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A REGIONAL TRANSPORTATION PARTNERSHIP

2050 Metropolitan Transportation Plan

Chapter 4 | Congestion Management Process

Adopted: December 10, 2025

WHAT IS IN THIS DOCUMENT?

This document describes MetroPlan Orlando's Congestion Management Process (CMP). The purpose of the CMP is to provide information to decision-makers regarding the allocation of financial resources to manage current and future congestion in the MetroPlan Orlando area. It addresses recurring and nonrecurring congestion. The CMP identifies existing congestion-related impacts and improvement strategies for both people and goods. The CMP performance measures used to evaluate the strategies' effectiveness directly align with the 2050 MTP goals and objectives related to: Safety, Reliability, Connectivity, Community, and Prosperity. Lastly, the CMP also includes a monitoring program that will periodically assess the effectiveness of the strategies overtime.

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Legal Information

The preparation of this report has been financed in part through grants from the Federal Highway Administration and Federal Transit Administration, U.S. Department of Transportation, under the State Planning and Research Program, Section 505 [or Metropolitan Planning Program, Section 104(f)] of Title 23, U.S. Code. The contents of this report do not necessarily reflect the official views or policy of the U.S. Department of Transportation.

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4.1 Introduction

Attractions, natural beauty, and a pleasant climate continue to draw people to the Central Florida region. The population in MetroPlan Orlando's planning area grew by 26% from 2012 through 2022. In comparison, the United States population grew 6.2% and Florida's population grew 15.2% during that period. As the population grows, so does the demand on existing infrastructure. Osceola County, Orange County, and Seminole County are expected to see continued population growth of more than 30% by 2050.

Based on the region's current transportation and land use, a larger population will mean more vehicles on the road and more vehicle miles traveled – resulting in heavy congestion as infrastructure is outpaced by travel demand. It is the MetroPlan Orlando's responsibility to plan for a multimodal approach that can move people and goods efficiently and safely through the area. To accomplish this, the MPO collaborates with Osceola, Orange, and Seminole Counties, local jurisdictions, transportation agencies, and the Florida Department of Transportation (FDOT).

The Federal Highway Administration (FHWA) requires that MPOs with populations greater than 200,000 use a congestion management process (CMP) (see Chapter 23 of the Code of Federal Regulations, 23 CFR 450.322, for more information). With a three-county population of more than 2.4 million, MetroPlan Orlando is required to produce a CMP to help provide a safe and reliable transportation system for residents and visitors alike. This chapter documents the CMP established for Orange, Osceola, and Seminole Counties.

4.1.1 APPROACH

This CMP takes a data-driven, performance-based planning approach to managing recurring and nonrecurring traffic congestion. Analyzing data to identify potential congestion issues, the CMP proposes strategies that address safety and congestion hot spots. These remedies are often operational fixes that focus on transportation system management and operations (TSM&O) strategies.

The plan uses safety and mobility metrics to assess congestion severity and track progress toward the MPO's congestion management goals. Ultimately, the CMP aims to reduce congestion, improve safety, and keep people and goods moving efficiently throughout the three-county region.

The preparation of the CMP followed the eight steps outlined as part of FHWA's process model – see Figure 4-1.

1. Define goals and objectives. The CMP's goals align with the goals of MetroPlan Orlando and its 2050 Metropolitan Transportation Plan (MTP) to support the MTP goal areas of safety and security; infrastructure and resiliency; mobility and reliability; economy and tourism; environment and conservation; and equity and livability.

2. Define the CMP network. The process identifies the area covered by the CMP and which facilities are analyzed.

3. Develop multimodal performance measures. The process uses mobility and safety performance metrics to help the MPO quantify progress toward its goals.

4. Collect data. The process uses multiple data sources, including crash data, roadway characteristics data, traffic volume counts, speed and travel time data, multimodal facility and service data, and demographics.

5. Analyze congestion problems and needs. To identify area needs, the process analyzes local roadway safety and congestion issues.

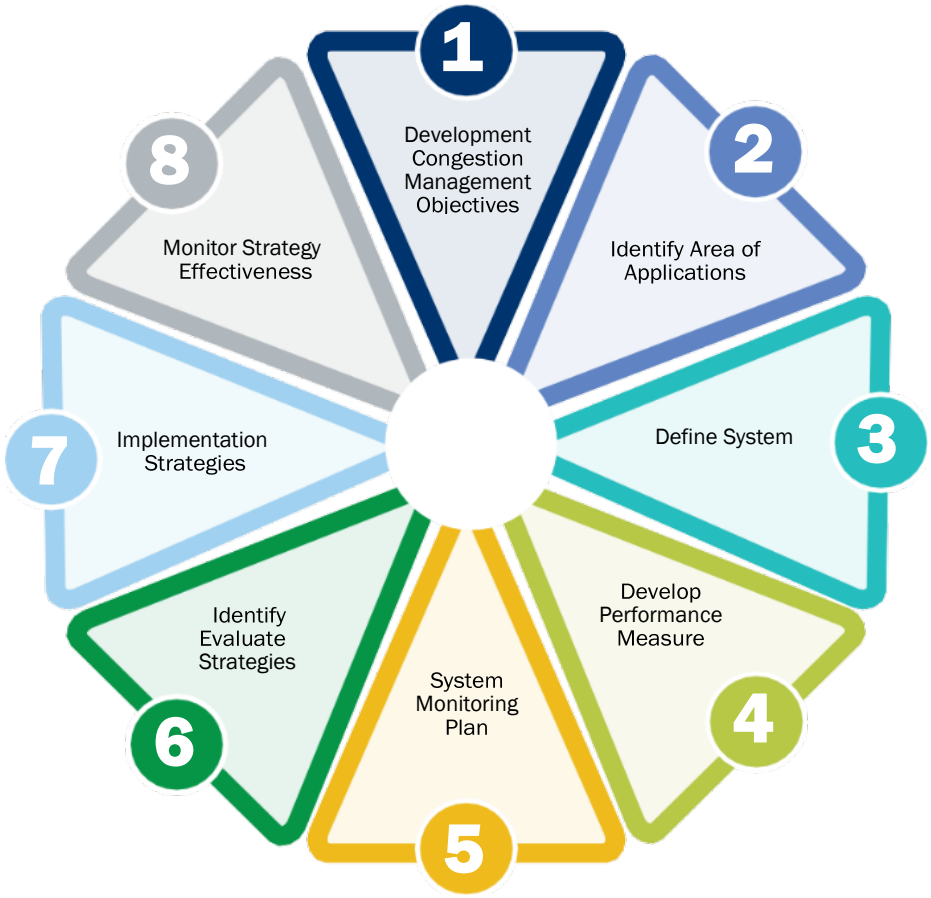
6. Identify and assess strategies. The process proposes management strategies based on needs identified in the fifth step and common crash factors and causes of congestion.

