System Performance Report

for

Huntsville Area Metropolitan Planning Organization

The System Performance Report for

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Background

Pursuant to the Moving Ahead for Progress in the 21st Century Act (MAP-21) Act enacted in 2012 and the Fixing America's Surface Transportation Act (FAST Act) enacted in 2015, state departments of transportation (DOT) and Metropolitan Planning Organizations (MPOs) must apply a transportation performance management approach in carrying out their federally required transportation planning and programming activities. The process requires the establishment and use of a coordinated, performance-based approach to transportation decision-making to support national goals for the federal-aid highway and public transportation programs. Performance Management is a strategic approach to connect investment and policy decisions to help achieve performance goals. Performance measures are quantitative criteria used to evaluate progress. Performance measure targets are the benchmarks against which collected data is gauged. The Moving Ahead for Progress in the 21st Century Act (MAP-21) requires State DOTs and MPOs to conduct performance-based planning by tracking performance measures and setting data-driven targets to improve those measures. Performance based planning ensures the most efficient investment of federal transportation funds by increasing accountability, transparency, and providing for better investment decisions that focus on key outcomes related to seven national goals:

- Improving Safety;
- Maintaining Infrastructure Condition;
- Reducing Traffic Congestion;
- Improving System Reliability;
- Improving the Efficiency of the System and Freight Movement;
- Protecting the Environment; and,
- Reducing Delays in Project Delivery.

The Fixing America's Surface Transportation (FAST) Act supplements the MAP-21 legislation by establishing timelines for State DOTs and MPOs to comply with the requirements of MAP-21. State DOTs are required to establish statewide targets and MPOs have the option to support the statewide targets or adopt their own.

The System Performance Report for Huntsville Area Metropolitan Planning Organization includes performance measures for: Highway Safety (PM1), Bridge and Pavement (PM2), System Performance (PM3), Transit Asset Management (TAM) and Transit Safety Performance (PTASP).

Huntsville Area Metropolitan Planning Organization adopted *TRiP 2045* Long-Range Transportation Plan (LRTP) with Resolution No. 14-20 on April 22, 2020 at 4pm. The System Performance Report is an integral part of the Huntsville Area Metropolitan Planning Organization *TRiP 2045* Long Range Transportation Plan. On August 17, 2022, the Huntsville Area Metropolitan Planning Organization Policy Board will amend *TRiP 2045* LRTP to include the System Performance Report.

The Huntsville Area MPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the *TRiP 2045* directly reflects the goals, objectives, performance measures, and targets as they are described in other public transportation plans and processes, including the current Huntsville Area MPO FY2020-2023 Transportation Improvement Program (TIP).

The Huntsville Area MPO FY2020-2023 Transportation Improvement Program (TIP) considers potential projects that fall into specific investment priorities. Federally funded projects identified in the State TIP (STIP) can be implemented using current and proposed revenue sources based on the Alabama Department of Transportation (ALDOT) Work Program and locally designated transportation revenues. The Huntsville Area MPO FY2020-2023 TIP includes the following investment priorities:

Safety. For the Huntsville Area MPO, this includes the Bridge and Capacity, Bicycle/Pedestrian, Transportation Alternative, Transportation Systems Management and Operations (TSMO), Public Transportation, Resurfacing, and other miscellaneous categories in the TIP. The expectation of the TIP projects in each of these categories is to improve safety and to reduce fatalities once these projects are constructed.

Bridge and Pavement. The Bridge projects identified in the TIP will maintain the bridges classified in Good Condition and assist in improving the bridges classified in Poor Condition. Widening and Resurfacing Projects in the TIP will assist in improving the Interstate and Non-Interstate National Highway System pavements that are classified in Poor Condition as well as improving reliability of freight movement for interstate and Non-Interstate National Highway System roadways.

System Performance. The Huntsville Area MPO will use the performance of interstate and non-interstate system, freight movement, traffic congestion, and mobile source emissions to address system reliability and congestion mitigation.

Transit Asset Management (TAM). The Transit projects identified in the TIP will assist in keeping the transit vehicles and facilities in State of Good Repair.

The TIP includes specific investment priorities that support the MPO's goals including safety, efficiency, connectivity, economic vitality, security, quality of life,

and the planning process which guide the Evaluation Criteria. The Evaluation Criteria in the LRTP filters down to the TIP.

<u>Purpose</u>

This document provides language that Alabama's Metropolitan Planning Organizations (MPO) may incorporate in Long-Range Transportation Plan (LRTP) System Performance Reports to meet the federal transportation performance management rules.

The document is consistent with the Transportation Performance Management Agreement developed jointly by the Alabama Department of Transportation (ALDOT), the Huntsville Area Metropolitan Planning Organization, and Huntsville Public Transit Agency. This document outlines the minimum roles of ALDOT, the MPOs, and the public transportation providers in the MPO planning areas to ensure consistency to the maximum extent practicable in satisfying the transportation performance management requirements promulgated by the United States Department of Transportation in Title 23 Parts 450, 490, 625, and 673 of the Code of Federal Regulations (23 CFR). The document is organized as follows:

- Part 1 covers the Highway Safety measures (PM1);
- Part 2 covers the Pavement and Bridge Condition measures (PM2);
- Part 3 covers System Performance measures (PM3);
- Part 4 covers Transit Asset Management (TAM) measures; and
- Part 5 covers Transit Safety measures.

