



Move People & Goods | Create Jobs | Strengthen Communities



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# **Broward Metropolitan Planning Organization Commitment 2045 Metropolitan Transportation Plan**

**Technical Report #3**

# **Goals, Objectives, & Measures of Effectiveness**

## **Revised Report**

**December 4, 2019**

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### **MPO MISSION STATEMENT**

To collaboratively plan, prioritize, and fund the delivery of diverse transportation options.

### **MPO VISION STATEMENT**

Our work will have measurable positive impact by ensuring transportation projects are well selected, funded, and delivered.

### **Core Products of the Broward MPO**



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# Commitment 2045 Goals, FAST Act, & Florida Transportation Plan (FTP)

The Fixing America's Surface Transportation Act (FAST Act) was signed into law by President Obama in 2015 and continued the performance-based planning process introduced in the Moving Ahead for Progress in the 21st Century Act (MAP-21). The FAST Act is the first federal law passed in more than a decade that provides long-term funding for surface transportation planning and investment. As with previous transportation laws, the FAST Act includes a series of metropolitan planning factors that ensure that the work of the MPO is based on a continuous, cooperative, and comprehensive process. With the passage of the FAST Act, two additional planning factors have been added. Following are the 10 planning factors that are to be applied to the metropolitan planning process for all metropolitan planning organizations, including the Broward MPO:

- (1) Support the *economic vitality* of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- (2) Increase the *safety* of the transportation system for motorized and non-motorized users.
- (3) Increase the *security* of the transportation system for motorized and non-motorized users.
- (4) Increase *accessibility* and *mobility* of people and freight.
- (5) Protect and *enhance the environment*, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- (6) Enhance the *integration* and *connectivity* of the transportation system, across and between modes, for people and freight.
- (7) Promote efficient *system management* and operation.
- (8) Emphasize the *preservation* of the existing transportation system.

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- (9) Improve the *resiliency* and *reliability* of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
- (10) Enhance *travel* and *tourism*.

The Broward MPO has established three key goals to respond to the requirements of the metropolitan planning process and address the specific needs of Broward County and its interaction with the region:

- **Move People and Goods** – maintaining existing infrastructure, improving multimodal accessibility to places where people want to go, providing options to people with limited means, expanding freight and good movement opportunities, achieving and maintaining acceptable performance on all forms of transportation, etc.
- **Create Jobs** – providing access to jobs and major employment centers, expanding freight and goods movement opportunities, fostering trade and tourism, etc.
- **Strengthen Communities** – promoting a choice of transportation alternatives that improve health and allow neighborhoods to be more integrated into the larger region, promoting infill development patterns, maintaining a healthy environment, realizing equitable distribution of benefits and costs to all communities and distinct populations, promoting economical transportation, improving safety, etc.

Table 1 indicates which planning factors are being addressed by each of the three key goals adopted by the Broward MPO.

In addition, it is important to note that the three key goals of the MTP are consistent with the seven goals of FDOT's 2015 Florida Transportation Plan (FTP) Policy Element (see Appendix A for more information). The FTP goals include the following:

1. Safety and Security for Residents, Visitors, and Businesses
2. Agile, Resilient, and Quality Infrastructure
3. Efficient and Reliable Mobility for People and Freight
4. More Transportation Choices for People and Freight

**Table 1: 2045 MTP Goals and FAST Act Planning Factors**

2045 MTP Goals		GOAL 1	GOAL 2	GOAL 3
FAST Act Planning Factors		Move People and Goods	Create Jobs	Strengthen Communities
1)	Support Economic Vitality			
2)	Increase Safety			
3)	Increase Security			
4)	Increase Accessibility and Mobility of People and Freight			
5)	Improve Quality of Life, Environment, Energy Conservation, and Plan Consistency			
6)	Enhance Integration and Connectivity Across and Between Modes			
7)	Promote System Management and Operation			
8)	Emphasize Preservation of the Existing System			
9)	Improve Resiliency and Reliability			
10)	Enhance Travel and Tourism			

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5. Transportation Solutions that Support Florida's Global Economic Competitiveness
  6. Transportation Solutions that Support Quality Places to Live, Learn, Work, and Play
  7. Transportation Solutions that Support Florida's Environment and Conserve Energy

## Objectives & Performance Measure Areas

Evaluating the effectiveness of the 2045 MTP is conducted by defining a series of measures that tie back to the Goals and Objectives of the plan. For each of the three MTP Goals, measurable objectives are proposed. Performance measures will then determine the extent to which objectives are achieved under various scenarios developed for the 2045 MTP.

- The proposed objectives are reflected for each of the three MPO goals in Tables 2, 3, and 4, respectively.
- These tables also include performance measure areas, which are grouped categories of similar performance measures that will be used to evaluate the 2045 MTP scenarios and the resulting Needs and Financially Feasible Plans.
- The tables include columns to indicate how the objectives are related to the 10 planning factors listed previously in this technical report. This confirms that the goals and objectives are comprehensive in addressing the planning factors.
- The performance measures developed for each performance measure area will include those required in the National Transportation Performance Management Rulemaking as well as accessibility and connectivity measures developed specifically for evaluating the MPO's 2045 MTP.

**Table 2: Goal 1 Objectives and FAST Act Planning Factors**

Goal 1 – Move People and Goods		FAST Act Planning Factors*									
Objective	Performance Measure Area**	1)	2)	3)	4)	5)	6)	7)	8)	9)	10)
1-1: Maintain infrastructure.	Operations/Maintenance Funding							✓	✓		
	Pavement Condition								✓		
	NHS Bridge Condition								✓		
1-2: Provide transportation options.	Multimodal Choices	✓			✓		✓				✓
1-3: Manage roadway congestion.	System Performance	✓			✓		✓				
	Annual Hours of Excessive Delay per Capita	✓				✓		✓			
1-4: Improve travel time reliability/consistency.	Travel Time Reliability	✓			✓					✓	
1-5: Improve transportation accessibility for all users of the transportation system.	Accessibility/Connectivity				✓	✓	✓				
1-6: Improve safety and security for all system users.	HSIP Performance Measures		✓	✓							
1-7: Increase transit ridership.	Transit Quality/Performance				✓	✓	✓				✓
	Transit Demand				✓	✓	✓				
	Transit Supply				✓	✓	✓				✓
1-8: Shorten project delivery.	Project Delivery: Right-of-Way								✓		
1-9: Improve truck travel time reliability/consistency.	Truck Travel Time Reliability	✓			✓					✓	

\*Refer to Table 1 for description of FAST Act Planning Factors.

\*\*Performance Measure Areas are grouped categories of similar performance measures that will be used to evaluate scenarios.

