tribe
<b>OR</b>	<b>OR</b>
> 100 vehicles in one non-fixed route mode	< 101 vehicles across all fixed route modes
	<b>OR</b>
	< 101 vehicles in one non-fixed route mode

#### TAM Plan Elements

The following graphic shows the TAM Plan elements that are required by each category of provider. Since Tier II providers generally operate less complex systems, their TAM Plan requirements are not as extensive.

Tier I & II

5. TAM and SGR Policy
6. Implementation Strategy
7. List of Key Annual Activities
8. Identification of Resources
9. Evaluation Plan

Tier I Only

## Assets Included in Plan

It is expected that all assets used in the provision of public transit will be included in the TAM Plan asset inventory. This includes (with the exception of equipment) assets that are owned by a third party or shared resources. The inventory must include all service vehicles, and any other owned equipment assets over \$50,000 in acquisition value. Agencies only need to include condition assessment for assets for which they have direct capital responsibility.

## Plan Responsibility

Tier I providers must develop and carry out their own TAM plans. Tier II providers may develop their own plans or participate in a Group Plan, which is compiled by a Group Plan Sponsor (generally the State DOT or designated §5310 recipient). Tier II §5307 sub-recipients are not required to be offered a group plan, but may participate in one if a Sponsor invites them. Each Transit Provider must designate an Accountable Executive to ensure that the necessary resources are available to carry out the TAM plan and the Transit Agency Safety Plan, regardless of whether it develops its own TAM Plan or participates in a Group Plan.

## Performance Management

Asset performance is measured by asset class, which means a subgroup of capital assets within an asset category. The following table shows the distinction between what assets must be included in asset inventories and the assets for which transit providers must measure performance.

<b>Assets:</b> <i>Only those for which agency has direct capital responsibility</i>	<b>Performance Measure</b>
<b>Equipment</b> Non-revenue support-service and maintenance vehicles	Percentage of vehicles met or exceeded Useful Life Benchmark
<b>Rolling Stock</b> Revenue vehicles by mode	Percentage of vehicles met or exceeded Useful Life Benchmark
<b>Infrastructure</b> Only rail fixed-guideway, track, signals and systems	Percentage of assets in a State of Good Repair
<b>Facilities</b> Maintenance and administrative facilities; and passenger stations (buildings) and parking facilities	Percentage of assets with condition rating below 3.0 on FTA TERM Scale

## Useful Life Benchmark

The expected lifecycle of a capital asset for a particular Transit Provider's operating environment, or the acceptable period of use in service for a particular Transit Provider's operating environment

## Target Setting

Targets should be set by each transit provider or TAM plan sponsor for each applicable asset class for the coming year. Initial targets must be set by January 1, 2017 and then every fiscal year thereafter. It is recognized that Transit Providers may not have complete data while setting initial targets. To the extent feasible, targets should be supported by data such as the most recent condition data and reasonable financial projections for the future, but the overall end goal is to be in a system-wide SGR.

## Timeframes/Reporting

### TAM Plans

A TAM plan must be updated in its entirety at least every 4 years, and it must cover a horizon period of at least 4 years. An initial TAM plan must be completed no later than 2 years after the Final Rule effective date.

### NTD

Each entity developing a TAM Plan will have to report annually to FTA's National Transit Database (NTD). This submission should include: (1) projected targets for the next fiscal year; (2) condition assessments and performance results; and (3) a narrative report on changes in transit system conditions and the progress toward achieving previous performance targets.



## Additional Information

Mshadoni Smith (Mshadoni.Smith@dot.gov)

**Final Rule Docket Number:** FTA-2016-16883

<https://www.transit.dot.gov/TAM>

July 2016

## Default Useful Life Benchmark (ULB) Cheat Sheet

Source: 2017 Asset Inventory Module Reporting Manual, Page 53

Transit Agencies will report the age of all vehicles to the National Transit Database. FTA will track the performance of revenue vehicles (Rolling Stock) and service vehicles (Equipment), by asset class, by calculating the percentage of vehicles that have met or exceeded the useful life benchmark (ULB).

FTA has set a default ULB as the expected service years for each vehicle class in the table below. ULB is the average age-based equivalent of a 2.5 rating on the FTA Transit Economic Requirements Model (TERM) scale. Transit agencies can adjust their Useful Life Benchmarks with approval from FTA.

Vehicle Type		Default ULB (in years)
AB	Articulated bus	14
AG	Automated guideway vehicle	31
AO	Automobile	8
BR	Over-the-road bus	14
BU	Bus	14
CC	Cable car	112
CU	Cutaway bus	10
DB	Double decked bus	14
FB	Ferryboat	42
HR	Heavy rail passenger car	31
IP	Inclined plane vehicle	56
LR	Light rail vehicle	31
MB	Minibus	10
MO	Monorail vehicle	31
MV	Minivan	8
	Other rubber tire vehicles	14
RL	Commuter rail locomotive	39
RP	Commuter rail passenger coach	39
RS	Commuter rail self-propelled passenger car	39
RT	Rubber-tired vintage trolley	14
SB	School bus	14
	Steel wheel vehicles	25
SR	Streetcar	31
SV	Sport utility vehicle	8
TB	Trolleybus	13
TR	Aerial tramway	12
VN	Van	8
VT	Vintage trolley	58