Part 1: Highway Safety measures (PM1)

Safety was the first national goal identified in the FAST Act. In March of 2016, the Highway Safety Improvement Program (HSIP) and Safety Performance Management Measures Rule (Safety PM Rule) was finalized and published in the Federal Register. The rule requires MPOs to set targets for the following safety-related performance measures and report progress to the State DOT:

- Number of Fatalities;

- Number of Serious Injuries;

- Number of Nonmotorized Fatalities and Serious Injuries;

- Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT); and

- Rate of Serious Injuries per 100 Million VMT.

The Alabama Departments of Transportation (ALDOT) Strategic Highway Safety Plan (SHSP) 2017 focused on how to accomplish the vision of eliminating fatalities and reducing serious injuries on all public roads. The SHSP development process included review of safety-related goals, objectives, and strategies in MPO plans. The SHSP guides ALDOT, MPOs, and other safety partners in addressing safety and defines a framework for implementation activities to be carried out. ALDOT establishes Safety Targets based on federal requirements. Each Alabama MPO are to either create their own or adopt ALDOT's targets and measures annually by the the end of February.

The SHSP highlights the continued commitment toward a vision of zero deaths. The SHSP documents the statewide performance measures ***Toward Zero Deaths*** for all transportation system users and the goal to ***reduce fatalities and serious injuries by 50 percent by 2035***.

Statewide Safety Performance Measurement (PM1) Targets approved by the ALDOT and supported by the most current resolution #01-22 of the Huntsville Area MPO:

RESOLUTION NO. 01-22
HUNTSVILLE-AREA METROPOLITAN PLANNING ORGANIZATION
AMENDING THE FY 2020-2023 TRANSPORTATION IMPROVEMENT PROGRAM

WHEREAS, federal regulations require that the Metropolitan Transportation Plans and Transportation Improvement Programs include Safety Performance Measurement (PM1) Targets for urbanized areas and;

WHEREAS, the Technical Coordinating Committee (TCC) of Huntsville Area Metropolitan Planning Organization (MPO) in coordination with the Federal Highway Administration and the Alabama Department of Transportation (ALDOT) has reviewed the requirement to adopt Safety Performance Measurement (PM1) Targets for use in the transportation process as required by 23 CFR 490.105;

WHEREAS, the TCC Committee at its March 16th, 2022 meeting recommended that Huntsville-Area MPO Policy Board adopt and support the Statewide Safety Performance Measurement (PM1) Targets approved by the ALDOT.

NOW, THEREFORE, BE IT RESOLVED that the Huntsville Area MPO Policy Board concurs with the recommendation of the Technical Coordinating Committee and here by adopts and supports the Statewide Safety Performance Measurement (PM1) Targets as approved by the ALDOT.

- PM1 Measure: *Number of fatalities*
  - Explanation: This target was developed through a trend line analysis of the five-year moving average for fatalities, Alabama unemployment rate trend, and Alabama Gross Domestic Product (GDP) trend.
  - 2022 Target: 961 (5-year rolling average)

- PM1 Measure: *Rate of fatalities*
  - Explanation: This target was developed using the fatality trend line plus a 1.7% increase associated with GDP and an estimated vehicle miles traveled (VMT) growth of 1%.
  - 2022 Target: 1.364 per 100 million vehicle miles traveled (5-year rolling average)

- PM1 Measure: *Number of serious injuries*
  - Explanation: This target was developed through a trend line analysis of the five-year moving average for serious injuries, Alabama unemployment rate trend, and Alabama Gross Domestic Product (GDP) trend.
  - 2022 Target: 6595 (5year rolling average)

- PM1 Measure: *Rate of serious injuries*
  - Explanation: This target was developed using the serious injuries trend line plus a 1.7% increase associated with GDP and an estimated vehicle miles traveled (VMT) growth of 1%.
  - 2022 Target: 9.355 per 100 million vehicle miles traveled (5-year rolling average)

- PM1 Measure: *Number of non-motorized fatalities and non-motorized serious injuries*
  - Explanation: This target was developed through a trend line analysis of the five-year moving average for non-motorized fatalities and serious injuries, Alabama unemployment rate trend, and Alabama Gross Domestic Product (GDP) trend.
  - 2022 Target: 366 (5-year rolling average)

CERTIFICATION

I hereby certify that the above is a true and correct copy of a Resolution 01-22 adopted by Huntsville-Area MPO Policy Board, at their meeting held on Wednesday, March 16, 2022 at 4pm.
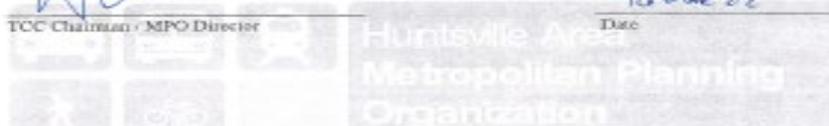
Recommended by:

_____
Huntsville-Area MPO Policy Board Chairperson

Date 3/16/2022

_____
TCC Chairman - MPO Director

Date 16 Mar 22

Statewide system conditions for each safety performance measure are included in Table 1 along with system conditions in the Alabama transportation planning area. System conditions reflect baseline performance (2014-2018). The latest safety conditions will be updated annually on a rolling five-year window and reflected within each subsequent system performance report, to track performance over time in relation to baseline conditions and established targets.