7. Program strategies. The CMP's systematic approach will help integrate safety and congestion mitigation strategies into the MPO's MTP, with some strategies moving through the implementation pipeline into the Transportation Improvement Program (TIP).

8. Evaluate effectiveness. The CMP includes a monitoring plan to help track the region's progress towards performance targets, and assess which strategies are most effective in helping the region pursue congestion management goals.

For more on FHWA's CMP process model, visit: https://ops.fhwa.dot.gov/plan4ops/focus_areas/cmp.htm

Figure 4-1 | FHWA's Eight Step Congestion Management Process



4.1.2 UNDERSTANDING CONGESTION

Understanding what causes congestion is essential to managing and preventing it. There are two types of congestion: recurring congestion and nonrecurring congestion (see Figure 4-2).

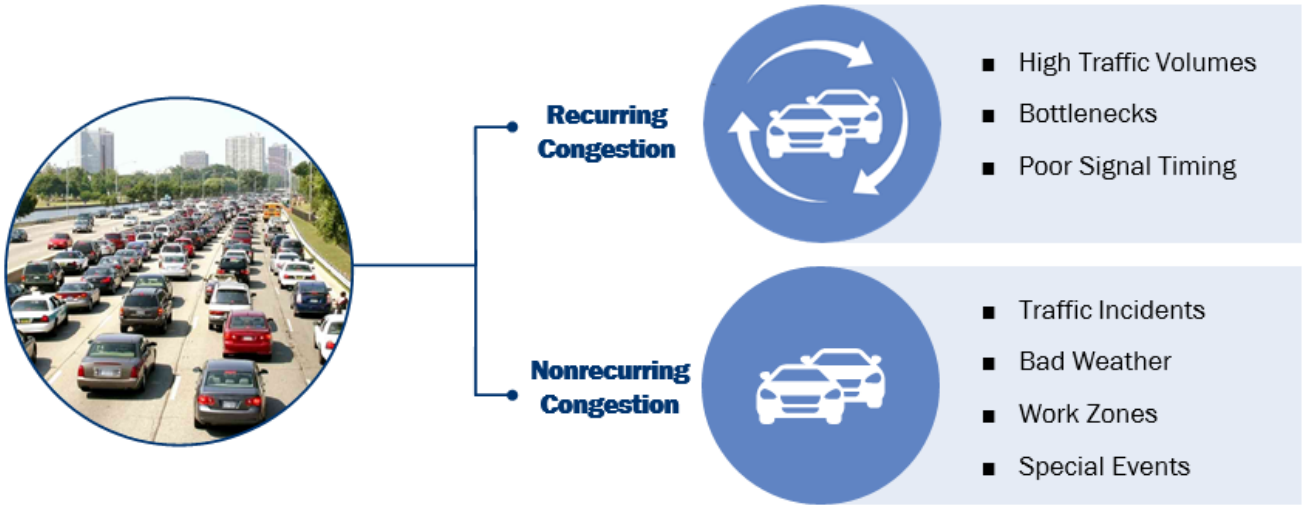
Recurring congestion. Travelers often expect some congestion at certain locations during predictable times of day. This expected traffic, sometimes referred to as rush hour, is recurring congestion, which primarily occurs when roadways reach their capacity at a predictable time of day.

For example, from 5:00 to 6:00 p.m. most travelers anticipate congestion on roadways in and around downtown Orlando. Historically, this has served as the peak hour but the recent spread in volume distribution has created a peak period that goes from 4:30 to 6:30 p.m. Vehicle volumes surge during this time as commuters leave the workplace. Rush hour is a state of recurring congestion, which primarily occurs when roadways reach their capacity at a predictable time of day.

Nonrecurring congestion. There are also irregular constraints on roadway capacity or sporadic travel demand increases that cause congestion. Some capacity constraints can be forecasted, such as construction work zones. Other constraints are less predictable, such as car crashes and inclement weather, when the loss of a travel lane or reduced travel speeds create congestion. Nonrecurring congestion can also be caused by special events that generate travel demand that exceeds typical roadway volumes such as sporting events or holiday weekends.

In Orange, Seminole, and Osceola Counties, congestion has various causes including high traffic volumes, bottlenecks, traffic incidents, inclement weather, work zones, inefficient traffic signal timing, and special events among other causes.