**Table 3: Goal 2 Objectives and FAST Act Planning Factors**

Goal 2 - Create Jobs		FAST Act Planning Factors*									
Objective	Performance Measure Area**	1)	2)	3)	4)	5)	6)	7)	8)	9)	10)
2-1: Maintain or reduce average travel time to major economic centers of the urban area.	Access to Jobs	✓					✓				✓
2-2: Support smart growth and transit-oriented development.	Accessibility/Connectivity				✓		✓				
2-3: Support efficient transportation investments.	Cost of Congestion					✓					
2-4: Maximize private investments in transportation service provision.	Public Private Partnership	✓									
2-5: Fund and support implementation of multimodal transportation projects.	Multimodal Transportation Projects	✓			✓		✓				✓

\*Refer to Table 1 for description of FAST Act Planning Factors.

\*\*Performance Measure Areas are grouped categories of similar performance measures that will be used to evaluate scenarios.

**Table 4: Goal 3 Objectives and FAST Act Planning Factors**

Goal 3 – Strengthen Communities		FAST Act Planning Factors*									
Objective	Performance Measure Area**	1)	2)	3)	4)	5)	6)	7)	8)	9)	10)
3-1: Improve transportation accessibility for all users of the transportation system.	Accessibility/Connectivity					✓	✓				
3-2: Strive for the equitable distribution of transportation benefits and costs.	Accessibility/Connectivity (Transportation Equity)				✓	✓	✓	✓			
3-3: Improve safety and security for all system users.	HSIP Performance Measures		✓	✓							
3-4: Reduce pollutants generated by vehicular travel.	CMAQ: On-Road Mobile Source Emissions					✓					
	Autonomous/Connected Vehicle Integration		✓	✓		✓					✓
3-5: Promote resiliency in response to climate- and weather-related events.	Incorporation of Adaptation/ Resiliency Strategies									✓	
3-6: Distinguish quality of life considerations by community.	Community Input	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

\*Refer to Table 1 for description of FAST Act Planning Factors.

\*\*Performance Measure Areas are grouped categories of similar performance measures that will be used to evaluate scenarios.

# FAST Act Performance Measures

As previously introduced, reforms made by MAP-21 and the FAST Act address transitioning to a performance-based program and include establishing national performance goals for federal-aid highway programs, incorporating performance goals, measures, and targets into the process of identifying needed improvements and project selection. Performance measurement is being implemented to transform the federal-aid highway program and to provide a means to the most efficient investment of federal transportation funds, refocus on national transportation goals, increase the accountability and transparency of the federal-aid highway program, and improve decision-making through performance-based planning and programming.

As proposed in 23 CFR 490, transportation performance measures focus around six core areas to assess the:

- Highway Safety Improvement Program (HSIP);
- Pavement Condition;
- Performance of the National Highway System (NHS);
- Freight Movement on the Interstate System;
- Traffic Congestion of the Congestion Mitigation and Air Quality (CMAQ) Program; and
- On-Road Mobile Source Emissions of the Congestion Mitigation and Air Quality (CMAQ) Program.

In complying with federal requirements, the *Commitment 2045* MTP will begin incorporating the National Performance Management Measures into the long-range metropolitan planning process as applicable, while outside of the MTP process, the Broward MPO will annually monitor and document the National Performance Management Measures in the MPO's *State of the System Performance Report* and as part of the Transportation Improvement Program. See Appendix A for additional information about the federal and state context for the MTP process.

## System Performance Report

Pursuant to MAP-21, enacted in 2012, and the FAST Act, enacted in 2015, state DOTs and 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.

On May 27, 2016, FHWA and FTA issued the Final Rule on Statewide and Nonmetropolitan Transportation Planning and Metropolitan Transportation Planning (Planning Rule). This rule details how state DOTs and MPOs must implement new MAP-21 and FAST Act transportation planning requirements, including transportation performance management provisions.

In accordance with the Planning Rule, the Broward MPO must include a description of the performance measures and targets that apply to the MPO planning area and a System Performance Report as an element of the MTP. The System Performance Report evaluates the condition and performance of the transportation system with respect to required performance targets and reports on progress achieved in meeting the targets in comparison with baseline data and previous reports.

There are several milestones related to the required content of the System Performance Report:

- In any LRTP adopted on or after May 27, 2018, the System Performance Report must reflect Highway Safety (PM1) measures.
- In any LRTP adopted on or after October 1, 2018, the System Performance Report must reflect Transit Asset Management measures.
- In any LRTP adopted on or after May 20, 2019, the System Performance Report must reflect Pavement and Bridge Condition (PM2) and System Performance (PM3) measures.
- In any LRTP adopted on or after July 20, 2021, the System Performance Report must reflect Transit Safety measures.

*Commitment 2045* was adopted on December 12, 2019. Per the Planning Rule, the System Performance Report for the Broward MPO includes the required Highway Safety (PM1), Bridge and Pavement (PM2), System Performance (PM3), and Transit Asset Management sections. An introduction to the Transit Safety measures is provided at the end of the System Performance Report; however, as safety targets were not adopted prior to the MTP, a discussion of these targets and progress achieved is not possible.

### Highway Safety Measures (PM1)

Statewide targets for highway-related measures were adopted by FDOT on August 31, 2018, and the MPO agreed to plan and program projects so they contribute toward the accomplishment of FDOT targets. The Broward MPO adopted FDOT’s PM1 targets on November 14, 2018.

Table 5 shows the areas in which the MPO is expressly supporting the statewide target developed by FDOT.

**Table 5: Highway Safety (PM1) Measures and Targets**

Performance Target	Broward MPO agrees to plan and program projects so they contribute toward the accomplishment of the FDOT safety target of zero
Number of Fatalities	✓
Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT)	✓
Number of Serious Injuries	✓
Rate of Serious Injuries per 100 Million VMT	✓
Number of Non-Motorized Fatalities/Non-Motorized Serious Injuries	✓

Statewide system conditions for each safety performance measure are shown in Table 6 with the system conditions in the Broward MPO metropolitan planning

area. These conditions reflect baseline performance, which for this first report is the same as the current reporting period (2013–2017). The safety conditions will be updated annually on a rolling five-year window and reflected in each subsequent system performance report to track performance over time in relation to baseline conditions and established targets.

**Table 6: Highway Safety (PM1) Conditions and Performance**

Performance Measure	Florida Statewide Baseline Performance (Five-Year Rolling Average 2013–2017)	Calendar Year 2019 Florida Performance Targets (Vision 0)
Number of Fatalities	2,685.6	0
Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT)	1.3	0
Number of Serious Injuries	20,830.0	0
Rate of Serious Injuries per 100 Million VMT	10.2	0
Number of Non-Motorized Fatalities/Non-Motorized Serious Injuries	3,253.0	0

### Baseline Conditions

To evaluate baseline Safety Performance Measures, the most recent five-year rolling average (2013–2017) of crash data and Vehicle Miles Traveled (VMT) were used. Table 7 presents the Baseline Safety Performance Measures for Florida and the Broward MPO.