Table 1: Highway Safety (PM1) Conditions and Performance				
	Alabama Statewide Baseline Performance Targets (Five-Year Rolling Average)			
	CY2019	CY2020	CY2021	CY2022
PM1 Measure: *Number of fatalities*	2019 Target: 932	2020 Target: 964	2021 Target: 961	2022 Target: 961
PM1 Measure: *Rate of fatalities per 100 million VMT*	2019 Target: 1.33	2020 Target: 1.35	2021 Target: 1.364	2022 Target: 1.4
PM1 Measure: *Number of serious injuries*	2019 Target: 8,469	2020 Target: 8,143	2021 Target: 6,595	2022 Target: 6,000
PM1 Measure: *Rate of serious injuries per 100 million VMT*	2019 Target: 12.08	2020 Target: 11.08	2021 Target: 9.355	2022 Target: 9.000
PM1 Measure: *Number of non-motorized fatalities and non-motorized serious injuries*	2019 Target: 394	2020 Target: 384	2021 Target: 366	2022 Target: 365

Baseline Conditions
Huntsville Area MPO supports the states' Baseline Safety Performance Measures.

Trends Analysis
The process used to develop the Huntsville Area MPO's Long-Range Transportation Plan, *TRiP2045*, includes analysis of safety data trends, including the location and factors associated with crashes with emphasis on fatalities and serious injuries. The data is used to help identify regional safety issues and potential safety strategies for the LRTP and TIP.

The Alabama 2017 Strategic Highway Safety Plan (SHSP) focuses mainly on: (1) speed and impaired driving, the two largest factors that cause injury and fatal crashes, and (2) lack of proper restraint use, which is the single greatest factor influencing severity. Locations with the highest numbers of severe injury crashes, or hot spots, were included rather than a serious injury rate or number.

In the 5-year rolling average, Alabama fatal crashes decreased from 1,010 between the years 2012 and 2016 to 964 between the years of 2014 and 2018. Although the rate of serious injuries is trending downward from 8,369 (between years 2012 and 2016) to 8,143 (between 2014 and 2018) the rate of serious injuries is still high at 11.080 per million vehicle miles traveled. By focusing on the prevalent speeding locations, stakeholders implemented countermeasures such as evidence-based enforcement, educational programs, and engineering or design fixes to reduce fatalities, Alabama is committed to reducing this rate. Alabama continues to work toward the 2035 goal to reach a 50% reduction and sustain significant Toward Zero Deaths (TZD) progress.

A recent impacting trend is the direct effect of the Covid-19 pandemic on the transportation system. Although data is not currently available on ALDOT website to substantiate a decrease, freight, vehicle, and transit use, and therefore volume, is assumed to have moderately decreased in 2020. An important local economic driver, tourism and hospitality services also experienced a decrease with tourist destinations closed for a brief period, resulting in lower demand for transportation services and use. This trend is expected to increase as tourist destinations, retail, restaurants, and businesses continue to reopen.

Coordination with Statewide Safety Plans and Processes

The Huntsville Area MPO recognizes the importance of linking goals, objectives, and investment priorities to established performance objectives, and that this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the Huntsville Area MPO *TRiP2045* LRTP reflects the goals, objectives, performance measures, and targets as they are available and described in other state and public transportation plans and processes; specifically, the Alabama Strategic Highway Safety Plan (SHSP) and the Alabama Statewide Transportation Plan.

The Alabama Strategic Highway Safety Plan (SHSP) includes five major component areas to address roadway safety in the state. The goal of the plan is Toward Zero Deaths (TZD) program by working in all areas that influence fatal crashes, including changing the highway safety culture in the State by making TZD the responsibility of everyone. The safety components are:

- Driver Behavioral Crashes;
- Infrastructure Countermeasures;
- Legislative Initiative;
- Traffic Safety Information Systems (TSIS); and
- Safety Stakeholder Community

The Alabama Statewide Transportation Plan is a long-range plan that assesses the State's multimodal transportation system and presents plans for improvement and maintenance. The plan forecasts a minimum of 20 years and involves engagement with both public and private entities. The plan is designed to meet the goals and other requirements required by federal legislation with its emphasis on performance management. The most recent Statewide Transportation Plan was completed in July 2017.

The Alabama Highway Safety Improvement Program (HSIP) is an annual report that documents the statewide performance measures toward the zero deaths vision. It also identifies and reviews traffic safety issues around the state to identify locations with the potential for improvement.

<u>LRTP Safety Priorities</u>
TRiP2045 LRTP increases the safety of the transportation system for the Huntsville region for motorized and non-motorized users. *TRiP2045* LRTP also aligns with the Alabama SHSP with safety projects and educational initiatives working towards TZD.

The LRTP identifies safety needs within the metropolitan planning area and provides funding for targeted safety improvements. The Huntsville Area MPO has developed a project selection process using evaluation criteria to rank the established five safety performance measures.

Chapter 2 Vision & Goals of the adopted Huntsville Area MPO *TRiP2045* LRTP describes and lists some safety goals and objectives. One includes increasing the safety of the transportation system for motorized and non-motorized users. While another goal suggests: To improve the safety of our streets for all users, MPO member jurisdictions build sidewalks, ramps, crosswalks, pedestrian signals, bike routes and bike lanes. These infrastructure improvements reduce casualties and fatalities for pedestrians, cyclists, and people with disabilities over in Chapter 6.