Figure 4-2 | Sources of Congestion



4.2 Goals and Objectives

The 2025 CMP goals are the same as those in MetroPlan Orlando's 2050 MTP. The CMP includes objectives and performance indicators that measure progress towards the goals in Figure 4-3. The CMP objectives are summarized by goal area in Table 4-1 and provide a mechanism for ensuring investment decisions are made with a clear focus on desired outcomes.

Figure 4-3 | 2050 MTP Goals

Table 4-1 | 2025 CMP Goals and Objectives

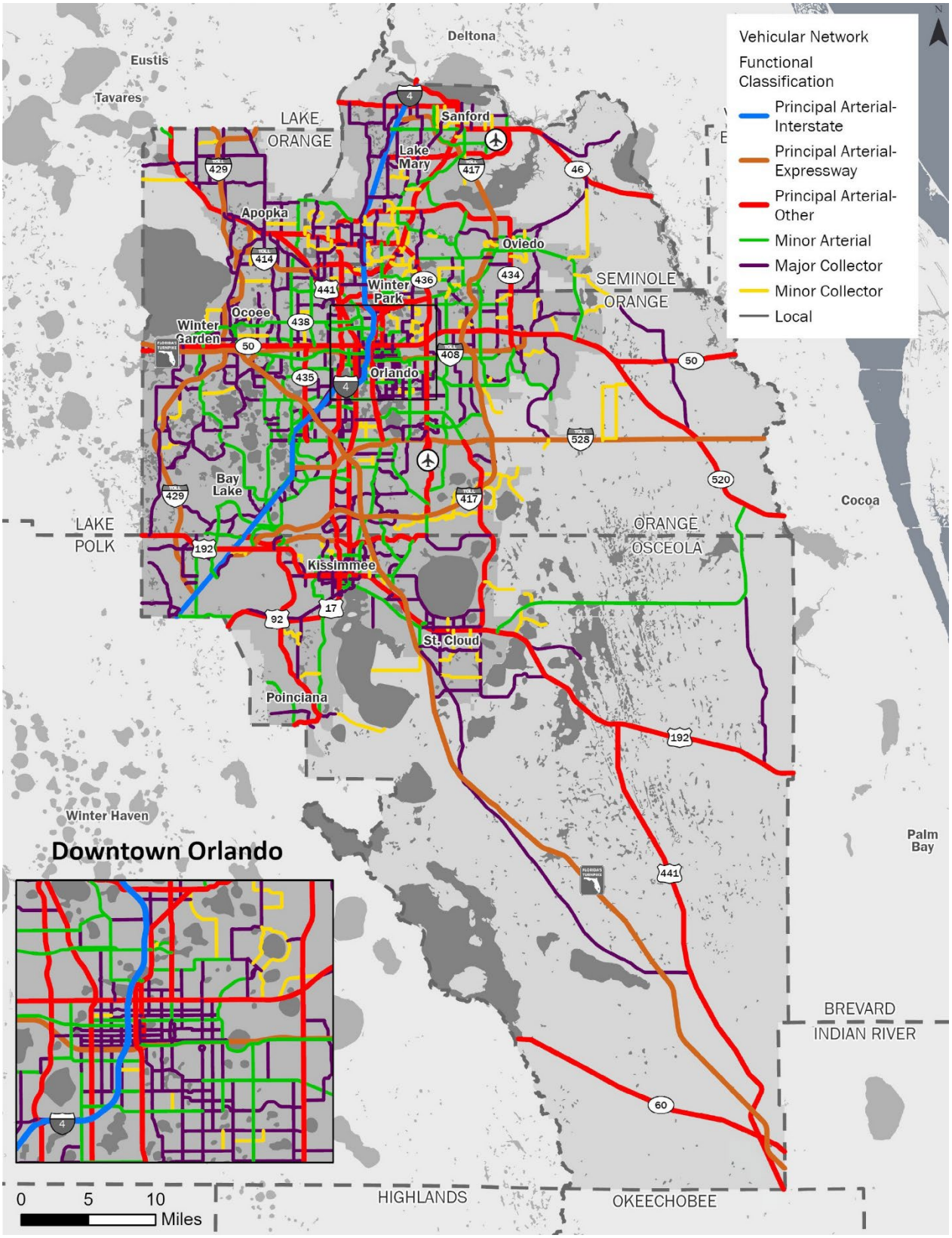
Goals	Objectives
Safety	Eliminate deaths and serious injuries on the transportation system, with an emphasis on the most vulnerable users
	Provide infrastructure and services to help mitigate, prepare for, respond to, and recover from emergencies
	Increase the resilience of transportation infrastructure to environmental, security, and other risks
Connectivity	Increase the frequency, service, and accessibility of public transportation and shared mobility services
	Improve the connectivity and accessibility of multimodal transportation infrastructure
	Enhance the connectivity of the region by reducing trip distance per capita
Reliability	Enhance the multimodal transportation system to maintain a state of good repair
	Improve travel time reliability for all modes
	Accommodate changing customer needs and preferences, including changing technologies
Community	Provide transportation solutions that contribute to improved public health, including reducing adverse health impacts associated with physical inactivity
	Reduce air quality pollutants and emissions per capita from transportation sources
	Provide transportation solutions that enhance the natural and built environments
Prosperity	Promote transportation investments and strategies that enhance economic prosperity
	Improve access to jobs, with emphasis on essential service workers
	Increase Central Florida's affordability as a place to live, work, and visit

4.3 CMP Study Area

MetroPlan Orlando's 2024 CMP provides a systematic approach for managing existing congestion in the MPO's planning area, which includes all of Orange, Osceola, and Seminole Counties as illustrated in Figure 4-3. The CMP's area of application, the area within which the recommended congestion management strategies will be applied, is the three-county region. The CMP addresses present-day congested locations that threaten the mobility of the regional transportation network. Recurring and non- recurring congestion was analyzed on all publicly owned roadways to consider how operations on those roadways may impact auto, transit, and freight travel.