### Trend Analysis

The MPO uses crash data tracking fatalities and serious injuries in Broward county to analyze past trends and identify regional safety issues. Tracking these measures will help to estimate the effectiveness of future MPO transportation investment, as reflected in the TIP. Table 8 shows the changes in Safety Performance Measures for the Broward MPO from 2013 through 2017. The measures shown in Table 8 were calculated by following the same methodology as that used to calculate the baseline conditions.

**Table 7: Baseline Safety Performance Measures**

Performance Measure	Florida (Five-Year Rolling Average 2013–2017)	Broward MPO (Five-Year Rolling Average 2013–2017)
Number of Fatalities	2,685.6	206.6
Rate of Fatalities per 100 Million Vehicle Miles Traveled (VMT)	1.3	1.228
Number of Serious Injuries	20,830.0	1,633.8
Rate of Serious Injuries per 100 Million VMT	10.2	9.782
Number of Non-Motorized Fatalities/Non-Motorized Serious Injuries	3,253.0	333.0

**Table 8: Trends of Broward Safety Performance Measures**

Performance Measure	2009–2013	2010–2014	2011–2015	2012–2016	2013–2017
Number of Fatalities	178.4	175.0	183.0	198.6	206.6
Number of Serious Injuries	2,080.6	2,003.8	1,888.6	1,776.6	1,633.8
Fatality Rate per 100 million VMT	1.009	1.074	1.109	1.199	1.228
Serious Injury Rate per 100 million VMT	12.801	12.277	11.446	10.801	9.782
Total Number of Non-Motorized Fatalities and Serious Injuries	351.4	350.4	341.2	351.8	333.0
VMT (100 MVMT)	162.710	163.403	165.204	165.202	167.814

## Coordination with Statewide Safety Plans and Processes

The Broward 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, *Commitment 2045* 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 Florida Strategic Highway Safety Plan (SHSP), the Florida Highway Safety Improvement Program (HSIP), and the Florida Transportation Plan (FTP).

- The 2016 Florida SHSP focuses on how to accomplish the vision of eliminating fatalities and reducing serious injuries on all public roads. It was developed in coordination with Florida's 27 MPOs through Florida's MPO Advisory Council (MPOAC). The SHSP guides FDOT, MPOs, and other safety partners in addressing safety and defines a framework for implementation activities to be carried out throughout the state.
- The Florida HSIP process provides for a continuous and systematic process that identifies and reviews traffic safety issues around the state to identify locations with potential for improvement. The goal of the HSIP process is to reduce the number of crashes, injuries, and fatalities by eliminating certain predominant types of crashes through the implementation of engineering solutions.
- Transportation projects are identified and prioritized with the MPOs and nonmetropolitan local governments. Data are analyzed for each potential project using traffic safety data and traffic demand modeling, among other data. The *FDOT Project Development and Environment Manual* requires the consideration of safety when preparing a proposed project's purpose and need and defines several factors related to safety, including crash modification factors and safety performance factors, as part of the analysis of alternatives. MPOs and local governments consider safety data analysis when determining project priorities.

## MTP Safety Priorities

*Commitment 2045* increases the safety of the transportation system for motorized and non-motorized users as required. The MTP aligns with the Florida SHSP and HSIP with specific strategies to improve safety performance focused on prioritized safety projects, pedestrian and/or bicycle safety enhancements, and traffic operation improvements to address our goal to reduce fatalities and serious injuries.

The MTP identifies safety needs within the metropolitan planning area and provides funding for targeted safety improvements. The adopted goals and objectives for this MTP include Goal 1, Move People & Goods, which includes Objective 1-6, Improve system safety and security for all users. To satisfy this objective, the MPO developed a project selection process that identifies safety as one of the six planning factors by which projects are scored and accounts for up to 20% of the project's total score. Through the MTP, a funding program is established specifically for Systems Management and Safety projects, to which 15% of available revenues were allocated. Two additional funding programs, Complete Streets and Other Localized Initiatives and Complete Streets Master Plan, are dedicated to improving multimodal travel conditions within Broward County and, by default, focus on safety of all road users.

*Commitment 2045* will provide information from the FDOT HSIP annual reports to track the progress made toward the statewide safety performance targets. The MPO will document the progress on any safety performance targets established by the MPO for its planning area.

## **Pavement and Bridge Condition Measures (PM2)**

In January 2017, USDOT published the Final Rule on Pavement and Bridge Condition Performance Measures, also referred to as the PM2 Rule. This rule establishes the following six performance measures:

1. Percent of Interstate pavements in good condition
2. Percent of Interstate pavements in poor condition
3. Percent of non-Interstate National Highway System (NHS) pavements in good condition

4. Percent of non-Interstate NHS pavements in poor condition
5. Percent of NHS bridges (by deck area) classified as in good condition
6. Percent of NHS bridges (by deck area) classified as in poor condition

For pavement measures, five pavement metrics are used to assess condition:

- International Roughness Index (IRI) – an indicator of roughness; applicable to all asphalt and concrete pavements
- Cracking percent – percentage of pavement surface exhibiting cracking; applicable to all asphalt and concrete pavements
- Rutting – extent of surface depressions; applicable to asphalt pavements
- Faulting – vertical misalignment of pavement joints; applicable to certain types of concrete pavements
- Present Serviceability Rating (PSR) – quality rating applicable only to certain lower speed roads

For each pavement metric, a threshold is used to establish good, fair, or poor condition. 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 using these metrics and thresholds. A pavement section is rated as good if all three metric ratings are good and poor if two or more metric ratings are poor. Sections that are not good or poor are considered 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.

Bridge condition measures refer to the percentage of bridges by deck area on the NHS that are in good 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 7, the structure is classified as good. If the lowest rating is less than or equal to 4, the structure is classified as poor. If the lowest rating is 5 or 6, 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 but is nearing a point where substantial reconstruction or replacement is needed.

#### 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 and the progress achieved by the MPO in meeting these targets in comparison with system performance recorded in previous reports. Because the Federal performance measures are new, performance of the system for each measure only recently has been collected and targets only recently have been established. Accordingly, this first MTP System Performance Report highlights performance for the baseline period of 2017. FDOT 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 9 presents baseline performance for each PM2 measure for the state and for the MPO planning area as well as the two-year and four-year targets established by FDOT for the state.

FDOT established statewide PM2 targets on May 18, 2018. In determining its approach to establishing performance targets for the Federal pavement and bridge condition performance measures, FDOT considered many factors. FDOT is mandated by Florida Statute 334.046 to preserve the state's pavement and bridges to specific standards. To adhere to the statutory guidelines, FDOT

**Table 9: Pavement and Bridge Condition Performance Measures and Targets**

Performance Measures	Statewide Performance (2017 Baseline)	Broward Performance (2017 Baseline)	Statewide 2-Year Target (2019)	Statewide 4-Year Target (2021)
Percent of Interstate pavements in good condition	66%	76.6%	n/a	60%
Percent of Interstate pavements in poor condition	0.1%	0.0%	n/a	5%
Percent of non-Interstate NHS pavements in good condition	76.4%	38.4%	40%	40%
Percent of non-Interstate NHS pavements in poor condition	3.6%	0.4%	5%	5%
Percent of NHS bridges by deck area in good condition	67.7%	79.1%	50%	50%
Percent of NHS bridges by deck area in poor condition	1.2%	0.0%	10%	10%

prioritizes funding allocations to ensure that the current transportation system is adequately preserved and maintained before funding is allocated for capacity improvements. These statutory guidelines envelope the statewide Federal targets that have been established for pavements and bridges.