The safety goal and objectives support the Moving Ahead for Progress in the 21st Century Act (MAP-21) Planning Factors and the Alabama Statewide Transportation Plan (July 2017) which had an emphasis on Performance Management. Now, they support the Bipartisan Infrastructure Law.

The Huntsville Area MPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the LRTP directly reflects the goals, objectives, performance measures, and targets as they are described in other transportation plans and processes.

Part 2: Pavement and Bridge Condition measures (PM2)

Bridge and Pavement (PM2) was the second national goal identified in the FAST Act and was finalized in May 2017 and published in the Federal Register. The rule requires MPOs to set targets for the following bridge and pavement related performance measures and report progress to the State DOT:

Targets for assessing <u>Pavement and Bridge Condition for the National Highway Performance Program (PM2)</u> for the following measures:
   a. Percentage of pavements on the Interstate System in Good condition
   b. Percentage of pavements on the Interstate System in Poor condition
   c. Percentage of pavements on the NHS (excluding the Interstate System) in Good condition
   d. Percentage of pavements on the NHS (excluding the Interstate System) in Poor condition
   e. Percentage of NHS bridge deck area classified in Good condition
   f. Percentage of NHS bridge deck area classified in Poor condition

Targets for Pavement and Bridge System Performance were adopted on November 28, 2018 by Resolution 12-18 for targets in 2021 which supported the ALDOT targets and will need to be adopted again by April 1, 2023 since they are four-year targets.

The four pavement condition measures represent the percentage of lane-miles on the Interstate and non-Interstate NHS that are in good condition or poor condition. The PM2 rule defines NHS pavement types as asphalt, jointed concrete, or continuous concrete. Five metrics are used to assess pavement condition:

- International Roughness Index (IRI) - an indicator of roughness; applicable to asphalt, jointed concrete, and continuous concrete pavements;
- Cracking percent - percentage of the pavement surface exhibiting cracking; applicable to asphalt, jointed concrete, and continuous concrete pavements;
- Rutting - extent of surface depressions; applicable to asphalt pavements only;
- Faulting - vertical misalignment of pavement joints; applicable to jointed concrete pavements only; and
- Present Serviceability Rating (PSR) – a quality rating applicable only to NHS roads with posted speed limits of less than 40 miles per hour (e.g., toll plazas, border crossings). States may choose to collect and report PSR for applicable segments as an alternative to the other four metrics.

For each pavement metric, a threshold is used to establish good, fair, or poor condition. Using these metrics and thresholds, pavement condition is assessed for each 0.1-mile section of the through travel lanes of mainline highways on the Interstate or the non-Interstate NHS. Asphalt pavement is assessed using the IRI,

cracking, and rutting metrics, while jointed concrete is assessed using IRI, cracking, and faulting. For these two pavement types, a pavement section is rated good if the rating for all three metrics are good, and poor if the ratings for two or more metrics are poor.

Continuous concrete pavement is assessed using the IRI and cracking metrics. For this pavement type, a pavement section is rated good if both metrics are rated good, and poor if both metrics are rated poor.

If a state collects and reports PSR for any applicable segments, those segments are rated according to the PSR scale. For all three pavement types, sections that are not good or poor are rated fair.

The good/poor measures are expressed as a percentage and are determined by summing the total lane-miles of good or poor highway segments and dividing by the total lane-miles of all highway segments on the applicable system. Pavement in good condition suggests that no major investment is needed and should be considered for preservation treatment. Pavement in poor condition suggests major reconstruction investment is needed due to either ride quality or a structural deficiency.

The bridge condition measures refer to the percentage of bridges by deck area on the NHS that are in good condition or poor condition. The measures assess the condition of four bridge components: deck, superstructure, substructure, and culverts. Each component has a metric rating threshold to establish good, fair, or poor condition. Each bridge on the NHS is evaluated using these ratings. If the lowest rating of the four metrics is greater than or equal to seven, the structure is classified as good. If the lowest rating is less than or equal to four, the structure is classified as poor. If the lowest rating is five or six, it is classified as fair.

The bridge measures are expressed as the percent of NHS bridges in good or poor condition. The percent is determined by summing the total deck area of good or poor NHS bridges and dividing by the total deck area of the bridges carrying the NHS. Deck area is computed using structure length and either deck width or approach roadway width.

A bridge in good condition suggests that no major investment is needed. A bridge in poor condition is safe to drive on; however, it is nearing a point where substantial reconstruction or replacement is needed.

Federal rules require state DOTs and MPOs to coordinate when setting pavement and bridge condition performance targets and monitor progress towards achieving the targets. States must establish:

• Four-year statewide targets for the percent of Interstate pavements in good and poor condition;

• Two-year and four-year targets for the percent of non-Interstate NHS pavements in good and poor condition; and

• Two-year and four-year targets for the percent of NHS bridges (by deck area) in good and poor condition.

MPOs must establish four-year targets for all six measures. MPOs can either agree to program projects in the LRTP and TIP that will support the statewide targets or establish their own quantifiable targets for the MPO's planning area. The two-year and four-year targets represent pavement and bridge condition at the end of calendar years 2019 and 2021, respectively.