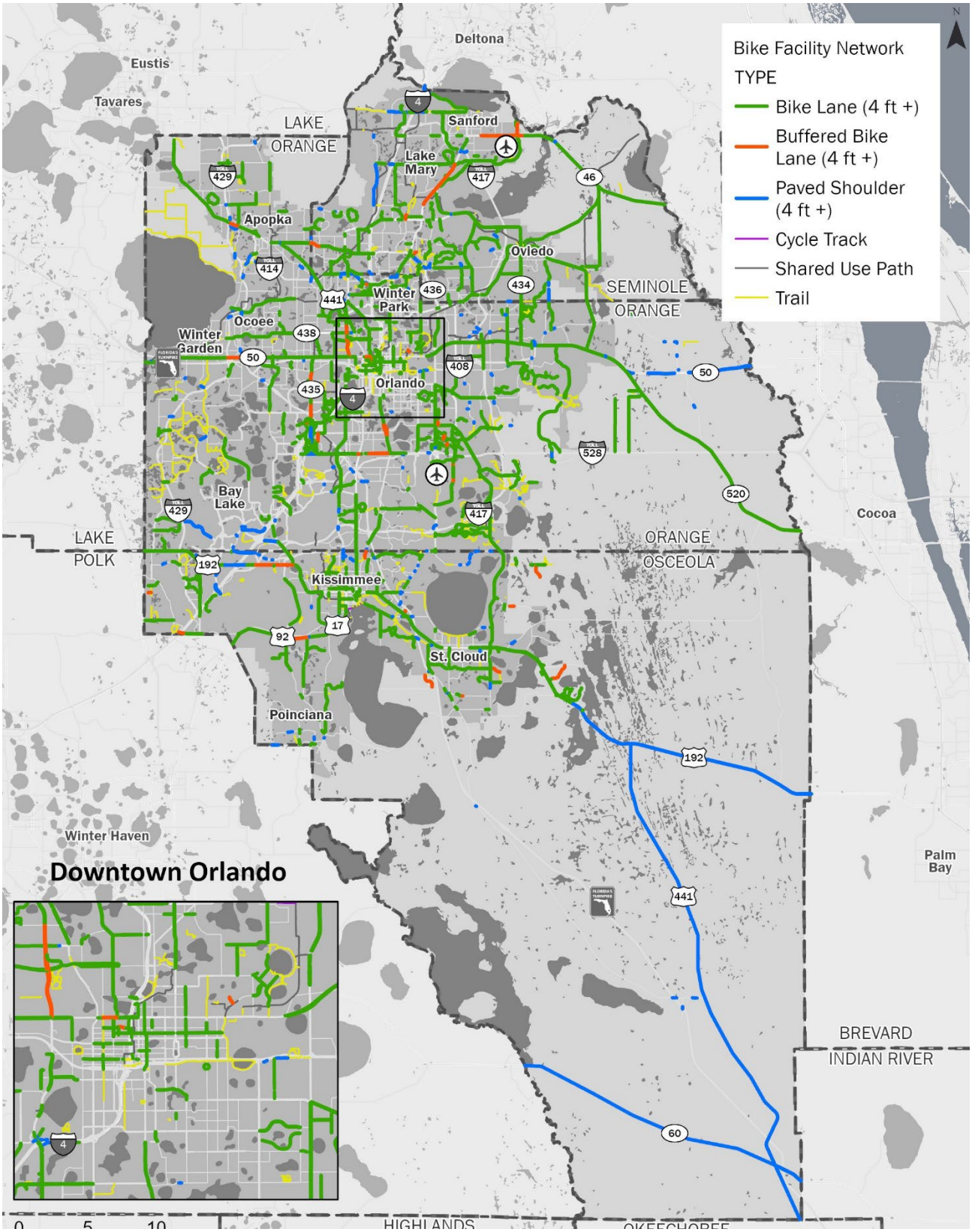
In addition, pedestrian and bicycle facilities were assessed from a safety and access perspective. All transportation facilities within the MetroPlan Orlando planning area were assessed where data was readily available. Figure 4-4 shows the Vehicular Network for the entire MetroPlan Orlando area, Figure 4-5 and Figure 4-6 show the bicycle and pedestrian networks within the three-county planning area.

Figure 4-4 | CMP Study Network: All Vehicle



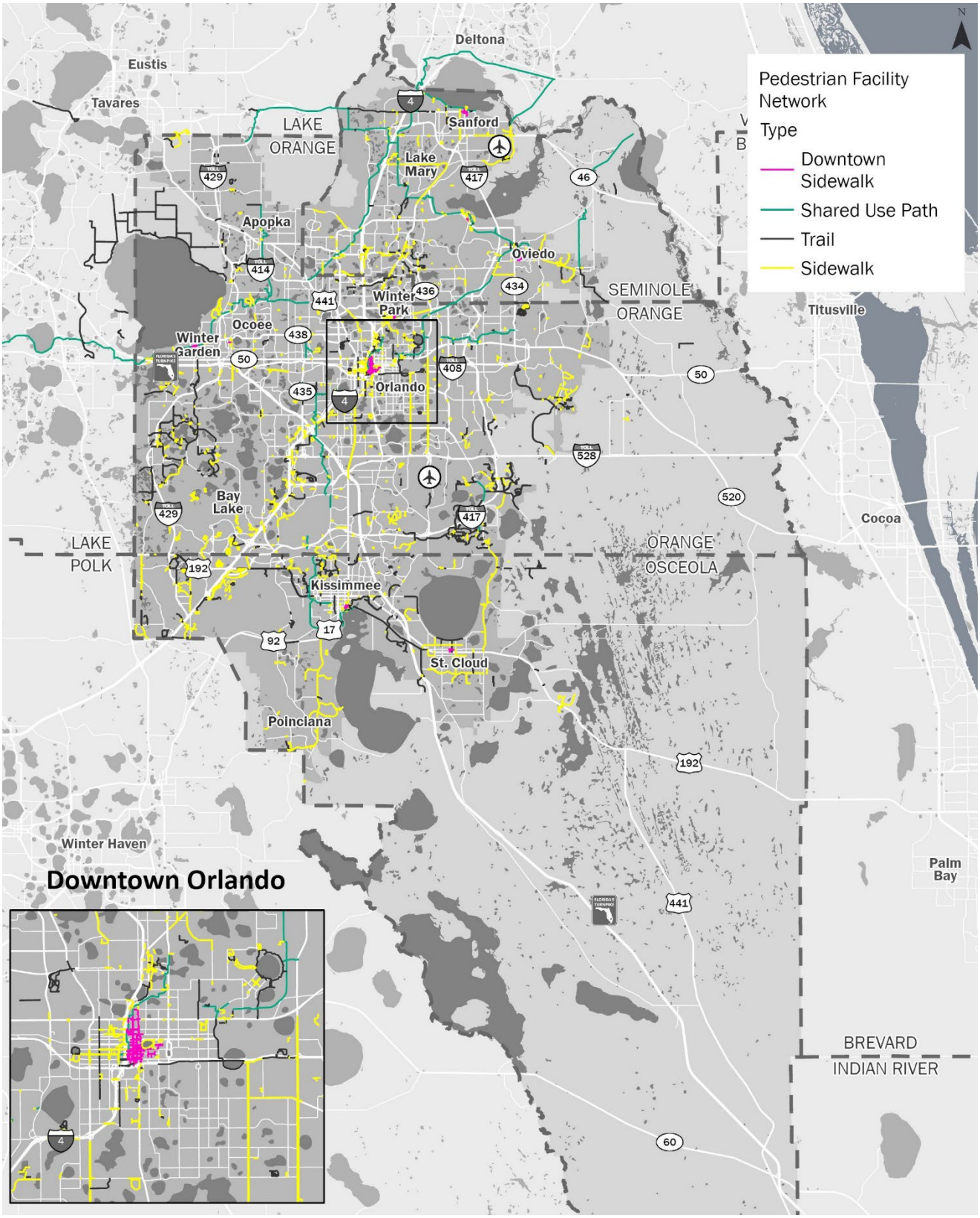
Source: FDOT Roadway Characteristics Inventory, Feature 124: Functional Classification, 2023

Figure 4-5 | CMP Study Network: Bike Facilities



Source: xGeographic; MetroPlan Orlando, 2024

Figure 4-6 | CMP Study Network: Pedestrian Facilities



Source: xGeographic; MetroPlan Orlando, 2024

4.4 System Monitoring

MetroPlan Orlando manages the collection of data to foster monitoring changes in the various performance measures, determining the impacts on congestion levels throughout the region, and reporting on the effectiveness of implemented strategies over time. During each CMP update, the MPO compiles and analyzes all available new data to identify and adjust goals, objectives, and performance measures.

Performance measures are the indicators used to conduct monitoring and evaluation. After assessing baseline visioning and data, the extent to which goals and objectives are being met is evaluated based on which metrics are moving towards the targets set by MetroPlan Orlando. This aims to assist the MPO in its CMP as well as implementing the MPO's performance-based project prioritization process with a specific focus on the elements of congestion, safety, mobility, and reliability. Through pinpointing hotspots on the road network, this analysis helps the MPO determine which roads should be prioritized for projects aimed at mitigating congestion and improving mobility, safety and reliability. The monitoring goes beyond system performance for vehicles to evaluate accessibility and the quantity of infrastructure provided to bicyclists and pedestrians system wide.

4.4.1 PERFORMANCE MEASURES

The objectives-driven, performance-based approach, promoted by FHWA and Federal Transit Administration (FTA), focuses on working toward desired system performance outcomes rather than only responding to problems. This approach recognizes that what is measured matters in decision making, and that setting specific, measurable performance objectives will facilitate incorporating operational strategies into the MTP.

Table 4-2 presents the performance measures used to monitor the CMP network, by goal area. The table includes a description of each measure and includes a brief summary of the recent historic trend for that measure. For information on the condition, performance and targets for required federal and state performance measures, please see the System Performance Report included as Appendix D. To review the historic trends for each measure over the past 5 years please see the CMP Technical Report (available HERE), and for details on how various measures were calculated please see Appendix E.

Table 4-2 | 2050 CMP Performance Measures

Safety Measures	Description
Fatal and Serious Injury Crashes	This measure accounts for persons who have lost their lives in a vehicle crash or suffered through a serious injury requiring hospitalization. With the exception of 2021, the trend is heading in a positive direction. Fatalities and serious injury crashes have decreased by 32% or roughly a third over the last 5 years.
Crash Rates	Crash rates refer to the ratio of the total number of crashes to the number of vehicle miles traveled (VMT) (expressed in 100 million VMT) in a calendar year. Over the 5-year period from 2018 through 2022, the crash rate has decreased by 18%.
Pedestrian and Bicycle Fatal and Serious Injury Crashes	This measure accounts for pedestrians and bicyclists who have lost their lives in a crash or suffered a serious injury requiring hospitalization. Of all the fatal and serious injury crashes in the region, one in three involve a bicyclists or pedestrian. This measure is trending in a positive direction.
Speeding-Related Crashes	This measure accounts for all crashes over the 5-year analysis period where speeding was the primary cause of the crash. Speeding related crashes for the past two observed years are within 1 percentage point of each other.
Average Incident Clearance Time	This measure refers to the average minutes between first notification of an incident and the final clearance of the scene. This measure is trending in a positive direction.
Average Incident Response Time	Average emergency response time refers to the average number of minutes between dispatch and arrival to the scene. This measure is trending in a positive direction.

Reliability Measures	Description
% of Reliable Interstate Miles	A segment of interstate is considered reliable when its Level of Travel Time Reliability (LOTTR) is less than 1.5. This performance measure compares the 80th percentile travel time to the median (50th percentile) travel time. With a LOTTR of 1.5, if your work commute takes 30 minutes on average, you would need to plan 45 minutes to ensure an on-time arrival, 80 percent of the time. This measure accounts for the person miles traveled on reliable interstate segments and is trending in a positive direction
% of Reliable Non-Interstate Miles	A segment of National Highway System (NHS) is considered reliable when its LOTTR is less than 1.5. This measure accounts for the person miles traveled on reliable NHS segments that are not on the Interstate. The last two years reported have witnessed a consistent trend.
% of System Connected with Fiber	This measure accounts for the percentage of centerline miles in the MPO planning area that are actively monitored or managed through fiber that connects to another device or back to a centralized monitoring center.
% of System with Connected Signals	This measure represents the percent of signalized intersections that are connected to a network, typically fiber. Connectivity between signals allows them to communicate to each other for vehicle throughput and with a traffic monitoring center. This measure has trended slightly negative over the past several years.
Transit On-Time Performance	The on-time performance threshold is within 5 minutes of the scheduled arrival time. These figures represent the level of success of the service operating according to the published schedule. This measure is trending in a negative direction for LYNX and has remained consistent for Sunrail.
% of Speed Limit Achieved by Drivers	This measure represents the percent of the posted speed limit achieved by all vehicles during the peak hour. The measure is expressed as the ratio of average peak hour speed against the posted speed limit. Travelers' ability to travel at the speed limit is decreasing.
Connectivity Measures	**Description**
Average Transit Frequency	This measure accounts for the time elapsed between transit vehicles. For LYNX, this trend has not changed significantly over the most recent 3 years reported.
% Population within ½-mile of Frequent Transit	This measure accounts for how accessible reliable transit is to the population within the MetroPlan Orlando service area. This measure includes transit routes with headways of 30 minutes or less, and is trending in a positive direction.
% Jobs within ½-mile of Frequent Transit	This measure accounts for the jobs that are within ½ mile (seen as an acceptable walking distance from the frequent transit service) of frequent transit routes. This measure includes transit routes with headways of 30 minutes or less.
% Transit Ridership , by Headway (LYNX)	This is the percent of passengers who board public transportation vehicles on the transit system's fixed routes with 15-minute, 30-minute, or 60-minute headways. The most recent trend for this measure is sporadic.
% Transit Ridership , by Headway (SunRail)	This is the percent of passengers who board SunRail trains with 30-minute, 31-59-minute, and 60+-minute headways. The annual changes in the trend over the evaluation period are minor and do not represent either a positive or negative direction.
Daily VMT, per Capita	This is the average daily vehicle miles traveled per person within the 3-county region. On average persons in the area drove over 28 miles a day for the last 5 years. This measure is trending in a negative direction.
% Population within a 10-minute Walk/Bike Ride of Essential Services	This measure serves as an indicator of the access to essential services including grocery stores, markets/convenience stores, small markets, restaurants, public parks, government, schools and health care. The measures reflects the percent of population within the MetroPlan Orlando planning area that has a proximity score of 8 or higher, indicating that percentage of population has access to essential services within a 10-minute walk or bike ride
Annual Unlinked Trips	This measure tracks the number of passengers who board public transportation vehicles. After 2 consecutive years of decreases in trips, this measure is trending in a positive direction.

Community Measures	Description
Air Quality Index	The air quality index (AQI) is an index for reporting daily air quality, and it is calculated based on monitored concentrations of ground-level ozone, particulate matter, carbon monoxide, sulfur dioxide and nitrogen dioxide. This measure is trending in a positive direction.
Rates of Asthma, Obesity and Diabetes	Traffic congestion can have significant negative impacts on public health, particularly in relation to asthma, obesity, and diabetes. Increased traffic leads to higher levels of air pollutants negatively affecting asthma. Traffic congestion can discourage walking or biking, leading to a more sedentary lifestyle. Physical inactivity is a major risk factor for obesity and diabetes.
% of Commutes using non-SOV Modes	This measure considers the percentage of multimodal commuting trips that are made using a mode other than a single occupant vehicle. Increasing the percentage of multimodal commute trips helps reduce the number of single-occupant vehicles (SOVs) on the road, which are major contributors to traffic congestion. The percentage of commute trips made via a method other than a SOV, such as by foot, by bike, or by transit is trending in a positive direction.
% of Network with Active Transportation Facilities	This measure identifies the share of non-limited access roads on the State Highway System that have shared use paths, bicycle or pedestrian facilities on one or both sides of the road.
Prosperity Measures	**Description**
Truck Travel Time Reliability	Truck travel time reliability is reflective of the Planning Time Index (PTI) for trucks. Truck travel time reliability measures the extent of this unexpected delay. The PTI represents the additional time that a traveler should budget to ensure on-time arrival to their destination at least 95% of the time. Since 2020 truck reliability has slightly worsened
Median Commute Travel Time	This measure represents the one-way commute time for workers. The average commute time in the United States is 26 minutes. Orange and Seminole Counties have not experienced much change in annual commute times. Osceola County commute time continues to worsen.
Annual Delay per Capita	This measure accounts for the time lost due to unattainable travel speeds. Higher travel times reflect slower travel speeds. The difference between the uncongested travel time and observed travel time is delay. This figure represents the number of hours lost by commuters each year. Delay per commuter increased by 50% from 2021 to 2022.

4.4.2 UPDATED PERFORMANCE MEASURES

The 2050 CMP includes multiple updates to the performance measures reported in the 2045 CMP. Table 4-3 through Table 4-7 summarizes which measures were added or removed, and the reasoning behind the changes.

Table 4-3 | Changes to Safety Measures since the 2045 CMP

Safety Measures	Reported in 2045 CMP	Reported in 2050 CMP	Notes
All fatal crashes and crash rate	Yes	Yes	Fatal + incapacitating injury crashes reported jointly in 2050 CMP. Crash rates not reported by severity
All incapacitating injury crashes and crash rate	Yes	Yes	Fatal + incapacitating injury crashes reported jointly in 2050 CMP. Crash rates not reported by severity
Bicycle fatal crashes	Yes	Yes	
Bicycle incapacitating injury crashes	Yes	Yes	
Ped fatal crashes	Yes	Yes	
Ped incapacitating injury crashes	Yes	Yes	
Average emergency response time	Yes	Yes	
Average incident clearance time	Yes	Yes	
Speeding related crashes	No	Yes	New measure for 2050 CMP; this measure provides more specificity to the types of crashes occurring

Table 4-4 | Changes to Reliability Measures since the 2045 CMP

Reliability Measures	Reported in 2045 CMP	Reported in 2050 CMP	Notes
Percent of interstate roadways providing reliable travel times	Yes	Yes	
Percent of non-interstate roadways providing reliable travel times	Yes	Yes	
Percent of system miles actively monitored and managed	Yes	Yes	
Annual vehicle hours of delay (per capita)	Yes	Yes	
Percent of transit system meeting on-time performance standard	Yes	Yes	
Percentage of TIP funding spent on TSM&O projects	Yes	No	Removed because the year over year change is not significant
Percent of system with connected signals	No	Yes	New measure for 2050 CMP; this measure is an indicator of improved arterial operations
Percent of speed limit achieved by drivers	No	Yes	New measure for 2050 CMP; This measure accounts for congestion

Table 4-5 | Changes to Connectivity Measures since the 2045 CMP

Connectivity Measures	Reported in 2045 CMP	Reported in 2050 CMP	Notes
Annual trips using shared micromobility	Yes	No	Micromobility has not yet proven to be an alternative mode for commuting it has little impact on congestion
Average fixed-route transit frequency	Yes	Yes	Same in each CMP
Percent of fixed-route transit ridership on: <15-minutes, 16-30 minutes, 31-59 minutes, >60 minutes routes	Yes	Yes	Same in each CMP
Percent of population within ½ mile of 30-minute or 15-minute transit frequency	Yes	Yes	Same in each CMP
Percent of jobs within ½ mile of 30-minute or 15- minute transit frequency	Yes	Yes	Same in each CMP
Percentage of population/acreage with access to essential services within a 10-minute walk/bicycle Ride	Yes	Yes	Same in each CMP
Daily VMT per capita	Yes	Yes	Same in each CMP
Annual passenger miles	Yes	No	Annual unlinked passenger trips is the primary indicator for transit use
Annual unlinked trips	Yes	Yes	Same in each CMP
Average weekday unlinked trips	Yes	No	Annual unlinked passenger trips is the primary indicator for transit use
Average weekend unlinked trips	Yes	No	Annual unlinked passenger trips is the primary indicator for transit use

Table 4-6 | Changes to Community Measures since the 2045 CMP

Community Measures	Reported in 2045 CMP	Reported in 2050 CMP	Notes
Percent of commutes that are non-single occupant vehicle (SOV)	Yes	Yes	Same in each CMP
Percentage of TMA/SU funds Allocated for projects that support the MetroPlan Orlando Board Emphasis Areas	Yes	No	MetroPlan Orlando is no longer tracking spending by Board Emphasis Area
Average annual Air Quality Index	Yes	Yes	Same in each CMP
Annual vehicle hours of delay and associated cost per capita (for personal travel)	Yes	No	The delay experienced provides an indication of congestion, not the associated costs
Rates of asthma, obesity and diabetes	No	Yes	New measure for 2050 CMP; this measure accounts for the impacts of congestion and idling vehicles
Percent of network with active transportation facilities	No	Yes	New measure for 2050 CMP; this measure accounts for multimodal alternatives

Table 4-7 | Changes to Prosperity Measures since the 2045 CMP

Prosperity Measures	Reported in 2045 CMP	Reported in 2050 CMP	Notes
Percent of regional visitor emphasis corridors providing reliable travel times	Yes	No	Replaced by "Annual hours of delay on visitor corridors" measure. Delay a better indicator of visitor experience than reliability
Truck travel time reliability index	Yes	Yes	Measure moved from Reliability goal area (2045) to Prosperity goal area (2050)
Median commute travel time	No	Yes	New measure for 2050 CMP; this measure accounts for congestion
Annual hours of delay on visitor corridors	No	Yes	New measure for 2050 CMP

4.4.3 DATA COLLECTION

The key to effective transportation decision making is accurate and reliable transportation data. Gathering data to monitor system performance is the element of the CMP that requires the largest number of resources and staff time for MetroPlan Orlando and its planning partners. Nearly all CMP performance measures have available data that is reported routinely, and MetroPlan Orlando staff periodically monitor when new data becomes available for each measure described in the previous section.