In addition, MAP-21 requires FDOT to develop a Transportation Asset Management (TAM) Plan for all NHS pavements and bridges within the state. The TAM Plan 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. FDOT's TAM Plan was updated to reflect MAP-21 requirements in 2018.

Federal pavement condition measures also require a new methodology that is a departure from the methods currently used by FDOT and uses different ratings and pavement segment lengths. For bridge condition, performance is measured in deck area under the Federal measure, whereas FDOT programs its bridge

repair or replacement work on a bridge-by-bridge basis. As such, the Federal measures are not directly comparable to the methods that are most familiar to FDOT.

In consideration of these differences and the unfamiliarity associated with the new required processes, FDOT took a conservative approach when setting its initial pavement and bridge condition targets.

### Coordination with Statewide Plans

The Broward 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 MTP reflects the goals, objectives, performance measures, and targets as they are described in other State and public transportation plans and processes, including the Florida Transportation Plan (FTP) and the Florida Transportation TAM Plan.

The FTP is the single overarching statewide plan guiding Florida's transportation future. It defines the State's long-range transportation vision, goals, and objectives and establishes the policy framework for the expenditure of State and Federal funds flowing through FDOT's work program. One of the seven goals defined in the FTP is Agile, Resilient, and Quality infrastructure.

The Florida TAM Plan explains the processes and policies affecting pavement and bridge condition and performance in the state. It presents a strategic and systematic process of operating, maintaining, and improving these assets effectively throughout their life cycle.

The MTP seeks to address system preservation, identifies infrastructure needs within the metropolitan planning area, and provides funding for targeted improvements. Goal 1, Move People & Goods, includes Objective 1-1, Maintain infrastructure, and identifies the PM2 performance measures and targets as the measures for determining achievement. The project prioritization criteria for this MTP included pavement and bridge condition criteria for scoring projects.

On or before October 1, 2020, FDOT will provide FHWA and the Broward MPO with a detailed report of pavement and bridge condition performance covering

January 1, 2018, to December 31, 2019. FDOT and the Broward MPO also will have the opportunity at that time to revisit the four-year PM2 targets.

### **System Performance, Freight, and Congestion Mitigation & Air Quality Improvement Program Measures (PM3)**

In January 2017, USDOT published the Final Rule on System Performance/Freight/CMAQ Performance Measures to establish measures to assess passenger and freight performance on the Interstate and non-Interstate NHS and traffic congestion and on-road mobile source emissions in areas that do not meet federal National Ambient Air Quality Standards (NAAQS). The rule, referred to as the PM3 Rule, requires MPOs to set targets for the following six performance measures.

#### National Highway Performance Program (NHPP)

1. Percent of person-miles on Interstate system that are reliable (Level of Travel Time Reliability) (LOTTR)
2. Percent of person-miles on non-Interstate NHS that are reliable (LOTTR)

#### National Highway Freight Program (NHFP)

3. Truck Travel Time Reliability index (TTTR)

#### Congestion Mitigation and Air Quality Improvement Program (CMAQ)

4. Annual hours of peak-hour excessive delay per capita (PHED)
5. Percent of non-single occupant vehicle (SOV) travel
6. Cumulative 2- and 4-year reduction of on-road mobile source emissions (NOx, VOC, CO, PM10, and PM2.5) for CMAQ-funded projects

In Florida, only the two LOTTR performance measures and the TTTR performance measure apply. Because all areas in Florida meet current NAAQS, the last three measures listed pertaining to the CMAQ Program do not currently apply in Florida.

LOTTR is defined as the ratio of longer travel times (80th percentile) to a normal travel time (50th percentile) over all applicable roads during four time periods (AM peak, Mid-day, PM peak, and weekends) that cover the hours of

6:00 am to 8:00 pm each day. The LOTTR ratio is calculated for each roadway segment, essentially comparing the segment with itself. Segments with  $LOTTR \geq 1.50$  during any of the above time periods are considered unreliable. The two LOTTR measures are expressed as the percent of person-miles traveled on the Interstate or non-Interstate NHS system that are reliable. Person-miles consider the number of people traveling in buses, cars, and trucks over these roadway segments. To obtain person miles traveled, the vehicle miles traveled (VMT) for each segment are multiplied by the average vehicle occupancy for each type of vehicle on the roadway. To calculate the percent of person miles traveled that are reliable, the sum of the number of reliable person miles traveled is divide by the sum of total person miles traveled.

TTTR is defined as the ratio of longer truck travel times (95th percentile) to a normal travel time (50th percentile) over the Interstate during five time periods (AM peak, Mid-day, PM peak, weekend, and overnight) that cover all hours of the day. TTTR is quantified by taking a weighted average of the maximum TTTR from the five time periods for each Interstate segment. The maximum TTTR is weighted by segment length, then the sum of the weighted values are divided by the total Interstate length to calculate the Travel Time Reliability Index.

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

### PM3 Baseline Performance and Established Targets

The System Performance Report discusses the condition and performance of the transportation system for each applicable PM3 target and 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 only recently has been collected and targets only recently have been established. Accordingly, this first MTP System Performance Report highlights performance for the baseline period of

2017. FDOT 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 10 presents baseline performance for each PM3 measure for the state and for the MPO planning area and the two- and four-year targets established by FDOT for the state.

**Table 10: Performance of NHS & Freight Movement on Interstate System Performance Measures and Targets**

Performance Measures	Statewide Performance (2017 Baseline)	Broward Performance (2017 Baseline)	Statewide 2-Year Target (2019)	Statewide 4-Year Target (2021)
Percent of person-miles on Interstate system that are reliable (Interstate Level of Travel Time Reliability [LOTTR])	82.2%	67%	75.0%	70%
Percent of person-miles on non-Interstate NHS that are reliable (Non-Interstate LOTTR)	84.0%	80%	n/a	50%
Truck Travel Time Reliability (TTTR)	1.43	1.81	1.75	2.00

FDOT established the statewide PM3 targets on May 18, 2018. In setting these targets, FDOT reviewed external and internal factors that may affect reliability, conducted a trend analysis for the performance measures, and developed a sensitivity analysis indicating the level of risk for road segments to become unreliable within the time period for setting targets. One key conclusion from this effort is that there is a lack of availability of extended historical data with which to analyze past trends and a degree of uncertainty about future reliability performance. Accordingly, FDOT took a conservative approach when setting its initial PM3 targets.

The Broward MPO agreed to support FDOT’s PM3 targets on November 14, 2018. By adopting FDOT’s targets, the Broward MPO agrees to plan and program projects that help FDOT achieve these targets.