Pavement and Bridge Condition Baseline Performance and Established Targets

This System Performance Report discusses the condition and performance of the transportation system for each applicable target as well as the progress achieved by the MPO in meeting targets in comparison with system performance recorded in previous reports. Because the federal performance measures are new, performance of the system for each measure has only recently been collected and targets have only recently been established. Accordingly, this first Huntsville Area MPO *TRiP2045* LRTP System Performance Report highlights performance for the baseline period, which is 2017. ALDOT will continue to monitor and report performance on a biennial basis. Future System Performance Reports will discuss progress towards meeting the targets since this initial baseline report.

Table 2 presents baseline performance for each PM2 measure for the State of Alabama. For the 2-Year Target Date ALDOT used 2020. The 4-Year Target is 2022.

Table 2: Pavement and Bridge (PM2) Conditions and Performance			
	Alabama Statewide Baseline Performance Targets		
	2017 (baseline)	2020 (2-yr target)	2022 (4-yr target)
PM2 Measure: *% of Pavements of the Interstate System in Good Condition*	n/a	n/a	> 50.0%
PM2 Measure: *% of Pavements of the Interstate System in Poor Condition*	n/a	n/a	< 5.0%
PM2 Measure: *% of Pavements of the Non-Interstate NHS in Good Condition*	79.9%	> 40.0%	> 40.0%
PM2 Measure: *% of Pavements of the Non-Interstate NHS in Poor Condition*	4.1%	< 5.0%	< 5.0%
PM2 Measure: *% of NHS bridges in Good condition by deck area*	27.2%	≥ 27.0%	≥ 27.0%
PM2 Measure: *% of NHS bridges in Poor condition by deck area*	2.0%	≤ 3.0%	≤ 3.0%

In compliance with MAP-21 and the FAST Act, ALDOT established PM2 targets and were adopted by MPO's by April 2019. ALDOT and the MPOs, along with Transit Providers, have a cooperative agreement in place to coordinate the development of the targets, the sharing of information related to the transportation performance measures, selection of targets, and reporting requirements. Typical highway projects, such as highway capacity, system preservation, bridge and safety projects, support the established targets.

ALDOT's Pavement Preservation Policy, approved by FHWA on June 2, 2019, is the planned strategy of cost-effective treatments to an existing roadway system that preserves the system, retards future deterioration, and maintains or improves the functional condition of the system without significantly increasing the structural capacity of the pavement.

In addition, MAP-21 requires DOTs to develop a Transportation Asset Management Plan (TAMP) for all NHS pavements and bridges within the state. The TAMP must include investment strategies leading to a program of projects that would make progress toward achievement of the state DOT targets for asset condition and performance of the NHS. The development process for the Alabama TAMP started in 2014 and a first draft was completed in 2016. In 2018, the TAMP was updated using 2017 pavement and bridge condition data. In 2019, the TAMP was updated to meet the guidelines for the annual consistency determination. The Final Report of the Alabama TAMP was released June 2020.

ALDOT's Transportation Asset Management Plan (TAMP) is consistent with ALDOT's desire to make data-driven spending decisions related to its assets. The TAMP is a central resource for multiple ALDOT Bureaus. The TAMP includes pavement and bridge inventory and condition, financial data, a revised risk register, and investment scenarios.

The Huntsville Area MPO agreed to support ALDOT pavement and bridge condition performance targets on September 12, 2018. By adopting ALDOT targets, the Huntsville Area MPO agrees to plan and program projects that help ALDOT achieve these targets in the *TRiP2045* LRTP and TIP.

The Huntsville Area MPO recognizes the importance of linking goals, objectives, and investment priorities to established performance objectives, and that this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the Huntsville Area MPO's *TRiP2045* LRTP reflects the goals, objectives, performance measures, and targets as they are described in other state and public transportation plans and processes, such as the Alabama Transportation Asset Management Plan.

• The Alabama Transportation Asset Management Plan (TAMP) explain the processes and policies affecting pavement and bridge condition and performance in the state. This plan presents a strategic and systematic process of operating, maintaining, and improving these assets effectively throughout their life cycle.

The Huntsville Area MPO's *TRiP2045* LRTP seeks to address system preservation, identifies infrastructure needs within the metropolitan planning area, and provides funding for targeted improvements. Goal C has been established for a transportation

system that is maintained and operated efficiently, with objectives to direct resources to preserve the existing infrastructure and replace deficient infrastructure.

Part 3: System Performance measures (PM3)

System Performance (PM3) was the third national goal identified in the FAST Act was also finalized in May 2017 and published in the Federal Register. The rule requires TPOs to set targets for the following system performance related performance measures and report progress to the State DOT.

Targets for assessing performance of the <u>National Highway System, Freight Movement on the Interstate System and Congestion Mitigation and Air Quality Improvement Program (PM3)</u> for the following performance measures:
    a. Percent of Person-Miles traveled on the Interstate System that are Reliable
    b. Percent of Person-Miles traveled in the Non-Interstate System that are Reliable
    c. Percentage of the Interstate System Mileage providing Reliable Truck Travel Times
    d. Annual hours of Peak-Hour Excessive Delay Per Capital
    e. Percent of Non-Single-Occupant-Vehicle (SOV) Travel
    f. Total Emissions Reduction

The data used to calculate PM3 measures are provided by FHWA via the National Performance Management Research Data Set (NPMRDS). This dataset contains travel times, segment lengths, and Annual Average Daily Travel (AADT) for Interstate and non-Interstate NHS roads.