# MTP 2040 Amendment # 3

JOB	COUNTY	ROUTE	TERMINI	LENGTH	TYPE WORK	ESTIMATED COST Funding Breakdown (in thousands)	AGENCY CARRYING OUT THE PROJECT	FFY	MPO
06X006	Garland	192	Little Glazypeau Creek Strs. & Apprs.	-	Strs. & Apprs.	400 - TOTAL 320 - NHPP 80 - State	State	2021	HSATS

In lieu of listing all of the Statewide Generic Jobs separately, the following statement will be applied: *The MTP is amended to include all statewide generic projects including but not limited to Various Transit Projects; IRP Debt Service; Various Project Development Activities; Various Roadway System Preservation Projects; Various Bridge Preservation, Rehabilitation and Replacement Projects; Various Safety Improvement Projects; Various Signal and Intersection Improvement Projects; Various Transportation Alternative Program Projects; and other Programs, Services and Activities.*



Pursuant to Federal regulations, the Tri-Lakes Metropolitan Planning Organization (MPO) is responsible for conducting a continuous, comprehensive and cooperative planning process with the Arkansas Department of Transportation (ARDOT), Intracity Transit, local government agencies, and other planning partners in the Hot Springs Metropolitan Planning Area (MPA). As such, the Tri-Lakes MPO is charged with the responsibility of developing and updating the Metropolitan Transportation Plan (MTP) and the Transportation Improvement Program (TIP), which are the MPO's long-range and short-range transportation plans, respectively.

Therefore, Tri-Lakes MPO invites the public to review and submit comments on the MTP Amendment # 3 and the Transportation Improvement Program (TIP) update. The MTP amendment pertains to adding a new project to the 2040 MTP; while the TIP update pertains to adding and updating various projects for the 2019-2022 Federal Fiscal Years.

The public comment period for both items is from **Saturday, June 30, 2018**, through close of business day on **Friday, July 13, 2018**. All comments must be postmarked no later than Friday, July 13, 2018.

Copies of the 2040 MTP Amendment # 3 and the 2019-2022 TIP will be available throughout the public comment period at the following locations; Garland County Court House; City of Hot Springs Public Information Office; Intracity Transit; City of Mountain Pine; Town of Fountain Lake; Hot Springs Village POA Office; Hot Spring County; City of Malvern; Greater Hot Springs Chamber of Commerce; Hot Springs National Park; Garland County Public Library; and the MPO Office & Website <http://wcapdd.org/index.php/hot-springs-area-mpo>

All comments/questions regarding the MTP & TIP should be submitted in writing to:

Tri Lakes MPO  
1000 Central Avenue  
P.O. Box 6409  
Hot Springs, AR 71902  
Email: [trilakesmpo@wcapdd.org](mailto:trilakesmpo@wcapdd.org)

**To date, no public comments have been received.**

## Resolution 2018-04

### 2040 Metropolitan Transportation Plan: Amendment #3 (FFY 2019-2022 TIP)

**WHEREAS**, pursuant to 23 CFR §450.324, the metropolitan transportation planning process shall include the development of a transportation plan addressing no less than a 20-year planning horizon as of the effective date. In attainment areas, the effective date of the transportation plan shall be its date of adoption by the MPO; and

**WHEREAS**, the transportation plan shall include existing and proposed transportation facilities (including major roadways, public transportation facilities, intercity bus facilities, multimodal and intermodal facilities, nonmotorized transportation facilities (e.g., pedestrian walkways and bicycle facilities), and intermodal connectors) that should function as an integrated metropolitan transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan; to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand; and

**WHEREAS**, the MTP shall include a description of the performance measures and targets used in assessing the performance of the transportation system in accordance with 23 CFR §450.306(d); and

**WHEREAS**, the MTP shall include a system performance report and subsequent updates evaluating the condition and performance of the transportation system with respect to the performance targets described in 23 CFR §450.306(d); and

**WHEREAS**, the MTP shall include a financial plan that demonstrates how the adopted transportation plan can be implemented; and

**WHEREAS**, the MPO shall review and update the transportation plan at least every 5 years in attainment areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period to at least a 20-year planning horizon; and

**WHEREAS**, the MPO may revise the transportation plan at any time using the procedures in this 23 CFR §450.324 Development and content of the metropolitan transportation plan; without a requirement to extend the horizon year. The MPO shall approve the transportation plan (and any revisions) and submit it for information purposes to ARDOT. Copies of any updated or revised transportation plans must be provided to the FHWA and the FTA; and

**WHEREAS**, until the MPO approves the updated metropolitan transportation plan, the MPO may not amend the TIP.

**NOW, THEREFORE, BE IT RESOLVED**, that the Policy Board of the Tri-Lakes MPO hereby adopts the 2040 Metropolitan Transportation Plan: Amendment #3 (FFY 2019-2022 TIP) on this 19th day of July 2018.

Approve: Tom Weiss  
Policy Board Chairman  
July 19, 2018  
Signature:



Attest: Emmily Tiampati  
MPO Director  
July 19, 2018  
Signature:

