Proposed Amendments to the 2045 Metropolitan Transportation Plan (MTP)

The Pine Bluff Area Transportation Study Metropolitan Transportation Plan (MTP))was adopted in September 0f 2020. The MTP must be consistent with the current Transportation Improvement Program and any projects included in the Draft 2021-2024.

The following widening and system preservation projects are included in the Draft 2021-2024 TIP and require an amendment adding them to the **Financially Constrained Roadway Projects section** of the MTP:

- 020661 I-530 – Selected Locations   Access Impvts.
- 020716 Hwy 65 – I-530 to Hwy 425   Minor widening
- 012359 Hwys 18, 63, & 167 - (selected sections)   System Preservation
- 02X041 Hwy 54 - Hwy 79 to Nevins Creek   System Preservation
- 020702 Hwys 63 & 65B – I-530 to I-530 Pine Bluff (S)   System Preservation
- 020071 Hwys 79 & 79B – Couch St. to Burnett St.   System Preservation
- 02X119 Hwy 256 – I-530 to Baldwin Rd   System Preservation
- 02X143 Hwy 270 – Hurricane Creek to 104   System Preservation
- 020696 Hwy 463 – Main Street to I-530   System Preservation

Amend the Visionary Roadway Capacity Projects to include the findings of the Pine Bluff Arsenal Compatible Use Study. The recent Pine Bluff Arsenal Compatible Use study identified issues with the transportation infrastructure from I-530 to the Arsenal gate. The 2021-2024 Transportation Improvement Program includes funding for system preservation; however, the recent Pentagon funded Compatible Use study recommended upgrades in the following areas: 1) enhanced access from I-530 to Plainview gate to widen from 2 to three lanes and replacement of the bridge over Caney Bayou, 2) relocation of Bridge 2280 prior to the Plainview gate entrance to accommodate commercial vehicles plus additional transportation improvement measures. Appendix A includes a letter requesting inclusion in the Long-Range Transportation Plan or MTP as well as supporting documentation.

In addition, the Draft TIP includes estimated project cost totals that differ from the 2045 MTP. The projects affected include:

Project Number	Hwy	Termini	2045 MTP Amt.	2021-2024 TIP Amt.
20588	190	11th - Harding	1,700,000	2,300,000
20626	270/365	Hwy 104-365	15,000,000	22,100,000
20615	79	PB - South	5,500,000	12,000,000
20628	190	I-53o-Hwy 79B	3,500,000	5,600,000

- The MTP amendment will change the MTP amounts to the 2021-2024 TIP amount.

In addition to the project changes, the MTP is required by federal statute to document Performance Measures and their respective targets. The PBATS Policy Board has chosen to adopt the State targets for Safety (PM #1), Pavement and Bridge Condition (PM #2) and Travel Time Reliability (PM #3); therefore, the MTP must be amended to include these performance measures.

The following table shows the amended projects. Those highlighted in blue are projects needing addition to the MTP. Projects where cost amounts changed are indicated in orange.

2021-2024 PBATS TIP

JOB	COUNTY	ROUTE	TERMINI	LENGTH	TYPE WORK	ESTIMATED COST COST FUNDING BREAKDOWN (IN THOUSANDS)	AGENCY CARRYING OUT THE PROJECT	FFY	MPO
020661	Jefferson	I-530	I-530 Access Impvts.	NA	Project Dev	5,000 - Total 4,000 - NHPP 1,000 - State	**State**	2021	PBATS
020716	Jefferson	65	I-530-425	2.5	Minor Widening	2,400 - Total 1,920 - NHPP 480 - State	State	2023	PBATS
012359	Jefferson	18, 63 & 167	Hwys 18, 63, 167 Sel. Sec	34.76	Sys. Preserv	4,500 - Total 3,120 - NHPP 480 - STBGP 900 - State	State	TBD	PBATS
02X041	Jefferson	54	Hwy 79 - Nevins Creek	1.21	Sys. Preserv	400 - Total 320 - STBGP 80 - State	State	TBD	PBATS
020702	Jefferson	63 & 65B	I-530 - I-530 Pine Bluff	9.52	Sys. Preserv	7,000 - Total 5,680 - NHPP 1,420 - State	State	TBD	PBATS
020701	Jefferson	79 & 79B	Couch Ln - Burnett St	3.14	Sys. Preserv	2,300 - Total 1,840 - NHPP 460 - State	State	TBD	PBATS
02X119	Jefferson	256	I-530 - Baldwin Rd	2.29	Sys. Preserv	500 - Total 400 - NHPP 100 - State	State	TBD	PBATS
02X143	Jefferson Grant	270	Hurricane Cr - Hwy 104	5.47	Sys. Preserv	1,300 - Total 1,040 - NHPP 260 - State		TBD	PBATS
020696	Jefferson	463	S. Main - I-530	2.87	Sys. Preserv	2,300 - Total 1,840 - STBGP 460 - State	State	TBD	PBATS

The following pages provide details regarding the Performance Measures and the Target Setting process.

Concur: *Lorie H. Tudor*

Date: 6/30/2020

TARGET SETTING FOR 2021
SAFETY
PERFORMANCE MEASURES

ArDOT
ARKANSAS DEPARTMENT
OF TRANSPORTATION

In accordance with 23 CFR 490.207, the national performance measures for State Departments of Transportation (DOTs) to use in managing the Highway Safety Improvement Program (HSIP) for all public roads are shown below.

Performance Measures
Number of Fatalities
Rate of Fatalities (per 100 million vehicle miles traveled)
Number of Serious Injuries
Rate of Serious Injuries (per 100 million vehicle miles traveled)
Number of Non-Motorized Fatalities and Serious Injuries

DATA SOURCES

Fatality Data: Fatality Analysis Reporting System (FARS).

Serious Injury Data: State motor vehicle crash database. Updated definition for "Suspected Serious Injury (A)" from the *Model Minimum Uniform Crash Criteria* (MMUCC) 4th edition was adopted by Arkansas State Police January 1, 2018.

Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries: FARS and State motor vehicle crash database. Fatalities with attribution codes for pedestrian, bicyclist, other cyclist, and person on personal conveyance are included. Serious injuries are associated with pedestrians or pedalcyclists as defined in *American National Standard Manual on Classification of Motor Vehicle Traffic Accidents* (ANSI D16.1-2007).

Volume Data: State Vehicle Miles Traveled (VMT) data is derived from the Federal Highway Administration (FHWA) and the Arkansas Department of Transportation (ArDOT).

TARGET SETTING REQUIREMENTS

State DOTs:

- Must establish targets for all public roads.
- Must establish statewide annual targets by June 30th of each year and report targets by August 31st of each year in the HSIP Report.
- State DOTs shall coordinate with the State Highway Safety Office to set identical targets on three common performance measures (Number of Fatalities, Rate of Fatalities, and Number of Serious Injuries).
- State DOTs shall coordinate with Metropolitan Planning Organizations (MPOs) when establishing targets, to the maximum extent practicable.

Metropolitan Planning Organizations (MPOs):

- Shall support the relevant State DOT annual 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.

METHODOLOGY

Through extensive coordination with the Arkansas Highway Safety Office, FHWA, the National Highway Traffic Safety Administration (NHTSA), all MPOs, and other stakeholders, a methodology to determine the targets was finalized in 2017.

Description of Methodology

The target setting method, similar to previous years, is generally described below:

1. Calculate moving averages for the last five years. A moving average "smooths" the variation from year to year. For this target setting, the moving average was calculated for the last five years (2010-2014, 2011-2015, 2012-2016, 2013-2017, and 2014-2018).
2. Calculate the average of these five data points.
3. Consider external factors to account for uncertainties. Past safety performance alone is not necessarily the best indicator of future performance, given numerous external factors outside of ArDOT's control. For instance, to account for the fact that 2019 crash data is incomplete, an adjustment factor may be considered to account for the uncertainty of what the final numbers will be, rather than attempting to predict exact numbers.
4. Apply any adjustment factors as needed based on Step 3 to the averages calculated in Step 2 to determine targets.

Step One: Calculate Moving Averages

Calculate the moving average for each of the performance measures for the last five years, as shown in Table 1.

Step Two: Calculate the Average

The average of the five data points for each of the performance measures is then calculated, as shown in Table 2.

Table 1 – Calculation of Moving Averages

Data						Moving Averages					
Year	Number of Fatalities	Rate of Fatalities	Number of Serious Injuries**	Rate of Serious Injuries	Number of Non-Motorized Fatalities and Serious Injuries	Years	Number of Fatalities	Rate of Fatalities	Number of Serious Injuries	Rate of Serious Injuries	Number of Non-Motorized Fatalities and Serious Injuries
2010	571	1.704	3,331	9.942	138						
2011	551	1.672	3,239	9.829	149						
2012	560	1.671	3,226	9.624	147						
2013	498	1.487	3,066	9.154	149						
2014	470	1.381	3,154	9.270	141	2010-2014	530.0	1.583	3,203.2	9.564	144.8
2015	550	1.576	2,888	8.276	112	2011-2015	525.8	1.557	3,114.6	9.231	139.6
2016	561	1.569	3,032	8.480	154	2012-2016	527.8	1.537	3,073.2	8.961	140.6
2017	525	1.443	2,816	7.739	189	2013-2017	520.8	1.491	2,991.2	8.584	149.0
2018	516	1.407	2,272	6.195	205	2014-2018	524.4	1.475	2,832.4	7.992	160.2

Notes:

2017 Fatalities are from FARS Final

2018 Fatalities are from FARS Annual Report File (Not Final)

Table 2 – Calculation of the Averages

Performance Measure	2010-2014	2011-2015	2012-2016	2013-2017	2014-2018	Average
Number of Fatalities	530.0	525.8	527.8	520.8	524.4	525.8
Rate of Fatalities	1.583	1.557	1.537	1.491	1.475	1.529
Number of Serious Injuries	3,203.2	3,114.6	3,073.2	2,991.2	2,832.4	3,042.9
Rate of Serious Injuries	9.564	9.231	8.961	8.584	7.992	8.866
Number of Non-Motorized Fatalities and Serious Injuries	144.8	139.6	140.6	149.0	160.2	146.8

Step Three: Consider External Factors

As shown below, a number of external factors that may have an impact on safety performance were identified through coordination with safety stakeholders mentioned on page 2.

Legalization of medical marijuana in Arkansas, and increase of opioid use
There is considerable uncertainty regarding the impact of medical marijuana and opioid use on highway safety. Although it is widely recognized that there is some level of impact, there are no studies that can definitively state the expected increase in crashes due to these factors.

Speed limit increase on rural freeways in Arkansas in 2020
State Act 784 of 2019 increases the maximum allowable speed limit for motor vehicles on rural freeways to 75 miles per hour (mph) effective July 1, 2020.

Continued increase in vehicle miles traveled in Arkansas
The vehicle miles traveled (VMT) in Arkansas has continued to increase in recent years as a result of continued population increase and an improving economy. Generally, the greater the VMT, the greater the risk of crashes. As shown in Figure 1, the VMT in Arkansas has increased in the last five years data, from 34,897 million VMT in 2015 to 37,109 million VMT in 2019. This is an increase of around six percent over the five-year period, or an average annual growth rate of 1.75%.

**Figure 1 – Vehicle Miles Traveled (VMT) in Arkansas**
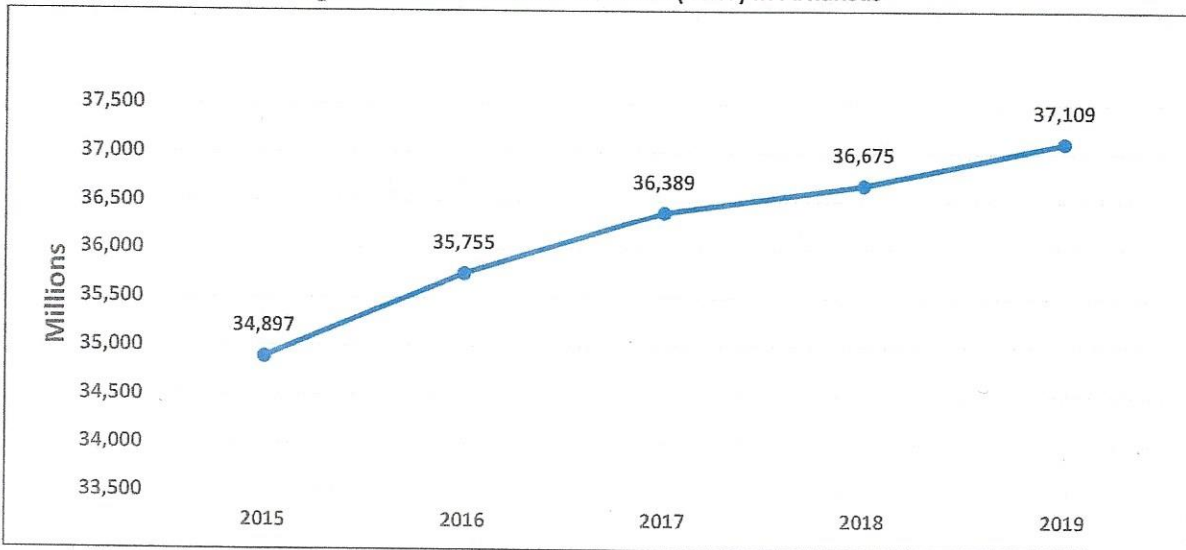
Data Source: FHWA and ArDOT

Continued transition to eCrash system

The eCrash system has made crash reporting more timely and consistent. Since first implemented by Arkansas State Police in 2015, law enforcement agencies throughout Arkansas have been transitioning to the eCrash system. To date, 60 percent of all law enforcement agencies now use eCrash as shown in Figure 2. However, several large jurisdictions such as Fayetteville, North Little Rock, and Hot Springs have yet to make the transition.

Figure 2 – eCrash Use in Arkansas
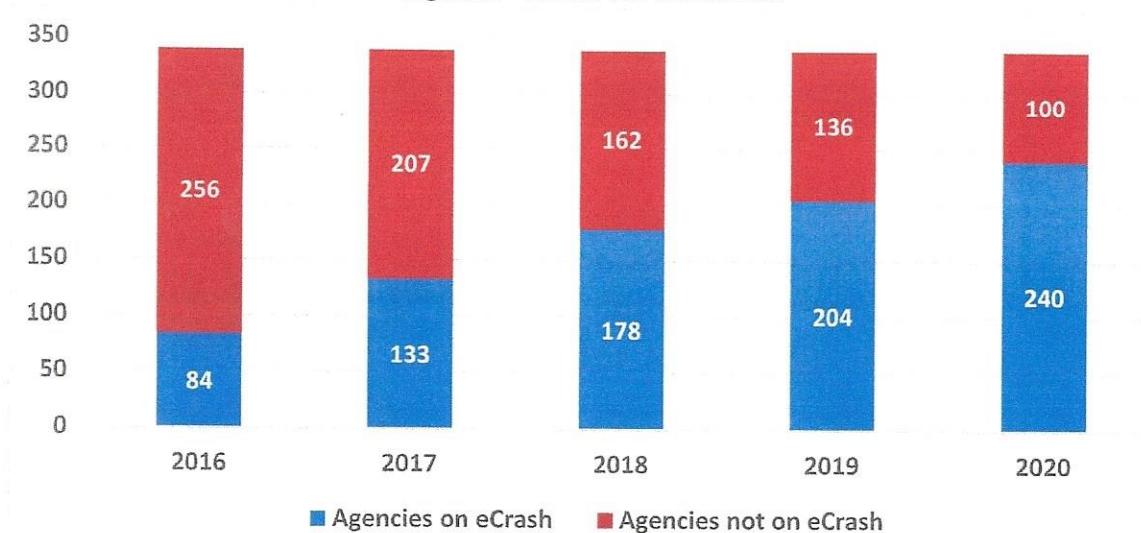
There is uncertainty regarding data quality, primarily regarding serious injuries. Although Arkansas State Police has an official definition of suspected serious injuries, it has been noted in the past that the definition was not applied consistently. Until all law enforcement agencies begin using eCrash, and proper

5

training on the definition is conducted, there will continue to be much uncertainty regarding data accuracy.

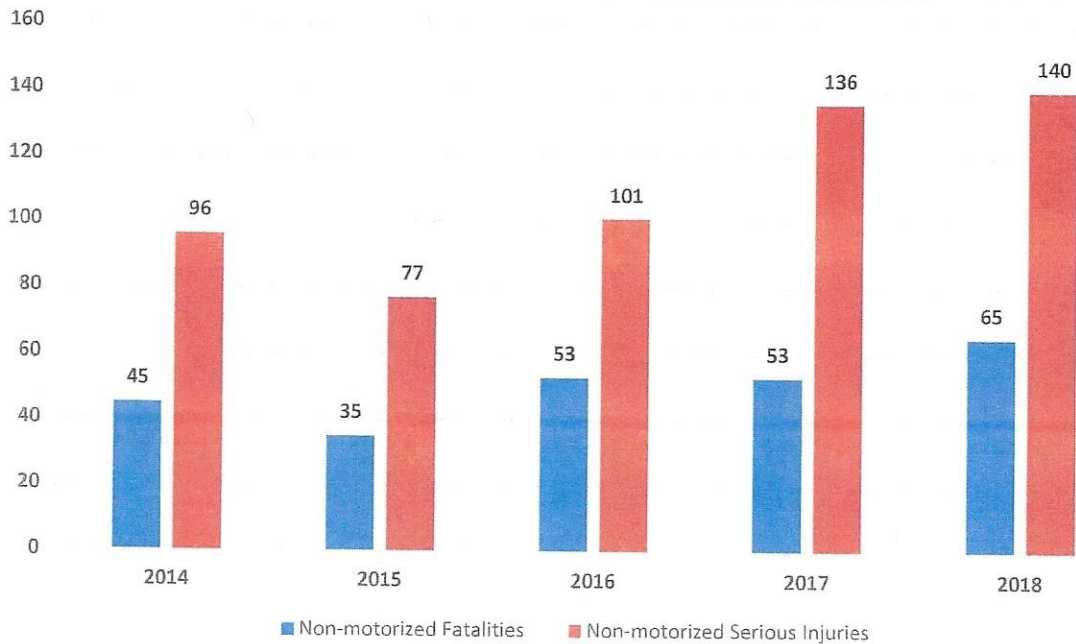*Uncertainty of 2018 crash data*

Agencies that are not using eCrash are using old paper forms or a separate electronic crash reporting system. Due to issues related to crash data entry at Arkansas State Police, a significant number of crash reports for 2018 were not entered into the eCrash system. As shown in Figure 3, although the number of crash reports submitted via eCrash continues to increase, the number of total crashes reported also continues to increase, except for 2018. As noted, the crash data entry issue is impacting the true number of crashes in Arkansas for 2018.

Figure 3 – Number of Crash Reports in Database
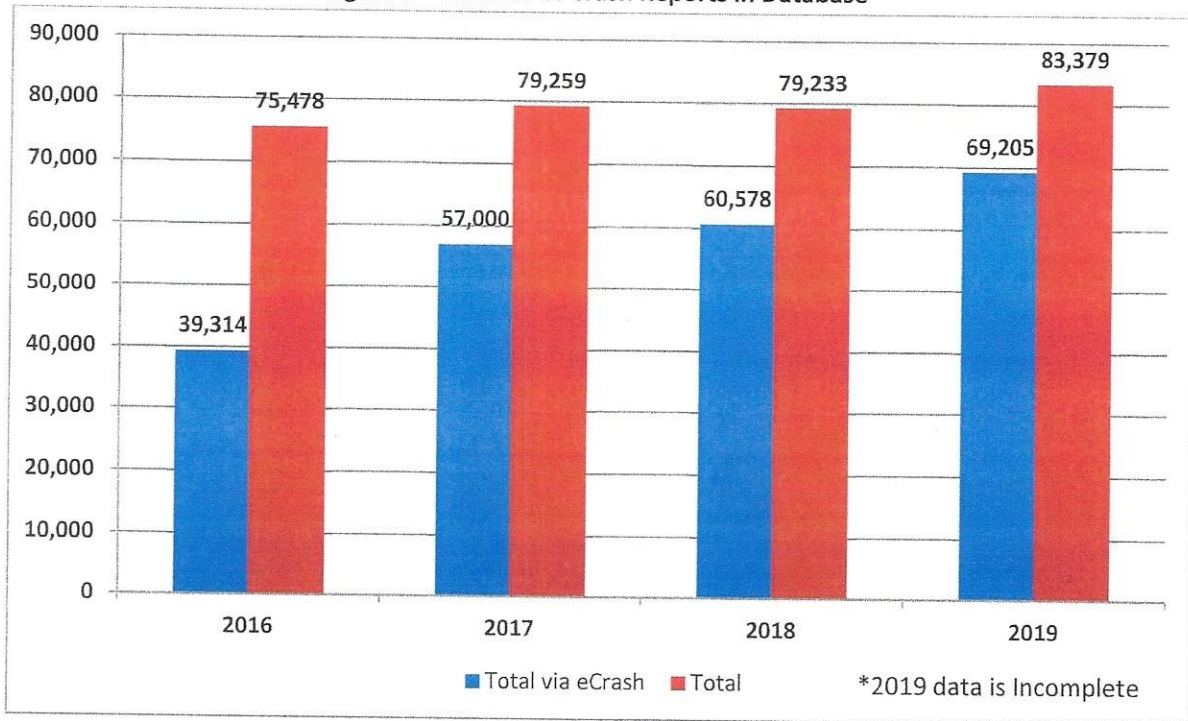
Although the crash data entry has less impact on fatalities due to the separate tracking system at Arkansas State Police, it has greater impact on non-motorized crashes. As shown in Figure 4, the number of non-motorized fatalities and serious injuries can vary significantly. Because there are a number of agencies in large urban areas not using eCrash, the number of non-motorized crashes could increase in the future if those agencies begin using eCrash. The variability of the Number of Non-Motorized Fatalities and Serious Injuries performance measure compared to other safety performance measures is illustrated in Attachment A. As shown in this attachment, the coefficient of variation for this performance measure is at 21 percent, which is significantly higher than the other performance measures ranging from 6 to 13 percent.

Figure 4 – Number of Non-Motorized Fatalities & Serious Injuries

Figure 4 – Number of Non-Motorized Fatalities & Serious Injuries

Legend: ■ Non-motorized Fatalities ■ Non-motorized Serious Injuries

Year	Non-motorized Fatalities	Non-motorized Serious Injuries
2014	45	96
2015	35	77
2016	53	101
2017	53	136
2018	65	140

Step Four: Apply Adjustment Factors

The various external factors mentioned under Step Three could impact Arkansas' safety performance. However, there is little to no research to justify the application of specific adjustment factors to account for external factors such as medical marijuana for instance. With that said, in consultation with other safety stakeholders, it is determined that a two percent adjustment factor can be justifiably applied to: Number of Fatalities, Rate of Fatalities, Number of Serious Injuries, and Rate of Serious Injuries.

This adjustment factor is based on the recent VMT trend in Arkansas since it has been increasing consistently in recent years and expected to continue into the near future.

It is recommended that a higher adjustment factor is applied to the Number of Non-Motorized Fatalities and Serious Injuries performance measure. Also, the known number of non-motorized fatalities and serious injuries has already increased in 2018 compared to previous years, as shown in Figure 4. Therefore, it is determined that approximately half of last year's adjustment factor of 110 percent i.e. 50 percent can be applied to the Number of Non-Motorized Fatalities and Serious Injuries performance measure.

TARGETS

Based on the methodology described, targets for each of the five performance measures is shown below in Table 3.

<div align="center">Table 3 – 2021 Performance Targets</div>

Performance Measure	Average[1]	Adjustment Factor[2]	Target
Number of Fatalities	525.8	+2%	536.3
Rate of Fatalities	1.529	+2%	1.560
Number of Serious Injuries	3,042.9	+2%	3,103.8
Rate of Serious Injuries	8.866	+2%	9.043
Number of Non-Motorized Fatalities and Serious Injuries	146.8	+50%	220.3

[1] See Table 2
[2] Description of justification found on page 7

To gauge how these averages, adjustments, and targets compare to last year's targets, see Table 4.

<div align="center">Table 4 – Comparison of 2020 & 2021 Performance Targets</div>

Performance Measure	2020			2021		
	Average	Adjust.	Target	Average[1]	Adjust.	Target
Number of Fatalities	530.6	+2%	541.2	525.8	+2%	536.3
Rate of Fatalities	1.564	+2%	1.595	1.529	+2%	1.560
Number of Serious Injuries	3,138.6	+2%	3,201.4	3,042.9	+2%	3,103.8
Rate of Serious Injuries	9.256	+2%	9.441	8.886	+2%	9.043
Number of Non-Motorized Fatalities and Serious Injuries	143.0	+110%	300.3	146.8	+50%	220.3

[1] See Table 2

FHWA ASSESSMENT OF 2019 PERFORMANCE TARGETS

FHWA will conduct an assessment to determine whether states have met or made significant progress toward meeting their previous year's targets in December of each year. For 2019, the assessment will be made in December of 2020 by comparing the actual 2015-2019 performance to the 2019 targets and the 2013-2017 baseline performance. At least four of the five targets must either meet (i.e., equal to or less than the target) or be better than the baseline performance to make significant progress. This means that states have two chances to "pass" the test for each performance measure. In some cases, a state may not be better than the baseline performance for any given measure, but may meet the target they set. In such cases, the state would "pass" the test for that measure.

As shown in Table 5, it is predicted that ARDOT will meet all of the targets except the Number of Non-motorized Fatalities and Serious Injuries. Therefore, FHWA will consider ARDOT as having "made significant progress" and thus avoid the penalty associated with safety performance.

Table 5 – 2019 Performance Assessment

Performance Measure	2015-2019 Average	2019 Targets	2013-2017 Baseline	Meets Target?	Better than Baseline?	Met or Made Significant Progress?
Number of Fatalities	531.6[1]	543.0	520.8	Yes	No	YES (4 out of 5 targets met or made significant progress)
Rate of Fatalities	1.472[1]	1.615	1.491	Yes	Yes	
Number of Serious Injuries	2656.0[2]	3,637.0	2,991.2	Yes	Yes	
Rate of Serious Injuries	7.377[2]	10.824	8.584	Yes	Yes	
Number of Non-Motorized Fatalities and Serious Injuries	173.0[2]	170.0	149.0	No	No	

Notes:

[1]Value is based on the actual FARS fatality numbers for 2015, 2016 and 2017, preliminary FARS numbers for 2018 and NSC number for 2019.
Example: Number of Fatalities = (550+561+525+516+506)/5=531.6

[2]Value is based on the actual serious injury numbers for 2015-2018, and an assumed number for 2019.

If FHWA determines that a state has not "made significant progress" toward meeting its safety targets, the penalty as set forth in 23 USC 148(i) is as follows:

- Use obligation authority equal to the HSIP apportionment for the year prior to the target year, only for HSIP projects.
- Submit an HSIP Implementation Plan that describes actions the state will take to meet or make significant progress toward meeting its targets.

ATTACHMENT A

Data Variability Analysis

Number of Fatalities

Year	Value		Statistic	Value
2014	470		Mean	524.4
2015	550		Standard Deviation	32
2016	561		Coefficient of Variation	6%
2017	525			
2018	516			

Rate of Fatalities

Year	Value		Statistic	Value
2014	1.381		Mean	1.475
2015	1.576		Standard Deviation	0.082
2016	1.569		Coefficient of Variation	6%
2017	1.443			
2018	1.407			

Number of Serious Injuries

Year	Value		Statistic	Value
2014	3,154		Mean	2832.4
2015	2,888		Standard Deviation	304
2016	3,032		Coefficient of Variation	11%
2017	2,816			
2018	2,272			

Rate of Serious Injuries

Year	Value		Statistic	Value
2014	9.270		Mean	7.992
2015	8.276		Standard Deviation	1
2016	8.480		Coefficient of Variation	13%
2017	7.739			
2018	6.195			

Number of Non-Motorized Fatalities and Serious Injuries

Year	Value		Statistic	Value
2014	141		Mean	160.2
2015	112		Standard Deviation	33
2016	154		Coefficient of Variation	21%
2017	189			
2018	205			

Coefficient of Variation is a statistical measure of the dispersion of data around the mean. It is a useful statistic for comparing the degree of variation from one data set to another, even if the means are drastically different from one another.

ATTACHMENT B

HSIP 2021 Target – Number of Fatalities

Legend:
- Rolling Average
- Overall Average
- Target Value

Y-axis: 5-Year Rolling Average - Fatalities (510 to 540)

Data:
- 2010-2014: 530
- 2011-2015: 526
- 2012-2016: 528
- 2013-2017: 521
- 2014-2018: 524

Target Value: 536.3
Overall Average: 525.8
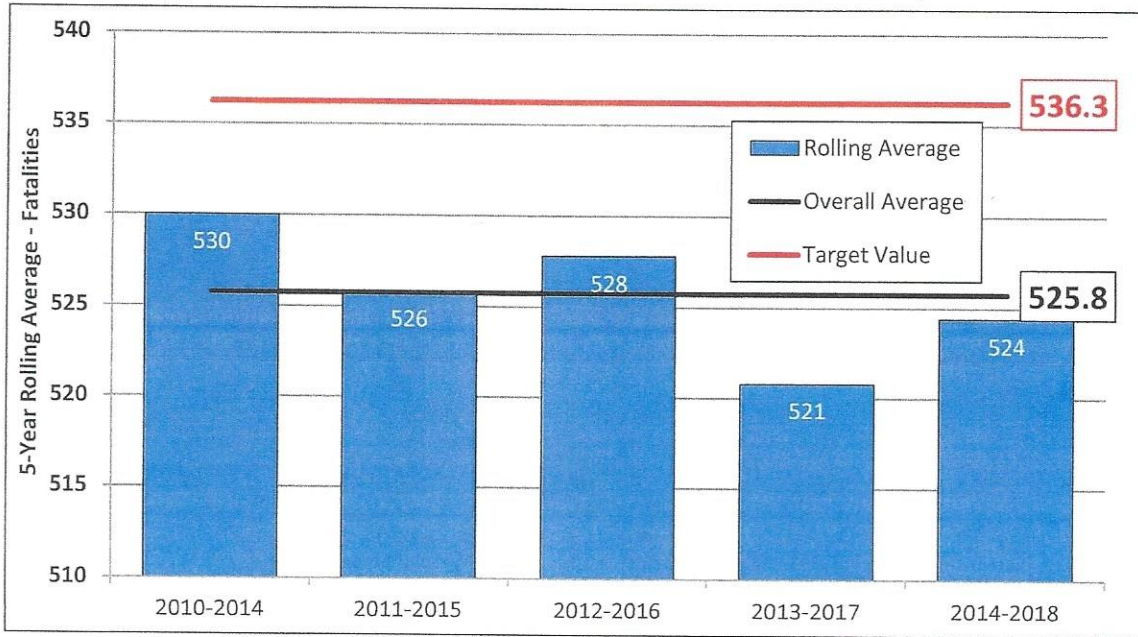
HSIP 2021 Target – Fatality Rate

Legend:
- Rolling Average
- Overall Average
- Target Value

Y-axis: 5-Year Rolling Average - Fatality Rate (1.42 to 1.60)

X-axis: 2010-2014, 2011-2015, 2012-2016, 2013-2017, 2014-2018

Target Value: 1.560
Overall Average: 1.529
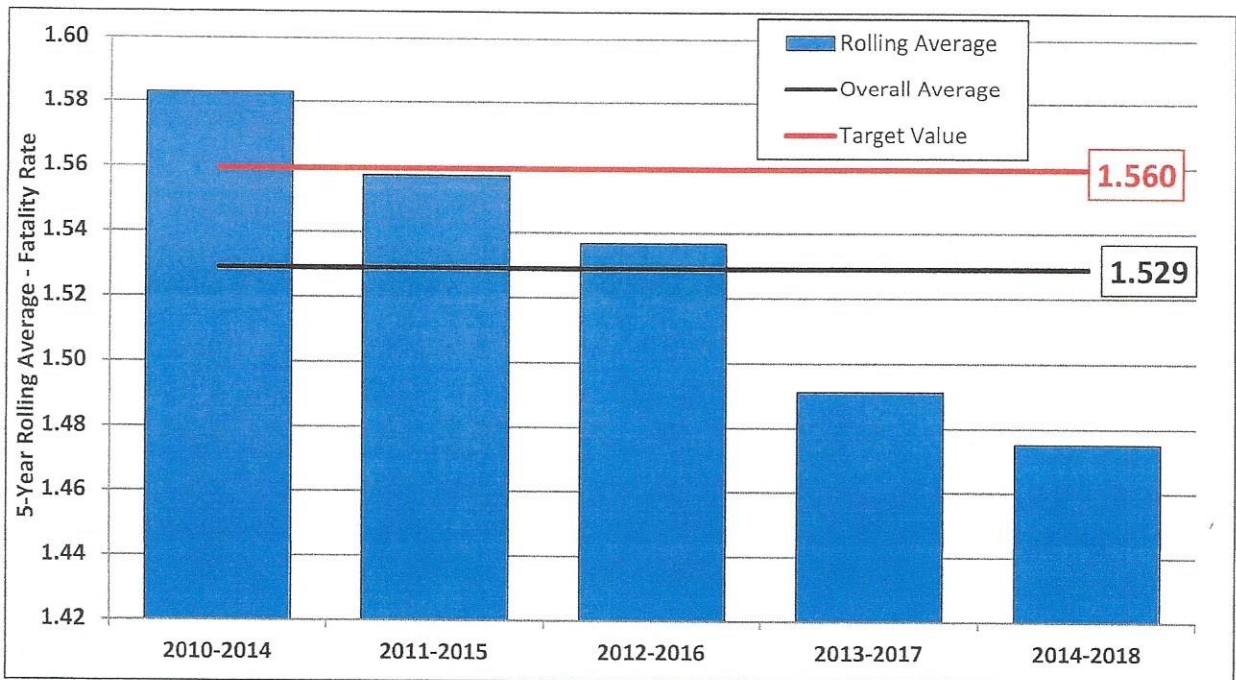
HSIP 2021 Target – Number of Serious Injuries
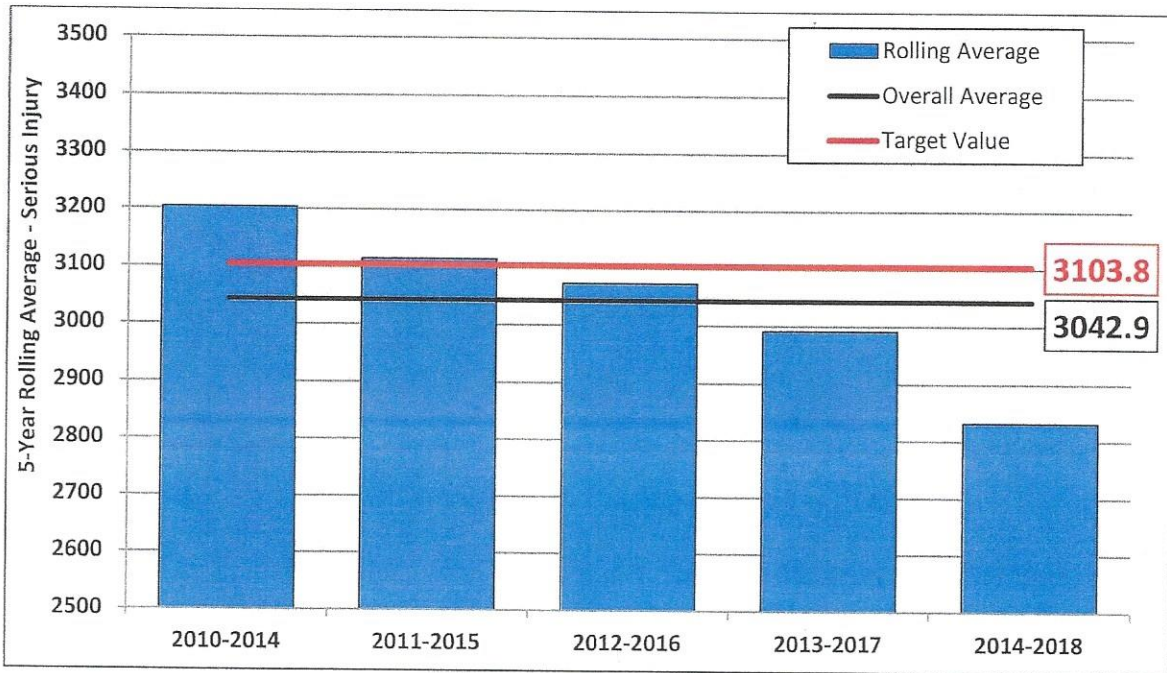
HSIP 2021 Target – Serious Injury Rate
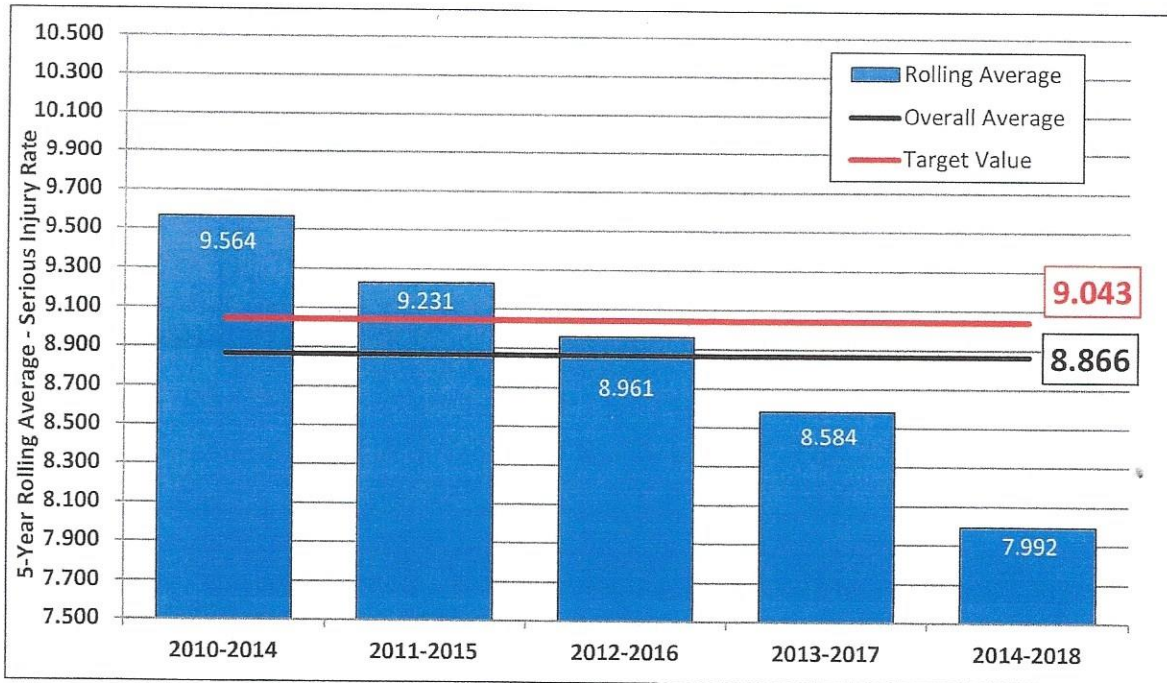
HSIP 2021 Target - Number of Non-Motorized Fatalities and Serious Injuries
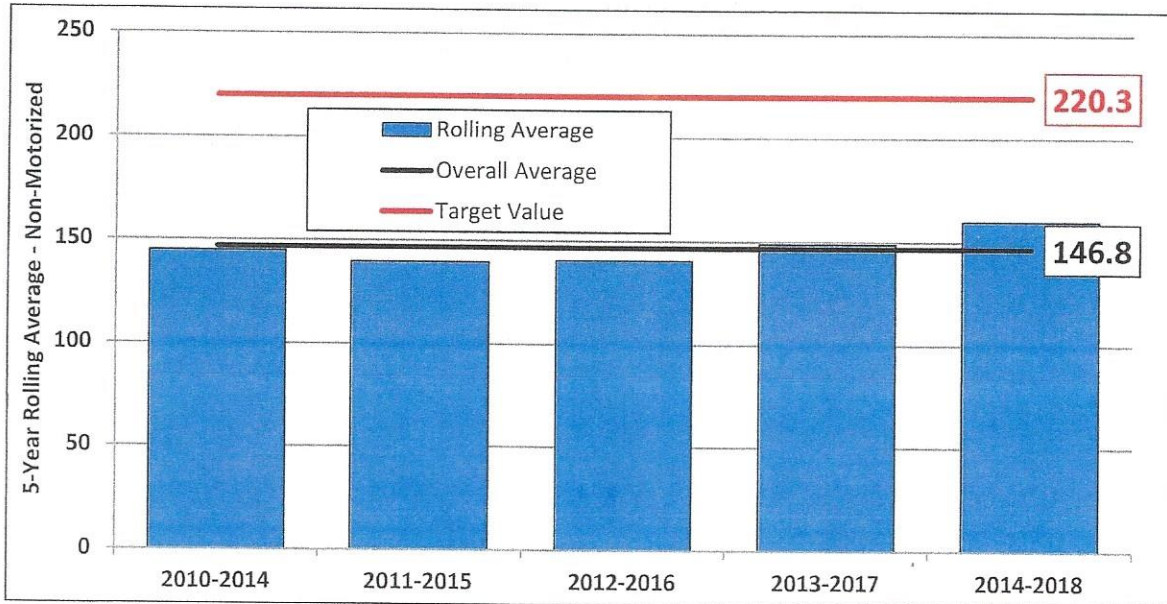
Mid-Performance Report

OVERVIEW
PERFORMANCE MEASURES

In July 2012, Congress passed the Moving Ahead for Progress in the 21st Century Act (MAP-21) and created a performance-based surface transportation program. The Fixing America's Surface Transportation Act (FAST Act), signed into law in December 2015, continued and refined those efforts. MAP-21 and FAST Act integrated performance into many Federal surface transportation programs.

In January 2017, The Federal Highway Administration (FHWA) published in the Federal Register (82 FR 5970) two final rules, Performance Measure Rules No. 2 and No. 3 (PM2 & PM3). PM2 established performance measures to assess the condition of bridges and pavements on the National Highway System (NHS). PM3 set performance measures for State Departments of Transportation (DOTs) to use to report on the performance of the Interstate and non-Interstate NHS to carry out the National Highway Performance Program (NHPP); freight movement on the Interstate system to carry out the National Highway Freight Program (NHFP); and traffic congestion and on-road mobile source emissions to carry out the Congestion Mitigation and Air Quality Improvement (CMAQ) Program. PM2 and PM3 became effective on May 20, 2017.

PERFORMANCE MANAGEMENT FORM (PMF)

The federal rules require recurring four-year performance periods (Figure 1) for which two and four-year targets need to be established. The PMF is how these targets and supporting documentation are reported to meet the reporting requirements of 23 U.S.C. 150 and 23 CFR part 490. This Mid-Performance Report will provide the bases of filling out the PMF.

The first performance period takes place from January 1, 2018 to December 31, 2022. There are a total of three progress reports due for each performance period:

- Baseline Performance Report (submitted October 1, 2018)

- Mid-Performance Period Progress Report (October 1, 2020)

- Full Performance Period Progress Report (October 1, 2022)

FHWA is charged with determining the headway on each Progress Report. Significant progress is defined as achieving a condition that is equal to or better than the target, or better than the baseline condition. If significant progress is not attained, ArDOT must document how it plans to achieve it for the next report or explain the need to adjust the target.

In the 2018 Baseline Performance Report, 2-year and 4-year targets were set for all PM2 and PM3 measures. Now, in 2020, the current conditions are compared with the 2-year targets set in 2018. Four-year targets may be adjusted to address any gap between the predicted and the current state.
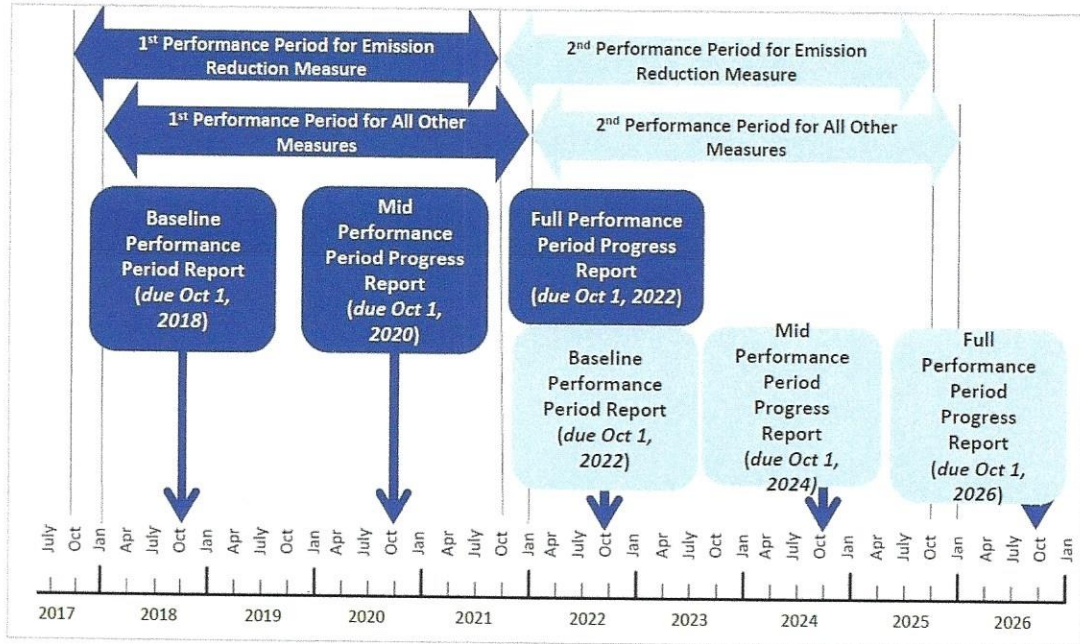
Figure 1. Performance Period and State DOT Biennial Performance Reporting (FHWA)

TARGET SETTING REQUIREMENTS

State DOTs:

- Must establish statewide 2-year 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 Metropolitan Planning Organizations (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 targets are set.

- 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.

Following is a summary of the measures with adjusted 4-year targets shown in red text. More information about the target setting and adjustments are provided later in this document.

SUMMARY

PAVEMENTS

2018 Baseline Performance Report (IRI Only)			
	Baseline (2018) *	2-year (2020)	4-year (2022)
Percent of Interstate pavements in Good condition	77%	N/A	79%
Percent of Interstate pavements in Poor condition	4%	N/A	5%
Percent of non-Interstate NHS pavements in Good condition	52%	48%	44%
Percent of non-Interstate NHS pavements in Poor condition	8%	10%	12%
2020 Mid-Performance Report (IRI Only)			
		Current (2020) ^	4-year (2022) #
Percent of Interstate pavements in Good condition		78%	79%
Percent of Interstate pavements in Poor condition		4%	5%
Percent of non-Interstate NHS pavements in Good condition		56%	59%
Percent of non-Interstate NHS pavements in Poor condition		8%	7%
* Condition rating based on ArDOT's 2017 HPMS pavement dataset – IRI Only			
^ Condition rating based on ArDOT's 2019 HPMS pavement dataset – IRI Only			
# Condition rating based on ArDOT's 2021 Projected pavement dataset – IRI Only			

2018 Baseline Performance Report (Full Distress)			
	Baseline (2018) *	2-year (2020)	4-year (2022)
Percent of Interstate pavements in Good condition	70%	N/A	72%
Percent of Interstate pavements in Poor condition	2%	N/A	5%
Percent of non-Interstate NHS pavements in Good condition	28%	36%	40%
Percent of non-Interstate NHS pavements in Poor condition	4%	4%	4%
2020 Mid-Performance Report (Full Distress)			
		Current^ (2020)	4-year# (2022)
Percent of Interstate pavements in Good condition		71%	72%
Percent of Interstate pavements in Poor condition		2%	5%
Percent of non-Interstate NHS pavements in Good condition		36%	40%
Percent of non-Interstate NHS pavements in Poor condition		4%	4%
* Condition rating based on ArDOT's 2017 HPMS pavement dataset – Full Distress			
^ Condition rating based on ArDOT's 2019 HPMS pavement dataset – Full Distress			
# Condition rating based on ArDOT's 2021 Projected pavement dataset – Full Distress			

BRIDGES

2018 Baseline Performance Report			
	Baseline (2018)	2-year (2020)	4-year (2022)
Percent of NHS bridges by deck area classified as Good condition	50.3%	50.0%	50.0%
Percent of NHS bridges by deck area classified as Poor condition	3.9%	4.0%	6.0%
2020 Mid-Performance Report			
		Current (2020)	4-year (2022)
Percent of NHS bridges by deck area classified as Good condition		44.5%	42.0%
Percent of NHS bridges by deck area classified as Poor condition		3.6%	6.0%

TRAVEL TIME RELIABILITY

2018 Baseline Performance Report			
	Baseline (2018)	2-year (2020)	4-year (2022)
Percent of Person-Miles Traveled on the Interstate that are Reliable	95%	91%	89%
Percent of Person-Miles Traveled on the non-Interstate NHS that are Reliable	96%	N/A	90%
2020 Mid-Performance Report			
		Current (2020)	4-year (2022)
Percent of Person-Miles Traveled on the Interstate that are Reliable		97%	93%
Percent of Person-Miles Traveled on the non-Interstate NHS that are Reliable		96%	92%

FREIGHT RELIABILITY

2018 Baseline Performance Report			
	Baseline (2018)	2-year (2020)	4-year (2022)
Truck Travel Time Reliability on the Interstate System	1.21	1.45	1.52
2020 Mid-Performance Report			
		Current (2020)	4-year (2022)
Truck Travel Time Reliability on the Interstate System		1.21	1.40

CONGESTION MITIGATION AND AIR QUALITY (CMAQ)

2018 Baseline Performance Report			
	Baseline (2018)	2-year (2020)	4-year (2022)
Annual Hours of Peak Hour Excessive Delay per Capita	8.42	N/A	18.81
Percent Non-Single Occupancy Vehicle Travel	17.0%	16.5%	16.5%
2020 Mid-Performance Report			
		Current (2020)	4-year (2022)
Annual Hours of Peak Hour Excessive Delay per Capita		6.70	8.00
Percent Non-Single Occupancy Vehicle Travel		15.9%	14.5%

APPENDIX A

Backup Information

PAVEMENTS

BRIDGE

TRAVEL TIME RELIABILITY

FREIGHT RELIABILITY

CONGESTION MITIGATION AND AIR QUALITY(CMAQ)

PAVEMENTS
PERFORMANCE MEASURES

In accordance with 23 CFR 490, FHWA established performance measures for State DOTs to use in managing pavement performance on the 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: Two or more measures are in poor condition

- Fair: Everything else

Pavement Condition Thresholds:

	Good	Fair	Poor
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-year and 4-year targets for the non-Interstate NHS and 4-year targets for the Interstates by <u>May 20, 2018</u> 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.

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 NHPP and Surface Transportation Program (STP) funds to address interstate pavement conditions. The first assessment will occur in June 2019.

MID-PERFORMANCE PERIOD

In the Department's 2018 Baseline Performance Period Report the condition ratings and targets were based on IRI only. With this Mid-Performance Period Update, the pavement condition ratings and targets are transitioning from IRI Only to Full Distress, as shown in Pavement Condition Determination Table above. The Current Condition, 2-year and 4-Year Pavement Performance Targets for the Interstate and Non-Interstate NHS pavements were developed using Highway Performance Monitoring System (HPMS) datasets for 2017 through 2019. Factors that were taken into consideration as part of this estimation included the calculated Current Condition, projects that are anticipated to be completed by 2021, estimated deterioration rates, and the anticipated level of available funding.

4-YEAR TARGET ADJUSTMENTS

A review of the current performance and targets revealed that the non-Interstate NHS pavements are performing better than anticipated. This is primarily due to an increased emphasis placed on pavement preservation and overall actual investments that exceeded the investment strategy targets due to the following:

- Additional funding provided by Local Public Agencies through Partnering Agreements

- State Surplus funds exceeded estimates

- Multiple Federal Fiscal Year Obligations applied to one or more projects

The 4-year non-Interstate NHS targets are being adjusting to account for the increase in preservation projects on the non-Interstate portion of the NHS and the impact of additional revenue from State of Arkansas Act 416 adopted in March 2019. 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 improving. The targets represent what is forecasted to be attainable if the strategies and funding estimates in the Transportation Asset Management Plan (TAMP) are implemented.

Performance Targets		
	2-year *	4-year ^
Percent of Interstate pavements in Good condition	N/A	72%
Percent of Interstate pavements in Poor condition	N/A	5%
Percent of non-Interstate NHS pavements in Good condition	36%	40%
Percent of non-Interstate NHS pavements in Poor condition	4%	4%
* Condition rating based on ArDOT's 2019 HPMS pavement dataset – full distress. ^ Condition rating based on ArDOT's Projected 2021 HPMS pavement dataset – full distress.		

BRIDGE
PERFORMANCE MEASURES

Per 23 CFR 490, FHWA established performance measures for State DOTs to use in managing bridge performance on the 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 the 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.

  o If the lowest rating is greater than or equal to 7, the structure is classified as good.

  o If it is less than or equal to 4, the classification is poor.

  o 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).

Additional 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 NHPP funds to eligible bridge projects on the NHS.

MID-PERFORMANCE PERIOD

A review of the Mid-Performance Period indicates that the 4-year target for poor bridges is still reasonable with the mid-performance at 3.6%, but that the 4-year target for good bridges is 5.5% lower than the 2-year mid-performance. A review of the individual bridges explained the unexpected drop from good to fair. A few large bridges moved from good to fair in the two year period. One bridge in particular, 07100 – Lake Village Bridge over the Mississippi River, accounted for 3.5% of the change by itself. Mississippi inspects bridge 07100, and this bridge was not included in the model since it is a

unique bridge and relatively new. It turns out there are design and construction issues with bridge 07100 that the model would not have accounted for even if it was in the model.

Another but less affecting issue is the makeup of the NHS itself. There were 248 bridge changes (removed and added) from 2018 to 2020. Replaced bridges accounted for 28% of the changes to the NHS, but the remainder is due to updates and corrections. Before 2019, there was no prescribed procedure to maintain the current NHS in the bridge database, so errors existed. GIS tools are now available to keep the bridge database in sync with the current NHS.

4-YEAR TARGET ADJUSTMENT

While the 4-year target of 6.0% poor is still reasonable, the number of large bridges moving to fair condition earlier than projected necessitates a change to the 4-year good target of 50.0%. While there may be some additional large bridges move from good to fair in the next two years, it is unlikely to drop as much as the previous two years. A target of 42.0% gives a reasonable adjustment with some room for downward movement if the trend continues. The following chart reflects the original targets with the proposed change.

NHS Performance Measures (by Deck Area)	2018 Baseline	2-year Target	Current Condition	Original 4-year Target	Revised 4-year Target
NHS bridges in Good condition	50.3%	50.0%	44.5%	50.0%	42.0%
NHS bridges in Poor condition	3.9%	4.0%	3.6%	6.0%	6.0%

RISK AND MITIGATION

The significant drop in good to fair bridges demonstrates the risk in projecting future conditions based on past performance. Changes in design, construction and maintenance practices, material quality, traffic, and environmental factors all can have a significant effect on the accuracy of the predictive model. The following steps help to mitigate future risks in model performance.

- Risk – A few large bridges changing states between Good and Fair or Fair and Poor can significantly affect the accuracy of the model – as explained previously.

    o Mitigation – Revising the bridge model better to fit the conditions of the last two years.

- Risk – There is a "lag" between the dTIMS (predictive modeling software) investment projections and the delivery of capital investments. In the 2018 model, the existing Statewide Transportation Improvement Program (STIP) was not modeled in the initial dTIMS run.

    o Mitigation – Include the most recent STIP in the dTIMS model.

While it is not possible to eliminate all risk in a predictive model, it is possible to mitigate the risks and increase the reliability of the predictive model. Planned improvements in the model include updates to the deterioration curves and integration of truck traffic and environmental factors. The use of artificial intelligence is also being investigated to help achieve better results. Validation checks along the way ensure that any changes made give improved outcomes. While these actions do not affect the current TAMP, it allows a higher degree of accuracy in the next TAMP.

TRAVEL TIME RELIABILITY
PERFORMANCE MEASURES

ArDOT
ARKANSAS DEPARTMENT
OF TRANSPORTATION

In accordance with 23 CFR 490, FHWA established performance measures for State DOTs to use in assessing system performance on the Interstate and non-Interstate NHS. The following is a list of the required performance measures for travel time reliability.
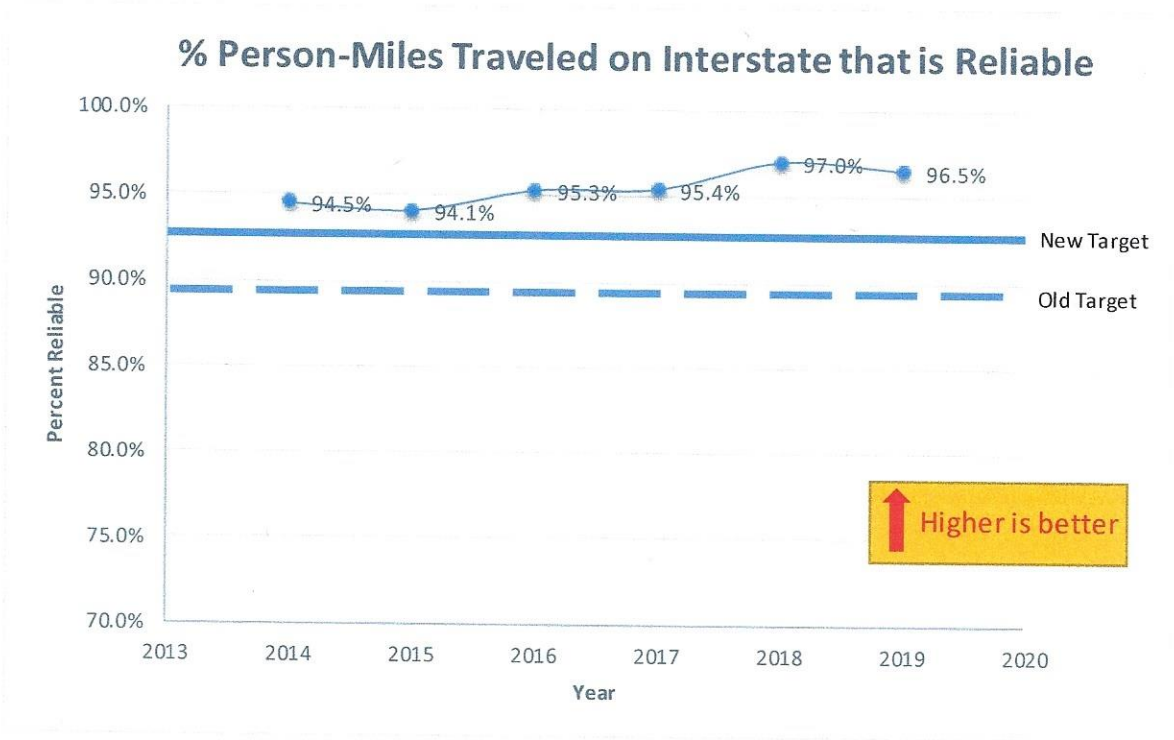
Performance Measures
Percent of Person-Miles Traveled on the Interstate that is Reliable
Percent of Person-Miles Traveled on the non-Interstate NHS that is Reliable

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 (80th percentile) to a "normal" travel time (50th 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 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, 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.

Additional information:

- State DOTs must establish targets for the Interstate and non-Interstate NHS.

- FHWA began introducing the NPMRDS provided by HERE in August 2013. The data was mainly considered 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.

- The data used in the 2018 target setting included three years (2014-2016) of data in HERE standard and one year (2017) of data in INRIX standard. Since that time, INRIX has backfilled 2016 data. Therefore, in the 2020 target setting, only the 2014-2015 data is in the HERE standard. 2016-2019 data is provided using the INRIX standard.

- Population growth and increasing travel will affect travel time reliability, particularly in fast-growing urban areas.

- An extensive construction program on the Interstate system could result in multiple major work zones. This scenario would have an effect on the reliability of the Interstates and non-Interstate NHS routes.

- 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 at this time.

MID-PERFORMANCE PERIOD

In the 2018 Baseline Report, the 2-year target for Percent of Person-Miles Traveled Reliable on Interstate was set to 91%. However, it was set with only one year (2017) of consistent data and four years (2014-2017) of total data. A consistent trend was not established at that time.

The latest data (2019) for Percent of Person-Miles Traveled on Interstate Reliable is 97%, which significantly outperforms the 2-year target of 91%. Considering the relatively flat trend line for this measure from recent years, the original 4-year target of 89% is very conservative.

4-YEAR TARGET ADJUSTMENT

The 4-year target for Percent of Person-Miles Traveled Reliable on Interstate can be adjusted to 93%. This new target is set to be lower than the current trend line. It takes into consideration the estimation of the increase in traffic over the next two years, along with construction impacts that can affect the reliability of the system. A few large construction projects in Central Arkansas are going to start in the near future that will potentially change traffic patterns. Figure 2 shows the data and targets for the Percent of Person-Miles Traveled Reliable on Interstate.

Similarly, the 4-year targets for Non-Interstate NHS will be changed from 90% to 92%. Figure 3 shows the data and targets for the Percent of Person-Miles Traveled Reliable on Non-Interstate NHS.

% Person-Miles Traveled on Interstate that is Reliable

Figure 2. Percent of Person-Miles Traveled on Interstate that is Reliable

% Person-Miles Traveled on Non-Interstate NHS that is Reliable
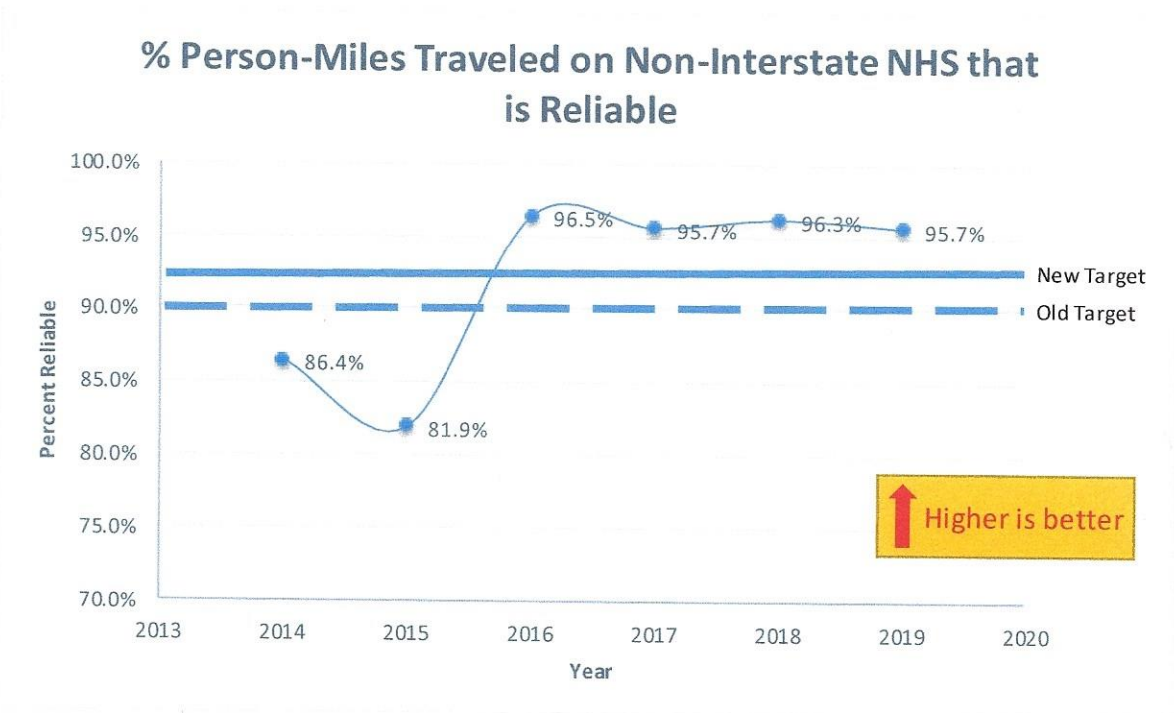
Figure 3. Percent of Person-Miles Traveled on Non-Interstate NHS that is Reliable

FREIGHT RELIABILITY
PERFORMANCE MEASURE

Ar DOT
ARKANSAS DEPARTMENT
OF TRANSPORTATION

In accordance with 23 CFR 490, FHWA established performance measures for State DOTs to use in assessing freight movement on the Interstate System. The following is the required performance measure for freight reliability.

Performance Measure
Truck Travel Time Reliability on the Interstate System

CONDITION BASED PERFORMANCE MEASURES

- The measure is based on the Truck Travel Time Reliability (TTTR) Index.

- The TTTR is defined as the 95th percentile truck travel time divided by the 50th percentile truck travel time using data from FHWA's NPMRDS or equivalent.

- The TTTR will be calculated for each of the following five time periods for each segment of Interstate known as a Traffic Message Channel (TMC):

    o 6:00 AM-10:00 AM Weekday

    o 10:00 AM-4:00 PM Weekday

    o 4:00 PM-8:00 PM Weekday

    o 6:00 AM-8:00 PM Weekends

    o 8:00 PM-6:00 AM All Days

- The maximum TTTR for each TMC will be multiplied by the length of the TMC. Then the sum of all length-weighted segments divided by the total length of Interstate will generate the TTTR Index.

Additional Information:

- Must establish targets for all Interstates.

- FHWA began introducing the NPMRDS provided by HERE in August 2013. The data was mainly considered as raw probe data.

- In February 2017, FHWA switched the NPMRDS vendor from HERE to INRIX. The change in vendor resulted in inconsistencies due to the different approaches in the data processing.

- The data used in the 2018 target setting include three years (2014-2016) of data in HERE standard and one year (2017) of data in INRIX standard. Since theat time, INRIX has backfilled 2016 data. Therefore, in the 2020 target setting, only the 2014-2015 data is in the HERE standard. 2016-2019 data is provided using the INRIX standard.

- Population growth and increasing travel will affect travel time reliability, particularly in fast-growing urban areas.

- Urban congestion often affects freight reliability. For example, 20 of the highest 40 TTTR segments in Arkansas are located on urban Interstates, where very little truck traffic exists.

- If FHWA determines that a state DOT has not made significant progress toward achieving the target, the State DOT shall include as part of the next performance target report identification of significant freight trends, needs, and issues within the State as well as a description of the freight policies and strategies and an inventory of truck freight bottlenecks. There is no financial penalty for not meeting the proposed targets at this time.

MID-PERFORMANCE PERIOD

In the 2018 Baseline Report, a 2-year target for TTTR on the Interstate System was set to 1.45. However, it was set with only one year (2017) of consistent data and four years (2014-2017) of total data. A consistent trend was not established at that time.

4-YEAR TARGET ADJUSTMENT

The latest data (2019) for TTTR on the Interstate System is 1.21, which significantly outperforms the 2-year target of 1.45. Considering the relatively flat trend line for this measure in recent years, the original 4-year target of 1.52 is very conservative. Therefore, the 4-year target for TTTR on Interstates can be adjusted to 1.40. Figure 4 shows the data and targets for the TTTR on Interstates.

The proposed target is slightly higher than the trend line. This considers the estimation of the increase in traffic over the next two years along with construction impacts that can affect the reliability of the system. A few large construction projects in Central Arkansas are going to start in the near future that will potentially change traffic patterns .
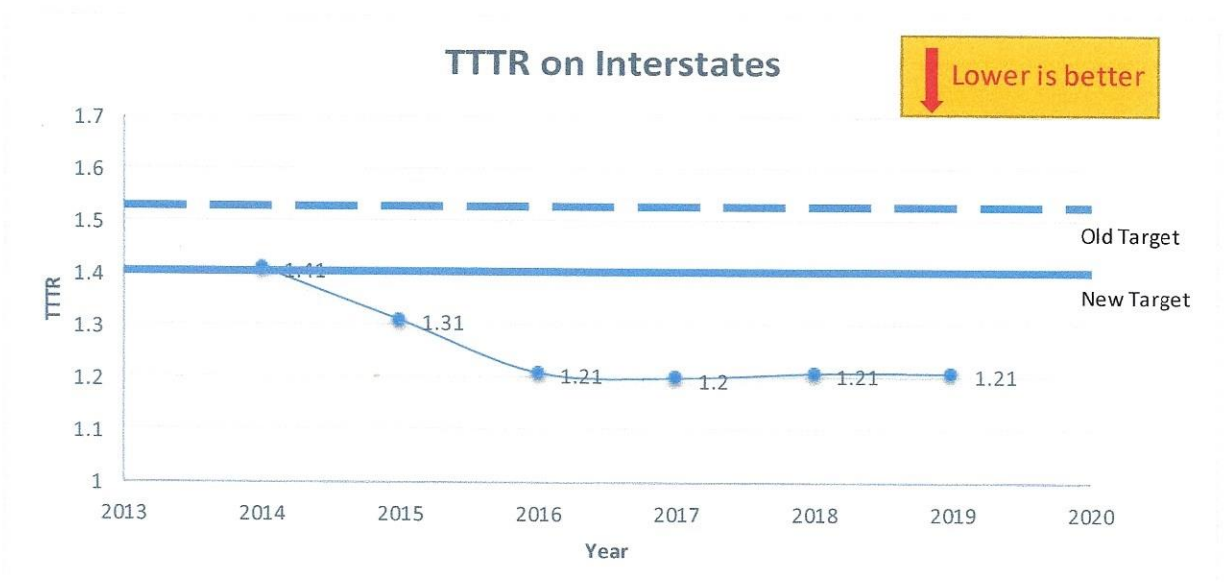
Figure 4. Truck Travel Time Reliability on Interstates

CMAQ
PERFORMANCE MEASURES

Ar DOT
ARKANSAS DEPARTMENT
OF TRANSPORTATION

In accordance with 23 CFR 490, FHWA established performance measures for the State DOTs to use in assessing the CMAQ Improvement Program for traffic congestion on the NHS. The following is a list of the required performance measures for the CMAQ program.

Performance Measures
Annual Hours of Peak Hour Excessive Delay per Capita (known as the PHED measure)
Percent of Non-Single Occupancy Vehicle (non-SOV) Travel

CONDITION BASED PERFORMANCE MEASURES

- The PHED is used to determine traffic congestion levels on the NHS in urbanized areas.

- The annual excessive delay is based on the difference between the actual travel time and the threshold travel time for a roadway segment.

- The threshold for excessive delay is based on the travel time at 20 miles per hour (mph) or 60 percent of the posted speed limit for both of the following periods:

  - 6:00 AM-10:00 AM Weekdays

  - 3:00 PM-7:00 PM or 4:00 PM – 8:00 PM Weekdays

- The annual excessive delay is then multiplied by the hourly traffic volume and occupancy factor for passenger cars, buses, and combination vehicles. Then the sum of annual excessive delay for all segments is divided by the latest urbanized area population estimates to determine the PHED.

- The Non-SOV measure is directly obtained from the Commuting data in the American Community Survey from the U.S. Census.

Additional Information:

- These measures only apply to urbanized areas of more than one million people that are also in nonattainment or maintenance areas for ozone, carbon monoxide, or particular matter for the first performance period (January 1, 2018 – December 31, 2021). Therefore, these measures only apply for Memphis-West Memphis-Marion Urbanized Area.

- In the second performance period beginning on January 1, 2022, the population threshold changes to greater than 200,000.

- The PHED and Percent of Non-SOV travel measures will be a single target for the Memphis-West Memphis-Marion Urbanized Area.

- Population growth and increasing travel will affect traffic congestion in urban areas.

- These measures will not be subject to significant progress determination.

MID-PERFORMANCE PERIOD

The targets were set in coordination with the Memphis MPO, West Memphis MPO, Tennessee DOT, and Mississippi DOT through a Tri-State PM3 measures working group. The working group also included members of the Arkansas, Mississippi, and Tennessee FHWA Division Offices as well as the University of Tennessee.

The 2-year condition of the PHED and percent Non-SOV Travel were reviewed and compared with the 2-year targets established in the 2018 Baseline Report. Adjustments have been made for 4-year targets to reflect the latest trend.

4-YEAR TARGET ADJUSTMENT

The current midpoint of PHED is 6.70 hours, which is significantly lower than the current 4-year target of 18.80 hours. The working group agreed to update the 4-year target for PHED to 8.00 hours considering low construction activity in the Greater Memphis Area and the possible increase of telecommuting after COVID-19. Figure 5 shows the data and new target for PHED in the Greater Memphis Area.
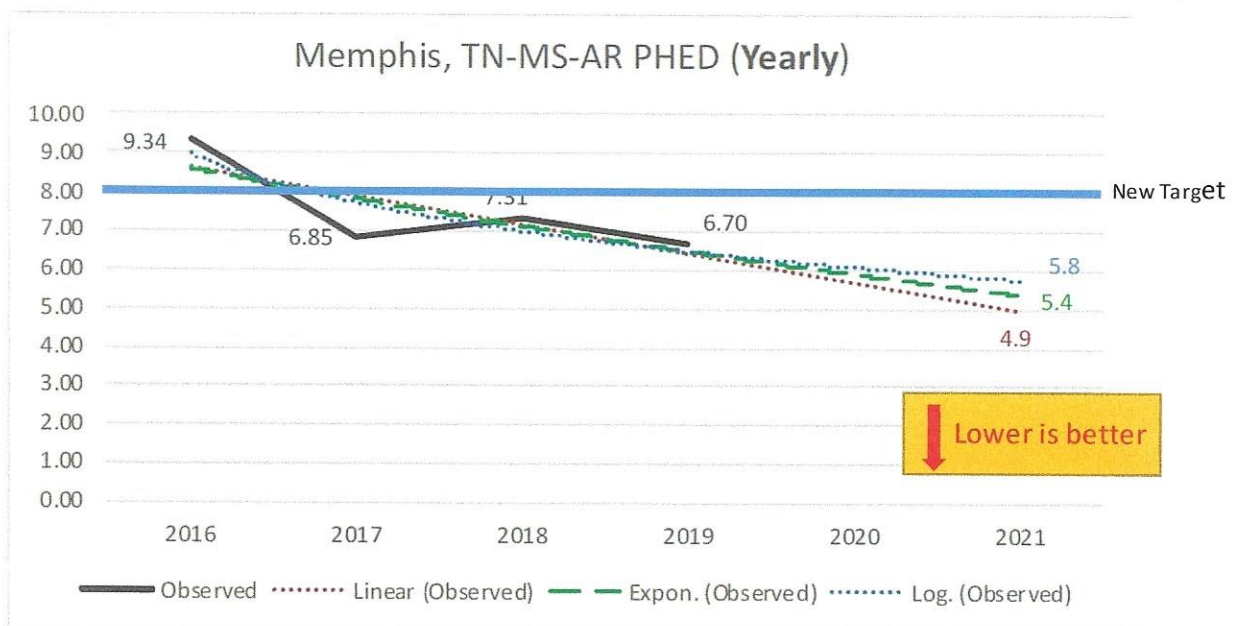
Figure 5. PHED Trend Analysis for Greater Memphis Area
(Source: Memphis MPO CMAQ Performance Plan 2020)

For Non-SOV, 2017 and 2018 American Community Survey (ACS) data for the Memphis TN-MS-AR Urbanized Area shows that the percentage has declined from 16.5% to 16.0% in 2017 and 15.9% in 2018. The Tri-State working group reviewed trend analysis and discussed other factors that could impact the 4-year target, including the change in the number of people communing to work due to COVID-19. It was noted that those traveling to work are essential employees and less likely to have the opportunity to carpool. Understanding that these factors may cause the future percentage to be lower than the trend, the group decided to build in a buffer that was slightly lower than the linear trend analysis. The working group agreed to update the 4-year target for Percent of Non-SOV Travel to 14.5%. Figure 6 shows the data and new target for Non-SOV in the Greater Memphis Area.
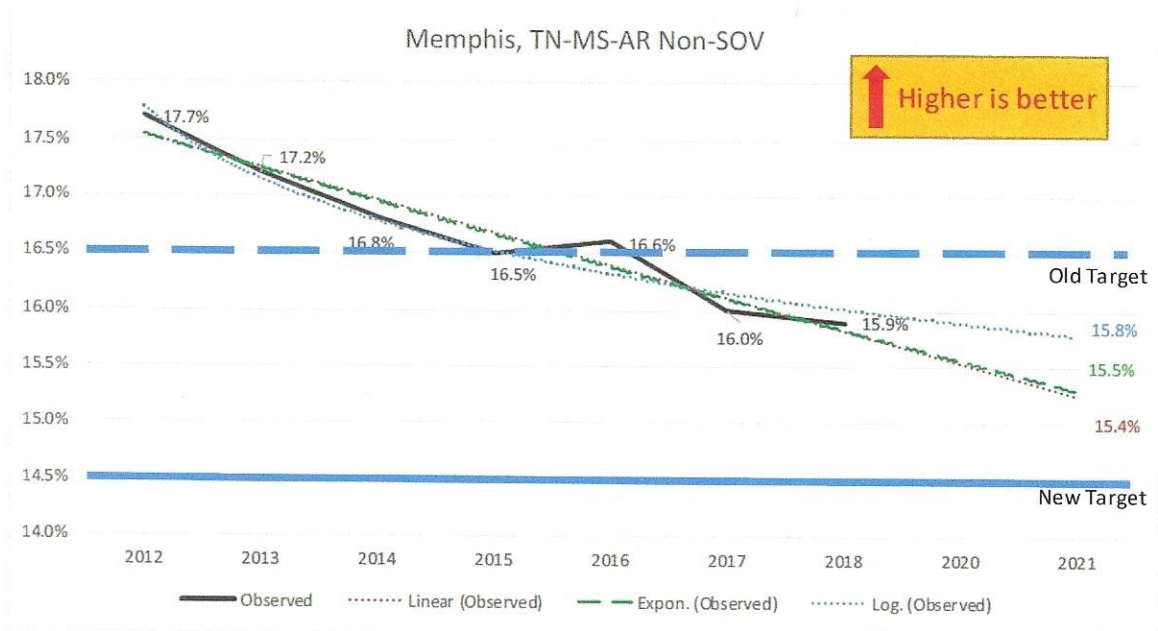
Figure 6. Non-SOV Trend Analysis for Greater Memphis Area
(Source: Memphis MPO CMAQ Performance Plan 2020)

APPENDIX A

Military Affairs Advisory Committee
White Hall, Arkansas

January 4, 2021

Larry Reynolds, Director
Southeast Arkansas Metropolitan Planning Organization
1300 Ohio Street, Suite B
Pine Bluff, Arkansas 71601

RE: LRTP Update for Hwy 256 - Pine Bluff Arsenal Access Road

Dear Mr. Reynolds:

The White Hall Military Affairs Advisory Committee (MAAC) requests a high priority project be included in the Long-Range Transportation Plan (LRTP) and the Transportation Improvement Program (TIP) in support of the Defense Department missions at the US Army Pine Bluff Arsenal.

Specifically, the upgrade of 2.1 miles of Highway 256 from Interstate 530 to Pine Bluff Arsenal Plainview Gate was identified as a high priority requirement in the recent Pentagon-funded Compatible Use Study (CUS). The CUS study documented multiple recommendations for the upgrade of Hwy 256 to improve safety, accommodate commercial traffic requirements for Pine Bluff Arsenal, and mitigate flooding impacts (portions of the highway were submerged during the historic flood of 2019). The White Hall MAAC is actively seeking funds to perform a 30% design in support of this project.

I have attached excerpts from the Compatible Use Study that outlines the recommendations for Hwy 256 upgrades and related items.

If you have any question, please do not hesitate to contact me.

David Beck
Chairman, White Hall MAAC

Encl: CUS Excerpts

CC:
Mayor Foster, White Hall
Mayor Washington, Pine Bluff
Gerald Robinson, Jefferson County Judge
COL Scott Daulton, Commander, Pine Bluff Arsenal
COL(R) Rob Ator, Director of Military Affairs, AEDC
Deric Wyatt, ARDOT

Area of Interest:
Hwy 256 Access Road
2.1 mi segment

Legend

100-Year Regulatory Floodplain	Pine Bluff Arsenal	Interstate
Study Area		Highway/Freeway
Municipal Boundary		Other Major Road
County Boundary		Railroad
		Stream

0 ½ 1 2 3 4 Miles

Source: Pine Bluff Arsenal, 2019. State of Arkansas, 2019.

Pine Bluff Arsenal
Compatible Use Study
JEFFERSON COUNTY, ARKANSAS
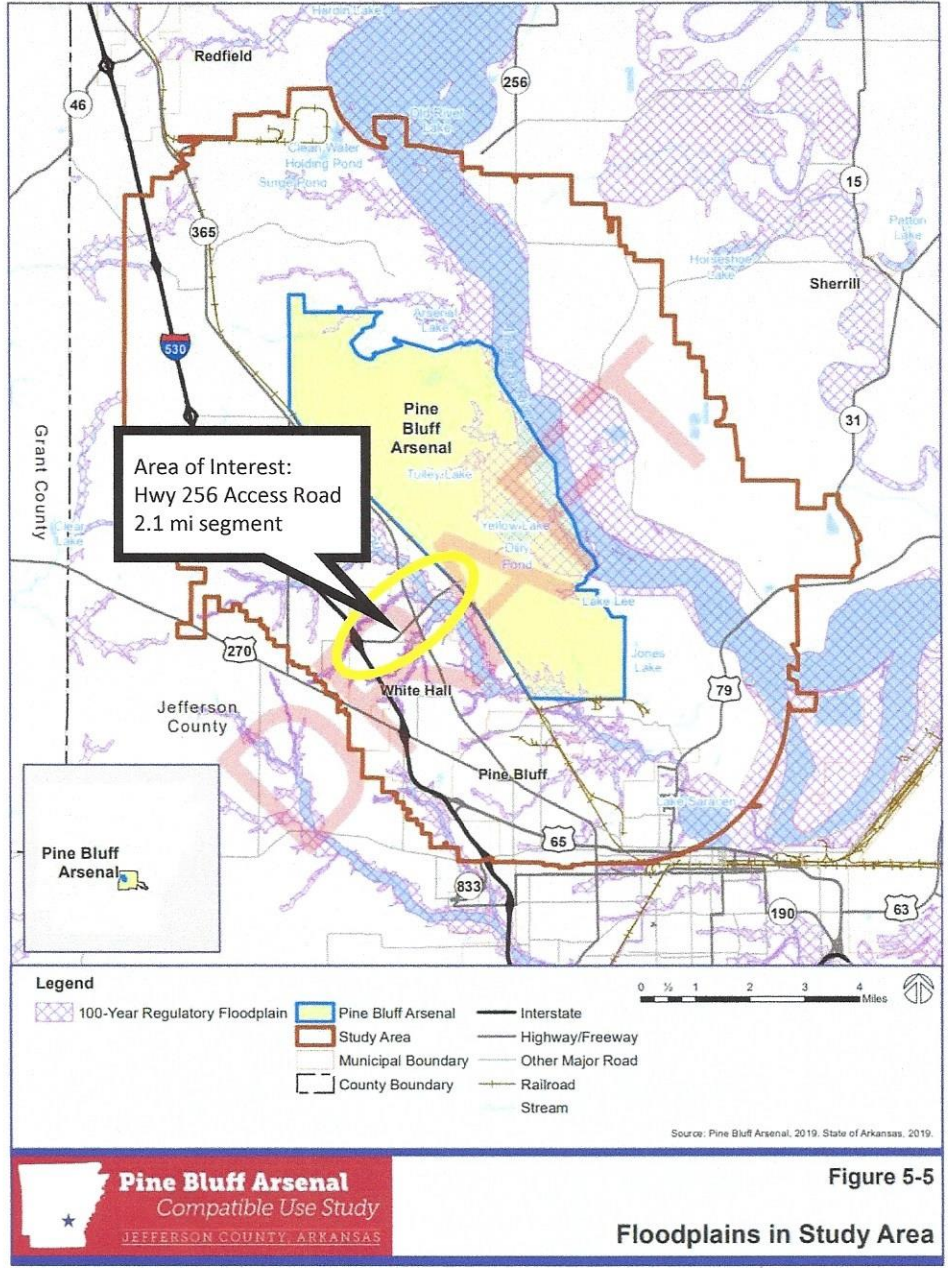
Figure 5-5

Floodplains in Study Area

Compatibility Assessment | 5

Table 6-1 High Priority Implementation Actions

	STUDIES
	POTENTIAL FUNDING – OFFICE OF ECONOMIC ADJUSTMENT CUS IMPLEMENTATION GRANT
1	RC-1A: Conduct a feasibility study for a 30% design to enhance access roads from Interstate 530 to Plainview Gate to widen from two to three lanes and replace Bridge #2280 over Caney Bayou.
2	CR-1A: Conduct a study for options to enhance or relocate Bridge #2280 to provide better access to Pine Bluff Arsenal, a wider road to support commercial trucks, and better protect the road and bridge from flooding events.
3	RC-1C: Conduct a study to establish a staging area for commercial trucks outside the Pine Bluff Arsenal fence line where trucks can wait without creating traffic congestion on local roads.
4	CR-1E: Conduct a feasibility study to reroute Hoadley Road to an alternate route that can be constructed with enhanced flood management measures and a wider road.
5	RE-2B: Apply for a grant to develop a Pine Bluff Arsenal resiliency study that addresses water quality / availability, supply chain, and cyber security to ensure future resiliency of the installation
6	SA-4A: Conduct a traffic study for enhancing traffic control measures at the intersection of Dollarway Road and Wise Road to identify the best course of action.
7	COM-3D: Conduct an economic diversification study to identify new opportunities that focus on diversifying the local economy for industries that are compatible with military operations.
	GIS WEB-BASED PORTAL
	POTENTIAL FUNDING – OFFICE OF ECONOMIC ADJUSTMENT CUS IMPLEMENTATION GRANT
8	COM-2B: Create and maintain an interactive, web-based GIS portal to share GIS data, such as existing land use, zoning, and other pertinent CUS-related geospatial data to promote enhanced, long-range, and coordinated compatibility planning.
	DOCUMENTS / MEMORANDA OF AGREEMENT
	POTENTIAL FUNDING – OFFICE OF ECONOMIC ADJUSTMENT CUS IMPLEMENTATION GRANT
9	COM-1C: Prepare and execute a formal Memorandum of Agreement with Pine Bluff Arsenal that establishes and formalizes the review process for certain types of development proposals, rezoning applications, and other land use policy or regulatory changes that may impact the military mission at the Arsenal.
10	AQ-1B: Develop a Memorandum of Agreement between Arkansas Department of Energy and Environment's Division of Environmental Quality and Pine Bluff Arsenal to inform the Arsenal of air permit requests within the Air Quality Control Region.
	PLAN / REGULATION UPDATES
	POTENTIAL FUNDING – OFFICE OF ECONOMIC ADJUSTMENT CUS IMPLEMENTATION GRANT
11	LU-1B: In accordance with Arkansas Code Title 14. Local Government § 14-17-209, Jefferson County should develop and adopt a zoning ordinance for a three-mile area around Pine Bluff Arsenal to guide future growth that is compatible with and will not encroach on the Arsenal's missions.