The PM3 rule requires state DOTs and TPOs to coordinate when establishing performance targets for these measures and to monitor progress towards achieving the targets. ALDOT must establish:

- Two-year and four-year statewide targets for percent of person-miles on the Interstate system that are reliable.
- Four-year targets for the percent of person-miles on the non-Interstate NHS that are reliable; and
- Two-year and four-year targets for truck travel time reliability.

The two-year and four-year targets represent system performance at the end of calendar years 2019 and 2021, respectively.

<u>PM3 Baseline Performance and Established Targets</u>

The System Performance Report discusses the condition and performance of the transportation system for each applicable PM3 target as well as the progress achieved by the TPO in meeting targets in comparison with system performance recorded in previous reports. Because the federal performance measures are new, performance of the system for each measure has only recently been collected and targets have only recently been established. Accordingly, this Huntsville Area MPO *TRiP2045* LRTP

System Performance Report highlights performance for the baseline period, which is 2017. ALDOT will continue to monitor and report performance on a biennial basis. Future System Performance Reports will discuss progress towards meeting the targets since this initial baseline report.

Table 3 present baseline performance for each PM3 measure and two-year and four-year targets established by ALDOT and the Huntsville Area MPO planning area.

Table 3: National Highway System, Freight Movement on the Interstate System and Congestion Mitigation and Air Quality Improvement Program (PM3) Conditions and Performance			
	Alabama Statewide Baseline Performance Targets		
	2017 (Baseline)	2020 (2-yr target)	2022 (4-yr target)
PM3 Measure: *% of Person-Miles traveled on Interstate System that is Reliable*	96.4%	92.0%	92.0%
PM3 Measure: *% of Person-Miles traveled on Non-Interstate NHS System that is Reliable*	93.8%	90.0%	90.0%
PM3 Measure: *Truck Travel Time Reliability Index*	1.19	1.3	1.3

* Source: ALDOT Bureau of Office Engineer

To establish data-informed targets for the Truck Travel Time Reliability Performance (TTTR) measures, ALDOT used a novel forecasting methodology relating segment-level roadway capacity and traffic volume to reliability performance to forecast future performance as roadway volumes and capacities change. In addition to PM3 target setting, this methodology supports other planning uses, including estimating capacity project performance impacts, and supports a better understanding of the relationship between roadway volumes, capacities, and reliability. As stated in a December 6, 2018 letter to MPOs, ALDOT modified its 4-year targets. A resolution to adopt the modified ALDOT 4-year (2021) targets was approved by the Huntsville Area MPO on February 24, 2021, by way of resolution number 07-21.

For PM3 target setting purposes, this methodology generated multiple forecast scenarios, reflecting different levels of possible traffic growth rates and multiple investment strategies. The forecasts provide a realistic basis for setting future targets, while simultaneously demonstrating how growing travel demand affects system reliability and the user experience improvements created by ALDOT's investments in new system capacity. Forecasts were generated for 2018 – 2021, to coincide with the PM3 first performance period.

The forecasting methodology uses a statistical model to relate road segment reliability performance to roadway volume and capacity. Future performance is forecasted at the segment level by growing future traffic volumes by known growth rates, updating future road capacity to reflect programmed capacity projects scheduled for completion during the first performance period, and measuring the forecasted change in performance. Segment-level forecasts are aggregated to state-wide performance measure forecasts using the PM3 Final Rule measure calculating methodology.

Part 4: Transit Asset Management (TAM) measures

The Huntsville-Area MPO is also required to adopt State of Good Repair Performance Measures for Transit Asset Management (TAM). The TAM rule from the Federal Transit Administration became effective on October 1, 2016. The rule requires MPOs to set targets for transit related performance measures and report progress to the State DOT.

Targets for assessing performance of the <u>Transit Asset Management (TAM) Plan</u> for the following performance measures:
   a. Asset Category: Rolling Stock (All revenue vehicles)
         i. Age- % of revenue vehicles within an asset class that have met or exceed their Useful Life Benchmark
   b. Asset Category: Equipment (Non-revenue vehicles)
         i. Age- % of revenue vehicles within an asset class that have met or exceed their Useful Life Benchmark
   c. Asset Category: Facilities (the STATE will only rate FTA funded facilities)
         i. Condition- % of facilities with a condition rating below 3.0 on a FTA Transit Economic Requirement Modal (TERM) Scale
   d. The TAM final rule requires that all TRANSIT AGENCIES that are recipients and sub recipients of 49 USC Charter 53 funds to develop a TAM Plan.
   e. TRANSIT AGENCIES that are a part of the Group (Statewide) TAM Plan will provide transit data by asset class (both revenue and non-revenue) and facilities conditions on an annual basis to the STATE.
   f. TRANSIT AGENCIES and MPOs developing their own TAM plan will provide their targets and the final report to the STATE.
   g. The STATE and the MPO are required to integrate the TRANSIT AGENCY performance targets into the planning documents including Statewide Transportation Improvement Plan (STIP) and Transportation Improvement Plan (TIP), respectively, and the Statewide Long-Range Plan (LRP) and Metropolitan Transportation Plan (MTP).