### Transit Asset Management Measures

On July 26, 2016, FTA published the Final Rule on Transit Asset Management (TAM), which applies to all recipients and subrecipients of Federal transit funding that own, operate, or manage public transportation capital assets. The TAM Rule defines the term “state of good repair,” requires that public transportation providers develop and implement TAM plans and establishes state of good repair standards and performance measures for four asset categories—transit equipment, rolling stock, transit infrastructure, and facilities. The TAM Rule became effective on October 1, 2018. Table 11 identifies performance measures outlined in the TAM Rule.

**Table 11: FTA TAM Performance Measures**

Asset Category	Performance Measure and Asset Class
1. Equipment	Percentage of non-revenue, support-service, and maintenance vehicles that have met or exceeded their useful life benchmark.
2. Rolling Stock	Percentage of revenue vehicles within a particular asset class that have either met or exceeded their useful life benchmark.
3. Infrastructure	Percentage of track segments with performance restrictions.
4. Facilities	Percentage of facilities within an asset class rate below condition 3 on the Transit Economic Requirements Model (TERM) scale.

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 and is not the same as an asset’s useful life.

The MPO has three transit providers operating in the region—BCT, SFRTA, and the City of Fort Lauderdale Transportation Management Association (TMA), which operates the Sun Trolley. All are Tier I providers and, as such, must develop a TAM Plan. BCT’s TAM Plan includes the following Tier II transit providers: Coconut Creek, Coral Springs, Dania Beach, Davie, Deerfield Beach, Hallandale Beach, Hillsboro Beach, Hollywood, Lauderdale-By-The-Sea, Lauderdale Lakes, Lighthouse Point, Margate, Miramar, Pembroke Pines, Pompano Beach, Tamarac, and West Park.

On November 14, 2018, the Broward MPO established transit asset targets for the MPO planning area. These targets were established in consultation with and reflect the targets established by BCT, SFRTA and the City of Fort Lauderdale through their TAM plans. The targets for rolling stock, particularly buses and vans, reflects a composite of all transit agency targets. In instances in which targets applied to one specific agency, such as locomotives and track restrictions, the MPO adopted that agency’s target.

The transit asset management targets are based on the condition of existing transit assets and planned investments in equipment, rolling stock, infrastructure, and facilities. The targets reflect the most recent data available on the number, age, and condition of transit assets, as well as expectations and capital investment plans for improving these assets. Table 12 summarizes existing conditions for the most recent year available and the targets.

**Table 12: TAM Performance Measures, Baseline Conditions, and Targets**

Performance Measures		Useful Life Benchmark (ULB) or Condition Rating	Broward MPO Baseline	Adopted Target
Rolling Stock	Cutaway Bus	ULB 10 yrs	0%	0%
	Paratransit Mini Van	ULB 8 yrs	0%	0%
	40 ft Bus	ULB 14 yrs	3%	15%
	60 ft Articulated Bus	ULB 14 yrs	0%	0%

Performance Measures		Useful Life Benchmark (ULB) or Condition Rating	Broward MPO Baseline	Adopted Target
	45 ft Bus	ULB 14 yrs	0%	0%
	Commuter Rail Locomotive	ULB 39 yrs	0%	0%
	Commuter Rail Passenger Coach	ULB 39 yrs	0%	0%
	Commuter Rail Self-Propelled Passenger Car	ULB 39 yrs	0%	0%
Equipment	All Non-Revenue Vehicles	ULB 8 yrs	0%	0%
	Other Rubber Tire Vehicles	ULB 14 yrs	0%	0%
Facilities	Passenger, Maintenance, Parking & Administration	Condition rating 3.0	30%	30%
Infrastructure	Rail Fixed Guideway, Track, and Signals	Performance Restrictions	8%	8%

## Transit Safety Performance

FTA published the Final Rule on Public Transportation Agency Safety Plan (PTASP) and related performance measures as authorized in MAP-21. The PTASP Rule requires operators of public transportation systems that receive Federal financial assistance to develop and implement a PTASP based on a safety management systems approach. Development and implementation of PTSAPs is anticipated to help ensure that public transportation systems are safe nationwide.

The PTASP Rule was published on July 19, 2018, with an effective date of July 19, 2019. Transit operators subject to the rule must have a PTASP and safety targets in place by July 20, 2020. The MTP was adopted on December 12, 2019,

and the transit operators within the MPO's planning area that are required to adopt safety targets had not yet adopted safety targets.

### Transit Safety Performance Measures

The transit agencies will set targets in their PTASPs based on the safety performance measures established in the National Public Transportation Safety Plan (NPTSP). The required safety performance measures are:

1. Total number of reportable fatalities
2. Rate of reportable fatalities per total vehicle revenue miles by mode
3. Total number of reportable injuries
4. Rate of reportable injuries per total vehicle revenue miles by mode
5. Total number of reportable safety events
6. Rate of reportable events per total vehicle revenue miles by mode
7. System reliability – mean distance between major mechanical failures by mode

Once the transit agencies required to develop PTASP's within the MPO's planning area have adopted safety targets, the MPO will coordinate with these agencies to establish transit safety targets for the planning area using the same approach for the TAM targets.

## **2045 MTP Performance Measures**

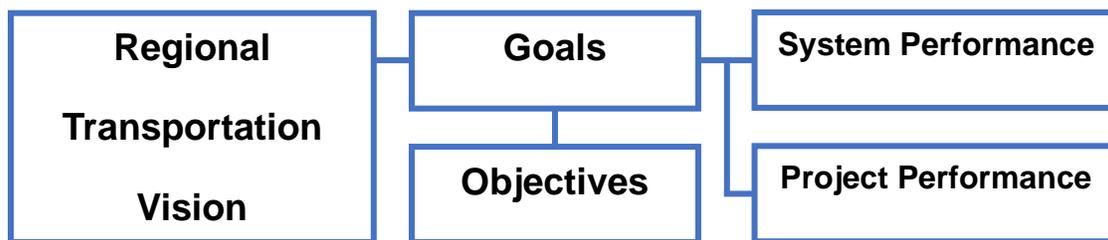
MTP performance measures are used to compare existing conditions with the 2045 Cost Feasible scenario. The regional performance measures tie back to the three core 2045 MTP goals, outlined in the previous section.

In addition to a summary of regional performance measures for consideration in the Commitment 2045 Plan, performance targets are shown that reflect challenging, yet achievable performance targets for the Broward region to achieve. The performance targets are shown as a way of assessing the level of consistency between Broward MPO 2045 MTP outcomes with the regional transportation vision and goals. The performance measures do not reflect

Broward MPO policy, and there are no positive or negative consequences to the Broward MPO or its member jurisdictions whether they are achieved or not. Ultimately, the regional performance measures are desired outcomes that reflect the community vision. The metrics reflected in Table 10 through Table 12 attempt to measure how the Commitment 2045 MTP compares to that vision as a first step toward performance measurement.

It is important to note that some transportation objectives are more statements of policy direction and can be very challenging to measure, quantify, and in most cases replicate. As illustrated in Figure 1, performance measures ensure that decisions align with and are promoting established transportation goals.

**Figure 1: Hierarchy of Performance Measurement**



## Goal #1: Move People and Goods

### Objectives:

- 1.1 Maintain Infrastructure
- 1.2 Provide Transportation Options
- 1.3 Manage Roadway Congestion
- 1.4 Improve Transit, Auto, and Truck Travel Time Reliability/Consistency
- 1.5 Improve Transportation Accessibility for All Users
- 1.6 Improve Safety and Security for All Users
- 1.7 Increase Transit Ridership
- 1.8 Shorten Project Delivery

## Goal #2: Create Jobs

### Objectives:

- 2.1 Maintain or Reduce Average Travel Times to Major Economic Centers
- 2.2 Support Smart Growth and Transit Oriented Development
- 2.3 Support Efficient Transportation Investments
- 2.4 Maximize Private Investments in Transportation Service Provision
- 2.5 Fund and Support the Implementation of Multimodal Transportation Projects

## Goal #3: Strengthen Communities

### Objectives:

- 3.1 Improve Transportation Accessibility for All Users
- 3.2 Strive for the Equitable Distribution of Transportation Benefits and Costs
- 3.3 Reduce Pollutant Emissions Generated by Mobile Transportation Sources
- 3.4 Promote Resiliency in Response to Climate Change and Weather-Related Events
- 3.5 Distinguish Quality of Life Considerations by Community
- 3.6 Consider Financial Burden on Communities that May Result from Transportation Investments.

**Table 13: 2045 MTP Goal #1: Move People and Goods – Performance Measures & Targets**

Measure Area	Performance Measure	Performance Measure Target for Commitment 2045 MTP
System Safety	Number of Fatalities	Reduce by 100% by 2045
	Rate of Fatalities per 100 Million Vehicle Miles Travelled (VMT)	Reduce to 0.00 by 2045
	Number of Serious Injuries	Reduce by 100% by 2045
	Rate of Serious Injuries per 100 Million VMT	Reduce to 0.00 by 2045
Congestion Management	Percent of Freeways Operating At or Above LOS Standards (AM Peak, PM Peak, Off-Peak)	Improve by 5% or more by 2045
	Percent of Uninterrupted Roads and High-speed Arterials Operating At or Above LOS Standards (AM Peak, PM Peak, Off-Peak)	Improve by 2% or more by 2045
	Percent of Other Roadways Operating At or Above LOS Standards (AM Peak, PM Peak, Off-Peak)	Improve by 2% or more by 2045
	Percent of All Roadways Operating At or Above LOS Standards	Improve by 5% or more by 2045
	Percent of National Highway Freight Network (NHFN) Operating At or Above LOS Standards	Improve by 5% or more by 2045
Level of Delay	Total Daily Hours of Delay (Vehicle Hours)	Reduce by 10% or more by 2045
Mode Share	Percent of Single Occupancy Vehicles (SOV) Mode Share	Reduce by 47% or more by 2045
	Percent of Transit Mode Share	Increase by 2% or more by 2045
Transit Supplied	Average Transit System Service Frequency/Headways	Reduce by 20% or more by 2045
	Revenue Hours of Service per Capita	Increase by 20% or more by 2045
	Revenue Miles of Service per Capita	Increase by 35% or more by 2045
Transit Consumed	Transit Passenger Trips	Increase by 75% or more by 2045
	Transit Passenger Trips per Capita	Increase by 50% or more by 2045
	Transit Passenger Trips per Revenue Hour	Increase by 20% or more by 2045
System Capacity	Miles of Dedicated Transitways	Increase by 250% or more by 2045
	Lane Miles	Maintain or increase by 2045
	Miles of Bike Lanes	Increase by 10% by 2045
	Miles of Buffered Bike Lanes	Increase by 10% by 2045
	Miles of Paved Trails / Shared Use Paths	Increase by 10% by 2045

**Table 14: 2045 MTP Goal #2: Create Jobs – Performance Measures & Targets**

Measure Area	Performance Measure	Performance Measure Target for Commitment 2045 MTP
Employment	Number of New Jobs	Increase by 25% by 2045
Access to Jobs	Percent of Employment within 1/4 Miles of Transit Service	Increase to 70% by 2045
	Percent of Employment within 1/4 Miles of Premium Transit Service (>50% Fixed Guideway)	Increase by 30% by 2045
	Average Transit Travel Time to Employment Activity Centers with >5,000 Employees per Square Mile	Maintain or improve by 2045
	Average Auto Travel Time to Employment Activity Centers with >5,000 Employees per Square Mile	Maintain or improve by 2045
	Average Total Transit Trip Time for Daily Job Commute (Countywide)	Improve by 2045
	Average Vehicle Travel Time for Daily Job Commute (Countywide)	Improve by 2045

**Table 15: 2045 MTP Goal #3: Strengthen Communities – Performance Measures & Targets**

Measure Area	Performance Measure	Performance Measure Target for Commitment 2045 MTP
Transit System Access	Percent of Population within 1/4 Miles of Transit Service	Increase to 60% by 2045
	Percent of Equity Area Population within 1/4 Miles of Transit Service	Increase to 65% by 2045
VMT	Vehicle Miles Traveled (VMT) per Capita	2045 VMT grows by 10% or less
VHT	Vehicle Hours Traveled (VHT) per Capita	2045 VHT grows by 5% or less
Air Quality / Pollutant Emissions	Total Daily Carbon Monoxide (CO) Emissions (kg)	Reduce by 10% or more
	Total Daily Nitrogen Oxide (NO) Emissions (kg)	Reduce by 10% or more
Transportation Equity	Average Total Transit Trip Time for Daily Job Commute (Equity Areas)	Improve by 2045
	Average Vehicle Travel Time for Daily Job Commute (Equity Areas)	Improve by 2045
	Miles of Bike Lanes in Equity Areas	Increase by 10% by 2045.
	Miles of Buffered Bike Lanes in Equity Areas	Increase by 10% by 2045.
	Miles of Paved Trails / Shared Use Paths in Equity Areas	Increase by 10% by 2045.
Transportation System Vulnerability & Resiliency	Lane Miles of Evacuation Routes per 100,000 Population	Maintain or increase by 2045.
	Miles of Public Roads and Rail Forecasted to be Permanently Inundated by between 1 ft. and 2 ft. of Sea Level Rise	Decrease by 2045.

# Appendix A: Federal & State Context for Goals, Objectives, & Measures of Effectiveness

## Federal and State Context

### FAST Act

Signed into law on December 4, 2015, the Fixing America's Surface Transportation (FAST) Act builds upon the previous federal transportation act, MAP-21, by continuing the focus on transportation system condition and performance while providing greater emphasis on intermodal strategies with goals focusing on the importance of system safety, security, efficiency, productivity, reliability, and resiliency. The FAST Act also aims to reduce the environmental impacts of freight movement while providing the United States with a platform to compete in the global marketplace.

A significant part of the reforms made by MAP-21 included transitioning to a performance-based program, including establishing national performance goals for federal-aid highway programs, and incorporating performance goals, measures, and targets into the process of identifying needed transportation improvements and project selection. The FAST Act supports and continues this overall performance management approach, within which states invest resources in projects that will collectively make progress toward national goals.

The federal highway program performance goals as established by Congress include:

**Safety** – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads.

**Infrastructure Condition** – To maintain the highway infrastructure asset system in a state of good repair.

**Congestion Reduction** – To achieve a significant reduction in congestion on the National Highway System.

**System Reliability** – To improve the efficiency of the surface transportation system.

**Freight Movement and Economic Vitality** – To improve the national freight network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development.

**Environmental Sustainability** – To enhance the performance of the transportation system while protecting and enhancing the natural environment.

**Reduced Project Delivery Delays** – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process, which includes reducing regulatory burdens and improving agencies' work practices.

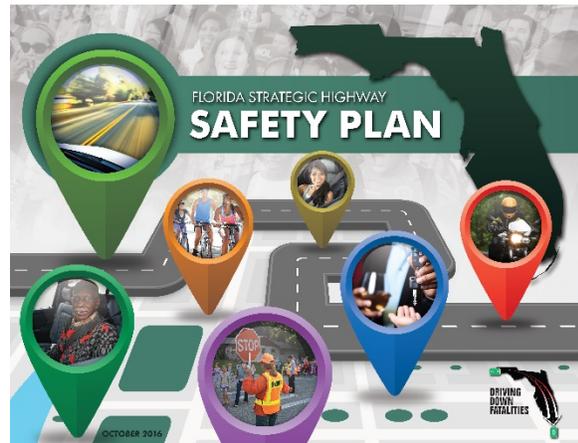
### **Strategic Highway Safety Plan (SHSP)**

A Strategic Highway Safety Plan (SHSP) is a major component and requirement of the Highway Safety Improvement Program (HSIP) (23 U.S.C. § 148). It is a statewide-coordinated safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads. A SHSP identifies a state's key safety needs and guides investment decisions towards strategies and countermeasures with the most potential to save lives and prevent injuries.

SHSPs were first required under SAFETEA-LU, which established the Highway Safety Improvement Program as a core federal program. The FAST Act continues the HSIP as a core federal-aid program and the requirement for states to develop, implement, evaluate and update an SHSP that identifies and analyzes highway safety problems and opportunities on all public roads.

## 2016 Florida Highway Strategic Plan (SHSP)

The 2016 SHSP was updated through collaboration with the State of Florida's safety partners. It is aligned with and builds on the recently adopted Florida Transportation Plan (FTP), the state's long-range transportation plan. Both the FTP and the SHSP share the vision of a fatality-free roadway system to protect Florida's 20 million residents and more than 105 million annual visitors.



Florida's SHSP is aimed at all public roads. Federal Highway Administration safety funding can be used for state and local safety projects. In developing the SHSP, efforts were made to reach out to local engineers and planners and the state's 27 MPOs to provide information on ways to improve safety. Local roads account for 39 percent of roadway fatalities. That is why coordination and collaboration through the SHSP is important as it helps achieve a shared vision for safety.

Thirteen Emphasis Areas are the primary focus for Florida's traffic safety improvement efforts. The Emphasis Areas were identified through a collaborative process that included: review of fatality and serious injury data from 2011 to 2015 to identify and set priorities among Florida's most serious crash problems; input from the existing strategic safety coalitions, MPOs, and other partners; and consideration of public input from the FTP update process.

Safety coalitions oversee many emphasis areas and develop detailed strategic plans that identify targeted strategies and actions to reduce fatalities and serious injuries for each Emphasis Area. Florida relies on the "4 Es" – engineering, education, enforcement, and emergency response – as a tool to guide decision-making for improving roadway safety. As identified in **Figure A-1**, the "4 Es" are used to help identify and organize overarching strategies that help guide the safety coalitions and other partners.

Figure A-1: 2016 Florida Strategic Highway Safety Plan Emphasis Areas



Source: 2016 Florida Strategic Highway Safety Plan, October 2016

## 2060 Florida Transportation Plan (FTP)

The Florida Transportation Plan (FTP) is the long-range transportation plan for the entire State of Florida. The purpose of the FTP is to provide strategic direction to the Florida Department of Transportation (FDOT) and all of its planning partners, at all levels of government; statewide, regional, and local.



The FTP is composed of three distinct elements: the Vision Element has a 50-year horizon and is future focused and identifies Florida's transportation system vision; the Policy Element has a 25-year horizon and is built upon the identified Vision, this element outlines the goals and objectives for Florida's transportation system; and the Implementation Element provides specific direction, identifies the role and responsibility for each planning partner, and calls for performance measures as a means of implementing, and evaluating the progress of the FTP.

As a collaborative effort, the FTP was developed in partnership with both public and private stakeholders to define transportation goals, objectives, and strategies to make the Florida economy more competitive, communities more livable, and the environment more sustainable for future generations.

### The 2060 FTP Goals include:

- Invest in transportation systems to support a prosperous, globally competitive economy;
- Make transportation decisions to support and enhance livable communities;
- Make transportation decisions to promote responsible environmental stewardship;
- Provide a safe and secure transportation system for all users;

- Maintain and operate Florida’s transportation system proactively; and
- Improve mobility and connectivity for people and freight.

# Appendix B: 2045 MTP Performance Measure Findings

**Table B-1: 2045 MTP Goal #1: Move People and Goods – Performance Measure Findings**

Measure Area	Performance Measure	Performance Measure Target (As Compared to 2015 Levels)	Existing Condition (2015)	2045 Needs Plan	2045 Cost Feasible Plan	MTP Outcome
System Safety	Number of Fatalities	Reduce by 100% by 2045	198	252	255	Target Not Achieved
	Rate of Fatalities per 100 Million Vehicle Miles Travelled (VMT)	Reduce to 0.00 by 2045	1.42	1.42	1.42	1.42
	Number of Serious Injuries	Reduce by 100% by 2045	1,459	1,861	1,881	Target Not Achieved
	Rate of Serious Injuries per 100 Million VMT	Reduce to 0.00 by 2045	10.48	10.48	10.48	10.48
Congestion Management	Percent of Freeways Operating At or Above LOS Standards (AM Peak, PM Peak, Off-Peak)	Improve by 5% or more by 2045	(76%, 66%, 98%)	(77%, 64%, 93%)	(78%, 65%, 94%)	Target Not Achieved
	Percent of Uninterrupted Roads and High-speed Arterials Operating At or Above LOS Standards (AM Peak, PM Peak, Off-Peak)	Improve by 2% or more by 2045	(98%, 91%, 100%)	(93%, 73%, 99%)	(93%, 71%, 99%)	Target Not Achieved
	Percent of Other Roadways Operating At or Above LOS Standards (AM Peak, PM Peak, Off-Peak)	Improve by 2% or more by 2045	(98%, 95%, 100%)	(94%, 80%, 98%)	(94%, 79%, 98%)	Target Not Achieved
	Percent of All Roadways Operating At or Above LOS Standards	Improve by 5% or more by 2045	(95%, 89%, 100%)	(91%, 74%, 98%)	(91%, 73%, 98%)	Target Not Achieved
	Percent of National Highway Freight Network (NHFN) Operating At or Above LOS Standards	Improve by 5% or more by 2045	(60%, 51%, 97%)	(53%, 41%, 82%)	(53%, 41%, 83%)	Target Not Achieved
Level of Delay	Total Daily Hours of Delay (Vehicle Hours)	Reduce by 10% or more by 2045	0.053	0.174	0.177	Target Not Achieved

Measure Area	Performance Measure	Performance Measure Target (As Compared to 2015 Levels)	Existing Condition (2015)	2045 Needs Plan	2045 Cost Feasible Plan	MTP Outcome
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Mode Share	Percent of Single Occupancy Vehicles (SOV) Mode Share	Reduce by 47% or more by 2045	49.32%	48.92%	49.61%	Target Not Achieved
	Percent of Transit Mode Share	Increase by 2% or more by 2045	1.41%	2.36%	1.55%	Target Not Achieved
Transit Supplied	Average Transit System Service Frequency/Headways	Reduce by 20% or more by 2045	44.7	39.1	42.3	Target Not Achieved
	Revenue Hours of Service per Capita	Increase by 20% or more by 2045	0.54	0.60	0.51	Target Not Achieved
	Revenue Miles of Service per Capita	Increase by 35% or more by 2045	7.55	9.67	7.08	Target Not Achieved
Transit Consumed	Transit Passenger Trips	Increase by 75% or more by 2045	89,472	181,396	121,032	Target Not Achieved
	Transit Passenger Trips per Capita	Increase by 50% or more by 2045	12.78	21.52	14.36	Target Not Achieved
	Transit Passenger Trips per Revenue Hour	Increase by 20% or more by 2045	23.67	35.86	28.15	Target Not Achieved
System Capacity	Miles of Dedicated Transitways	Increase by 250% or more by 2045	25	111	25	Target Not Achieved
	Lane Miles	Maintain or increase by 2045	4,947	5,308	5300	Target Achieved
	Miles of Bike Lanes	Increase by 10% by 2045	254.12	N/A	N/A	N/A
	Miles of Buffered Bike Lanes	Increase by 10% by 2045	7.4	N/A	N/A	N/A
	Miles of Paved Trails / Shared Use Paths	Increase by 10% by 2045	9.2	N/A	N/A	N/A

N/A -Multimodal facilities such as bicycle lanes and shared use paths were not projected to 2045 as part of the MTP process.

**Table B-2: 2045 MTP Goal #2: Create Jobs – Performance Measure Findings**

Measure Area	Performance Measure	Performance Measure Target (As Compared to 2015 Levels)	Existing Condition (2015)	2045 Needs Plan	2045 Cost Feasible Plan	MTP Outcome
Employment	Number of New Jobs	Increase by 25% by 2045	0	280,035	280,035	Target Achieved
Access to Jobs	Percent of Employment within 1/4 Miles of Transit Service	Increase to 70% by 2045	57.8%	68.8%	68.6%	Target Not Achieved
	Percent of Employment within 1/4 Miles of Premium Transit Service (>50% Fixed Guideway)	Increase by 30% by 2045	5.1%	27.1%	5.8%	Target Not Achieved
	Average Transit Travel Time to Employment Activity Centers with >5,000 Employees per Square Mile	Maintain or improve by 2045	118.6	108.8	114.3	Target Achieved
	Average Auto Travel Time to Employment Activity Centers with >5,000 Employees per Square Mile	Maintain or improve by 2045	22.0	23.5	23.6	Target Not Achieved
	Average Total Transit Trip Time for Daily Job Commute (Countywide)	Improve by 2045	100.4	93.3	95.4	Target Achieved
	Average Vehicle Travel Time for Daily Job Commute (Countywide)	Improve by 2045	16.5	17.3	17.3	Target Not Achieved

**Table B-3: 2045 MTP Goal #3: Strengthen Communities – Performance Measure Findings**

Measure Area	Performance Measure	Performance Measure Target (As Compared to 2015 Levels)	Existing Condition (2015)	2045 Needs Plan	2045 Cost Feasible Plan	MTP Outcome
Transit System Access	Percent of Population within 1/4 Miles of Transit Service	Increase to 60% by 2045	52.0%	59.2%	59.2%	Target Not Achieved
	Percent of Equity Area Population within 1/4 Miles of Transit Service	Increase to 65% by 2045	52.4%	63.6%	63.6	Target Not Achieved
VMT	Vehicle Miles Traveled (VMT) per Capita	2045 VMT grows by 10% or less	20.9	22.1	22.4	Target Achieved
VHT	Vehicle Hours Traveled (VHT) per Capita	2045 VHT grows by 5% or less	0.52	0.70	0.67	Target Not Achieved
Air Quality / Pollutant Emissions	Total Daily Carbon Monoxide (CO) Emissions (kg)	Reduce by 10% or more	166,224	42,919	43,509	Target Achieved
	Total Daily Nitrogen Oxide (NO) Emissions (kg)	Reduce by 10% or more	29,728	3,765	3,819	Target Achieved
Transportation Equity	Average Total Transit Trip Time for Daily Job Commute (Equity Areas)	Improve by 2045	98.5	92.2	94.7	Target Achieved
	Average Vehicle Travel Time for Daily Job Commute (Equity Areas)	Improve by 2045	16.3	17.1	17.3	Target Not Achieved
	Miles of Bike Lanes in Equity Areas	Increase by 10% by 2045.	N/A	N/A	N/A	N/A
	Miles of Buffered Bike Lanes in Equity Areas	Increase by 10% by 2045.	N/A	N/A	N/A	N/A
	Miles of Paved Trails / Shared Use Paths in Equity Areas	Increase by 10% by 2045.	N/A	N/A	N/A	N/A
Transportation System Vulnerability & Resiliency	Lane Miles of Evacuation Routes per 100,000 Population	Maintain or increase by 2045.	83	78	78	Target Not Achieved
	Miles of Public Roads and Rail Forecasted to be Permanently Inundated by between 1 ft. and 2 ft. of Sea Level Rise	Decrease by 2045.	15.8	31.5	30.1	Target Not Achieved

*N/A -Multimodal facilities such as bicycle lanes and shared use paths were not projected to 2045 as part of the MTP process.*



Move People & Goods | Create Jobs | Strengthen Communities

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For more information on activities and projects of the Broward MPO, please visit: [BrowardMPO.org](http://BrowardMPO.org)

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