12	LU-1A: Establish a three-mile area around Pine Bluff Arsenal in which development proposals are coordinated between SEARPC and the Arsenal to consider compatibility issues.
13	LU-1I: Add a "Military Element" to local comprehensive plans to include policies promoting compatible development around Pine Bluff Arsenal.
14	RE-1A: Develop an updated Regional Floodplain Management Plan to address existing high-risk areas such as access roads and rail lines that are susceptible to flooding.
15	LU-1H: Require as a condition for approval of any new plats within three miles of Pine Bluff Arsenal that a note be placed on the plat documentation identifying that the property is within the region where military production operations occur at Pine Bluff Arsenal.
16	AT-2A: Develop a template UAS ordinance that regulates civilian drone use based on land use and zoning powers; nuisance and trespass; reasonable time, manner, and geographic restriction boundaries; proper notification; and provisions for violations and penalties.

EDUCATIONAL MATERIALS / INFORMATION

POTENTIAL FUNDING – OFFICE OF ECONOMIC ADJUSTMENT CUS IMPLEMENTATION GRANT

17	LU-1G: Work with local realtor organizations to consider developing real estate disclosure notifications for the sale or transfer of property within three miles of Pine Bluff Arsenal.
18	COM-3E: Collaborate on regional economic development marketing materials to promote growth in industries that are compatible with Pine Bluff Arsenal's mission.
19	AT-2B: Develop, or use existing FAA resources, and distribute informational materials highlighting federal regulations for the use of UAS devices and how to safely use such devices in the region.

DEFENSE COMMUNITY INFRASTRUCTURE PROGRAM (DCIP)

POTENTIAL FUNDING – OFFICE OF ECONOMIC ADJUSTMENT DCIP PROGRAM

20	CR-1D: Rebuild or enhance Bridge #2280 to enhance its flood management capacity to reduce impacts from future flooding events and widen it to support enhanced entry into Pine Bluff Arsenal.
21	RE-1C: Enhance Highway 256 to reduce potential flooding impacts.
22	RE-2C: Prepare a project for future Defense Community Infrastructure Pilot Program opportunities through the DoD Office of Economic Adjustment to address water resiliency on Pine Bluff Arsenal.
23	RC-1D: Apply for OEA funding opportunities to construct a staging area outside of the Pine Bluff Arsenal fence line where trucks can wait without creating traffic congestion on local roads.

OTHER FUNDING SOURCES

POTENTIAL FUNDING – SPECIFIED STATE AND FEDERAL FUNDS

24	CR-1C: Review options through the ARDOT Historic Bridge Program to remove and relocate Bridge #2280 to a public park or similar nearby area to memorialize it in a preserved state. **Potential Funding:** Arkansas Department of Transportation
25	RC-1B: Coordinate with the Arkansas Department of Transportation to develop a set of priorities and request funding for roadway improvements on ARDOT roads that lead to Plainview Gate. **Potential Funding:** Arkansas Department of Transportation

26	RE-1B: Request a study by the U.S. Army Corps of Engineers' Floodplain Management Services Program to enhance stormwater management and flood proofing around Pine Bluff Arsenal. **Potential Funding:** US Army Corps of Engineers
27	RE-1D: Identify a project that will mitigate flooding around Pine Bluff Arsenal and prepare an application package for grant funding through the Federal Emergency Management Agency's Building Resilient Infrastructure and Communities (BRIC) program to complete the project. **Potential Funding:** Federal Emergency Management Agency's [FEMA] Building Resilient Infrastructure and Communities (BRIC) Program
28	RE-1F: Identify project opportunities along the Arkansas River that would be eligible for Readiness and Environmental Protection Integration (REPI) funding to support military installation resilience, particularly due to flooding. **Potential Funding:** Readiness and Environmental Protection Integration (REPI) Resilience Program
29	SA-4B: Discuss options with ARDOT that could be implemented to address safety concerns, such as a turn lane or signalized traffic control along Highway 365 at the intersection with Wise Road. **Potential Funding:** Arkansas Department of Transportation
30	SA-4C: Advocate to ARDOT to reduce the speed limit to 35 miles per hour on Dollarway Road within a mile of Wise Road to provide a safer environment for commercial trucks entering or exiting Pine Bluff Arsenal. **Potential Funding:** Arkansas Department of Transportation
31	AT-1A: Pine Bluff Arsenal should continue work to establish funding to upgrade and modernize the Plainview Gate to meet anti-terrorism and force protection standards and to serve as a commercial traffic entrance. **Potential Funding:** Military Construction Army (MCA) Department of Defense Funding
32	RC-1E: Upgrades to the Plainview Gate should be done in a manner that will allow commercial vehicles to be processed at the gate. **Potential Funding:** Military Construction Army (MCA) Department of Defense Funding
	COMMUNICATIONS **FUNDING NOT REQUIRED**
33	COM-1A: Establish a Pine Bluff Arsenal Partnership Committee to monitor CUS implementation and address future compatibility issues that may arise.
34	COM-1B: Develop a charter for the Pine Bluff Arsenal Partnership Committee that formalizes the group, its purpose and objectives, and roles and responsibilities.
35	AQ-1A: Develop an air quality working group among Arkansas Department of Energy and Environment's Division of Environmental Quality, Pine Bluff Arsenal, and CUS partners.

Strategy Type:	Timeframe:	
	Mid	Priority: **High**

RE-1C: Enhance Highway 256 to reduce potential flooding impacts.

ARDOT should work with the City of White Hall, Jefferson County, and Pine Bluff Arsenal to enhance Highway 256 to be better protected from heavy flood events.

This strategy could be eligible for OEA funding through the Defense Community Infrastructure Program or Community Economic Adjustment Assistance for Military Installation Resilience Program and should be further explored for such opportunities.

Responsible Party(ies):
- ARDOT

Partner(s):
- City of White Hall
- Jefferson County
- Pine Bluff Arsenal

Strategy Type:	Timeframe:	
	Mid	Priority: **High**

RE-1D: Develop an application package for a Building Resilient Infrastructure and Communities grant.

The City of White Hall should work with the Arkansas Department of Emergency Management to identify a project and prepare an application package for grant funding through the Federal Emergency Management Agency's Building Resilient Infrastructure and Communities (BRIC) program to complete the project that will mitigate flooding around Pine Bluff Arsenal and in the neighboring communities. More information on the BRIC program can be found at https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities .

Responsible Party(ies):
- City of White Hall
- Arkansas Department of Emergency Management

Partner(s):
- City of Pine Bluff
- Jefferson County
- Pine Bluff Arsenal

Strategy Type:	Timeframe:	
	Mid	Priority: **High**

RE-1E: Coordinate with Army Corps of Engineers for early warnings.

CUS partners should coordinate with the Army Corps of Engineers Pine Bluff Site Office to develop a MOA to provide early warning notification when water levels are rising or expected to rise in the Arkansas River. This notification would help provide advanced warning time to make preparations and accommodations. Additionally, the Army Corps of Engineers has a flood prediction modeling GIS program that could help the communities and Pine Bluff Arsenal better prepare.

Responsible Party(ies):
- City of White Hall
- City of Pine Bluff
- Jefferson County
- Pine Bluff Arsenal
- Army Corps of Engineers Pine Bluff Site Office

LU-1I: Add a "Military Element" to comprehensive plans to include policies promoting compatible development around Pine Bluff Arsenal.

The Cities of White Hall and Pine Bluff should develop a "Military Element" to include in their respective comprehensive plans that describes the Arsenal, the military activities that occur there, and the relationship between the community and the military and establishes policies for coordinating with the military and promoting compatible development around the installation. This element could be added when the community undergoes a plan update or created independently of plan updates.

Responsible Party(ies):
- City of White Hall
- City of Pine Bluff
- Jefferson County

Strategy Type:

Timeframe:
Long

Priority: High

ROADWAY CAPACITY (RC) ISSUES

RC-1: Commercial traffic entering Pine Bluff Arsenal at Dexter Gate sometimes causes traffic backups onto local roads during peak traffic hours.

The commercial inspection facilities at Dexter Gate can only handle a limited number of commercial trucks at a time, with a limited staging area for trucks to wait until they can be inspected. Egress and ingress infrastructure is not adequate at Dexter Gate especially at times of increased force protection levels at the installation when inspection times per commercial vehicle may increase. If manufacturing production levels at Pine Bluff Arsenal increase in the future, as projected for the production of textile components, there will be an increase in commercial trucks entering the installation that will increase traffic congestion entering at Dexter Gate. This gate does not meet AT/FP requirements.

Issue Importance:

High

RECOMMENDED STRATEGIES

RC-1A: Conduct a feasibility study for a 30 percent (30%) design to enhance access roads leading to Plainview Gate.

The City of White Hall should work with Pine Bluff Arsenal, Jefferson County, and ARDOT to conduct a feasibility study for a 30 percent (30%) design to enhance 2.1 miles of access roads, consisting of West Holland Avenue, West Hoadley Road, and East Hoadley Road, from Interstate 530 to Plainview Gate, to widen from two lanes to three lanes and replace Bridge #2280 over Caney Bayou. These improvements would allow better access to Plainview Gate, including shifting commercial truck access from Dexter Gate to Plainview Gate.

Responsible Party(ies):
- City of White Hall

Partner(s):
- Jefferson County
- ARDOT
- Pine Bluff Arsenal

Strategy Type:	Timeframe: Short	Priority: High

RC-1B: Coordinate with the ARDOT for road enhancements to support Pine Bluff Arsenal gate improvements.

After Strategy RC-1A is completed, the City of White Hall and Pine Bluff Arsenal should coordinate with ARDOT to develop a set of priorities and request funding for roadway improvements on ARDOT roads that lead to Plainview Gate.

Responsible Party(ies):
- City of White Hall
- Pine Bluff Arsenal
- ARDOT

Partner(s):
- Jefferson County

Strategy Type:	Timeframe: Mid	Priority: High

RC-1C: Conduct a study to establish a staging area for commercial trucks outside the Pine Bluff Arsenal fenceline.

The City of White Hall should work with Pine Bluff Arsenal, Jefferson County, and ARDOT to conduct a study to develop a staging area outside of the Pine Bluff Arsenal boundary where trucks can wait without creating traffic congestion on local roads. The study should consider land ownership and funding options, including federal grant opportunities such as the Defense Community Infrastructure Program or other OEA grants, for land acquisition and construction.

Responsible Party(ies):
- City of White Hall

Partner(s):
- Jefferson County
- ARDOT
- Pine Bluff Arsenal

Strategy Type:	Timeframe: Mid	Priority: High

RC-1D: Develop a staging area for commercial trucks outside the Pine Bluff Arsenal fenceline.

Based on the findings from the study conducted in Strategy RC-1C, the City of White Hall should work with Pine Bluff Arsenal, Jefferson County, and ARDOT to apply for OEA funding opportunities to construct a staging area outside of the Pine Bluff Arsenal fenceline where trucks can wait without creating traffic congestion on local roads. Federal funding to assist in the development of this staging area should be considered.

This strategy could be eligible for OEA funding through the Defense Community Infrastructure Program or Community Economic Adjustment Assistance for Military Installation Resilience Program and should be further explored for such opportunities.

Responsible Party(ies):
- City of White Hall

Partner(s):
- Jefferson County
- ARDOT
- Pine Bluff Arsenal

Strategy Type:	Timeframe: Mid	Priority: High