For equipment and rolling stock classes, Useful Life Benchmark (ULB) is defined as the expected lifecycle of a capital asset, or the acceptable period of use in service, for a particular transit provider's operating environment. ULB considers a provider's unique operating environment such as geography and service frequency.

TAM targets were adopted by the Huntsville Area MPO on June 8, 2022, by Resolution 14-22. The infrastructure category does not apply to the Huntsville Area MPO since there is no rail in the MPO area. The rolling stock category consists of Vans, Cutaway Buses, Body on Chassis, and Full-Size Buses. The targets for these categories are Vans (reduce by 10 Percent of current inventory), Cutaway Buses (reduce by 10 Percent of current inventory), Body on Chassis (reduce by 10 Percent of current inventory), and Full-Size Buses (reduce by 10 Percent of current inventory).

The equipment category is to reduce Service Vehicles by 10 Percent that have met or exceeded their Useful Life Benchmark.

Updated TAM Plan Performance Targets		
Asset Category	Target	February 2022 Actual
Paratransit Fleet	30% of Vehicle Fleet not to Exceed 200,000 miles	24%
Fixed Route Bus Fleet	30% of Vehicle Fleet not to Exceed Useful life in Years	22%
Facility Condition	Not Greater than 20% of Facilities fall below 3.0 Condition Rating	0

Table 4. 1 Huntsville Public Transit TAM Plan Performance Targets

Public transportation agencies are required to establish and report transit asset management targets annually for the following fiscal year. Each public transit provider or its sponsors must share its targets, TAM, and asset condition information with each MPO in which the transit provider's projects and services are programmed in the MPO's TIP.

The TAM rule defines two tiers of public transportation providers based on size parameters. Tier I providers are those that operate rail service or more than 100 vehicles in all fixed route modes, or more than 100 vehicles in one non-fixed route mode. Tier II providers are those that are a subrecipient of FTA 5311 funds, or an American Indian Tribe, or have 100 or less vehicles across all fixed route modes or have 100 vehicles or less in one non-fixed route mode. A Tier I provider must establish its own transit asset management targets, as well as report performance and other data to FTA. A Tier II provider has the option to establish its own targets or to participate in a group plan with other Tier II providers whereby targets are established by a plan sponsor, typically a state DOT, for the entire group.

As shown in the following Table 4.2, Alabama has a total of 28 transit providers participating in the ALDOT Group TAM Plan. The TAM Plan was developed with and covers ALDOT's Tier II transit providers, specifically organizations that are recipients of Sections 5311 and 5307 FTA program funding. The Subrecipients included in this TAM Plan provide Demand Response and Fixed Route Service. ALDOT and its Subrecipients adopted internal performance targets in January 2017. It was agreed that the performance targets would be reviewed and updated annually. Each Subrecipient formally agreed to be part of the Group TAM Plan process and remained in close contact with ALDOT staff throughout the plan development. ALDOT's TAM Plan will be updated every four years with the next update scheduled for October 2022.

Formal Agency Name	Business Entity
Alabama-Tombigbee Regional Commission	ATRC Rural Transportation
Area Referral and Information Service for the Elderly	A.R.I.S.E. Inc.
Autauga County Commission	Autauga County Rural Transportation
Baldwin County Commission	Baldwin Regional Area Transit System (BRATS)
Birmingham Regional Paratransit Consortium	ClasTran
Blount County Commission	Blount County Public Transportation
Chilton County Commission	Chilton County Transit
City of Eufaula	Eufaula/Barbour Transit Authority
City of Guntersville	Guntersville Public Transportation
City of Troy	Pike Area Transit System (PATS)
Covington County Commission	Covington Area Transit System (CATS)
Cullman County Commission	Cullman Area Rural Transportation System (CARTS)
Dekalb County Commission	Dekalb County Rural Transportation
East Alabama Regional Planning and Development Commission	Area Wide Community Transportation Service (ACTS)
Educational Center for Independence	Educational Center for Independence
Escambia County Commission	Escambia County Alabama Transit System (ECAT)
Etowah County Commission	Etowah County Rural Area Transportation
H.E.L.P. Inc.	H.E.L.P. Inc.
Jackson County Commission	Jackson County Rural Transportation
Lee-Russell Council of Governments	Lee County Express (LETA) Phenix City Express (PEX)
Macon County Commission	Macon County Rural Transportation Program
Madison County Commission	Transportation for Rural Areas of Madison County (TRAM)
North Central Alabama Regional Council of Governments	NARCOG Regional Transit Agency
Northwest Alabama Council of Local Governments	NACOLG Transit
SE AL Regional Planning and Development Commission	Wiregrass Transit Authority
St. Clair County Commission	St. Clair County Rural Transportation Program
Walker County Commission	Walker County Rural Transportation Program
West Alabama Health Services, Inc.	West Alabama Public Transportation

Table 4. 2 Alabama Group TAM Plan Participants

The Huntsville Area MPO has the following Tier I and Tier II providers operating in the region.

・Tier I: Madison County Commission's Transportation for Rural Areas of Madison County (TRAM)

・Tier II: Huntsville Public Transit System

The Huntsville Public Transit system is included in group TAM plans developed by the ALDOT office in Montgomery.

The statewide group TAM targets are based on the condition of existing transit assets and planned investments in equipment, rolling stock, infrastructure, and facilities over the next year. The targets reflect the most recent data available on the number,

age, and condition of transit assets, and expectations and capital investment plans for improving these assets during the next fiscal year.

As required by FTA, ALDOT will update the TAM Plan at least once every four years. ALDOT updated the TAM Plan June 2020. ALDOT will update the statewide performance targets for the participating agencies on an annual basis and will notify the participating transit agencies and the MPOs in which they operate when the targets are updated.

Part 5: Transit Safety measures

The Public Transportation Agency Safety Plan (PTASP) regulation, at 49 CFR Part 673, requires covered public transportation providers and State Departments of Transportation (DOT) to establish Safety Performance Targets (SPTs) to address the Safety Performance Measures (SPMs) identified in the National Public Transportation Safety Plan (49 CFR § 673.11(a)(3)).

According to the National Safety Council, passengers on the nation's bus, rail, or commuter rail systems are 40 times less likely to be involved in a fatal accident, and 10 times less likely to be involved in an accident resulting in injury compared to traveling by automobile

Targets for assessing performance of the <u>Public Transportation Agency Safety Plan (PTASP)</u> for the following performance measures (applicable to demand response/fixed route services):
   a. Fatality by Mode
         i. Fatality Total
         ii. Rate of Fatalities (per vehicle revenue mile)
   b. Injuries by Mode
         i. Injuries Total
         ii. Rate of Injuries (per vehicle revenue mile)
   c. Safety Events by Mode
         i. Safety Event Total
         ii. Rate of Safety Events (per vehicle revenue mile)
   d. System Reliability by Mode
         i. Miles between major mechanical failures
   e. The PTASP final rule requires that TRANSIT AGENCIES that are recipients and sub recipients of Urbanized Area Formula Grant Program under 49 USC 5307 develop safety performance targets within their Agency Safety Plan (ASP). Each TRANSIT AGENCY must provide the STATE and its respective MPOs its safety performance targets to assist the STATE and MPOs with capital program planning process.
   f. STATE and MPOs are required to integrate the TRANSIT AGENCY performance targets into the planning documents including Statewide Transportation Improvement Plan (STIP) and Transportation Improvement Plan (TIP), respectively, and the Statewide Long-Range Plan (LRP) and Metropolitan Transportation Plan (MTP).

Each provider of public transportation that is subject to the rule must certify it has a PTASP, including transit safety targets for the above measures, in place no later than July 20, 2020. However, on April 22, 2020, FTA issued a Notice of Enforcement Discretion that extends the PTASP deadline to December 31, 2020, due to the extraordinary operational challenges presented by the COVID-19 public health emergency.

Once the public transportation provider establishes targets, it must make the targets available to MPOs to aid in the planning process. MPOs have 180 days after receipt of the PTASP targets to establish transit safety targets for the MPO planning area. In addition, the Huntsville Area MPO must reflect those targets in any LRTP, and TIP updated on or after July 20, 2021.

In Alabama, transit agencies develop their own Public Transportation Agency Safety Plans. The transit agency's governing body adopts their respective safety plan. The ALDOT will review, approve, and monitor the implementation of the Public Transportation Agency Safety Plan to ensure compliance with the oversight agency's program standard at each transit agency.

In future LRTP updates, additional TAM performance data and targets will be available to allow a fuller discussion of trends and progress toward achieving targets.

The Huntsville Area MPO recognizes the importance of linking goals, objectives, and investment priorities to stated performance objectives, and that establishing this link is critical to the achievement of national transportation goals and statewide and regional performance targets. As such, the LRTP directly reflects the goals, objectives, performance measures, and targets as they are described in other public transportation plans and processes, including the Huntsville Area MPO FY 2020-2023 TIP, the current Huntsville Area *TRiP 2045* LRTP, and the Huntsville Public Transit Development Plan.

Baseline Safety Performance Measures

Mode	Fatalities	Rate of Fatalities	Injuries	Rate of Injuries	Safety Events	Rate of Safety Events	Mean Distance Between Major Machanical Failures
Fixed Route Bus	0	0	11	0.0000195	33	0.0000586	28,147
Demand Response	0	0	12	0.0000213	34	0.0000702	80,728

2021 Actual Safety Performance Results

Mode	Fatalities	Rate of Fatalities	Injuries	Rate of Injuries	Safety Events	Rate of Safety Events	Mean Distance Between Major Machanical Failures
Fixed Route Bus	0	0	0	0	19	0.000024	8,979
Demand Response	0	0	4	0.000018	8	0.000018	44,758

	Annual Revenue Vehicle Miles	Annual Mechancial Failures
Fixed Route	808146	90
Demand Response	447579	10

Updated (New) Safety Performance Targets for 2022

Mode	Fatalities	Rate of Fatalities	Injuries	Rate of Injuries	Safety Events	Rate of Safety Events	Mean Distance Between Major Machanical Failures
Fixed Route Bus	0	0	4	0.00000495	26	0.000032	18,563
Demand Response	0	0	8	0.00001787	21	0.000047	62,743

The Huntsville Area MPO will coordinate with public transportation providers in the planning area on the development and establishment of transit safety targets. Targets for transit safety performance were approved by the Huntsville Area MPO Policy Board at the June 2022 meeting and are considered in the Huntsville Public Transit Development Plan that is currently being updated. LRTP amendments or updates after July 20, 2021, will include the required details about transit safety performance data and targets.