In general, the following types of data are collected to support performance monitoring efforts:

- Roadway characteristics data
- Crash data
- Traffic volume counts
- Travel survey data
- Speed and travel time data
- Environmental data
- ITS and operations data
- Cost of congestion data
- Private sector cellular data
- Micromobility data
- Transit data
- Land use data
- Bicycle/pedestrian data
- Funding data

The collection techniques vary by data source. MetroPlan Orlando staff coordinate and compile the data from various sources and transportation partners.

4.5 Recommended Strategies

The CMP is supported by the identification of various strategies targeted to alleviate existing operational issues, separate from the MPO's planning process that addresses future mobility needs. While the project development process can take 10 years or more from the planning phase through the construction phase, projects identified through the CMP are intended to be implemented in less than half that time. These projects could be completed within a year or two of the project's initial execution. Aside from the strategies identified in the CMP, newer approaches and remedies may exist but are reliant on further study that could identify a winning strategy for inclusion in a future CMP update.

4.5.1 STRATEGIES IMPLEMENTED SINCE THE 2045 CMP

The 2045 CMP identified strategies in three broad categories in order to reduce recurring and nonrecurring congestion in the region. This section summarizes those strategies that have been implemented, that are in progress, or that are programmed for implementation.

STRATEGIES THAT IMPROVE SAFETY

A number of the safety-related strategies identified in the 2045 CMP were pursued since plan adoption including developing a Vision Zero Safety Action Plan for the region along with individual action plans for each jurisdiction. The region also continued to support traffic incident management strategies like road user notifications, the Road Rangers program, and utilizing integrated corridor management (ICM) to manage nonrecurring congestion.

STRATEGIES THAT OPTIMIZE SYSTEM CAPACITY

Several strategies have been implemented to improve capacity while utilizing existing infrastructure since the 2045 MTP adoption. FDOT implemented managed lanes along I-4 and added auxiliary lanes along I-4 near the Champions gate area. Maintaining agencies continue to add fiber and utilize signal retiming, which allows staff to actively monitor operations and periodically make adjustments to manage congestion along key corridors.

STUDIES THAT SHIFT SOV TRIPS TO OTHER MODES

More work remains to be done for all strategies identified in this area in the 2045 CMP. MetroPlan Orlando will begin a TDM Strategic plan in fiscal year 2026 that will provide recommendations for specific strategies. Additionally, coordination continues with local partners through the long range planning process to fund projects that will improve the user experience for all modes.

The strategies identified in the next section take into consideration those projects and strategies that are underway and expands on them to develop a holistic toolbox of options that are recommended for implementation to benefit immediate operational needs and to support safe and efficient operations within the region moving forward.

4.5.2 CONGESTION MANAGEMENT STRATEGY TOOLBOX

Solutions for congestion at an intersection or along a corridor must be tailored to the causes of that congestion and the context of the surrounding area. The traditional approach has been to increase roadway capacity by adding a lane, but expanding a roadway comes with significant costs. TSM&O strategies, on the other hand, can help mitigate congestion with significantly lower costs and faster implementation times.

Table 4-8 summarizes the strategies that have been identified to address the causes of congestion within the MetroPlan Orlando planning area. The strategies are intended to provide connectivity, improve collection of actionable data, and improve mobility on arterials and limited access facilities. Please reference the 2050 CMP Technical Report (available on the MetroPlan Orlando website HERE) for additional details on how each strategy can support the region's congestion management goals.

Table 4-8 | Summary of Congestion Management Strategies

Demand Management Strategies	
▪ Create a Transportation Demand Management (TDM) Strategic Plan ▪ Support LYNX /SunRail projects to optimize route structure, service hours, and frequency ▪ Magnify TDM strategies	▪ Adapt roads to accommodate all users ▪ Active parking management ▪ Improve local street connectivity/accessibility ▪ Incorporate TSP on corridors with high transit ridership
System Communication Strategies	
▪ Continue connecting intersections with each other and the traffic management center ▪ Support Traffic Signal Coordination/Active Arterial Management	▪ Promote interagency communications/interoperability
Information Collection Strategies	
▪ Expand the actively monitored system ▪ Support deployment of instruments to collect data (speed/volume/queuing/etc.)	▪ Set aside funding for data purchases to support decision-making ▪ Adopt systems to provide consistent reporting
Arterial Management	
▪ Evaluate special use lanes ▪ Consider alternative intersection geometry ▪ Continue to support signal retiming ▪ Expand ICM program	▪ Assess feasibility of reversible lanes ▪ Develop consistent curb management ▪ Reduce access (conflict) points ▪ Support deployment of adaptive signal control
Interstates and Expressway Management	
▪ Assess feasibility of ramp metering ▪ Program interchange improvements ▪ Implement congestion pricing ▪ Adopt variable speed limits	▪ Expand installation of advanced warning signs ▪ Increase reliability of key truck routes ▪ Study part-time shoulder use ▪ Promote work zone management
Safety	
▪ Implement Vision Zero Action Plan ▪ Continue to utilize ICM to redirect traffic for major incidents	▪ Continue to support Road Rangers service ▪ On-board units and roadside units ▪ Intersection collision avoidance

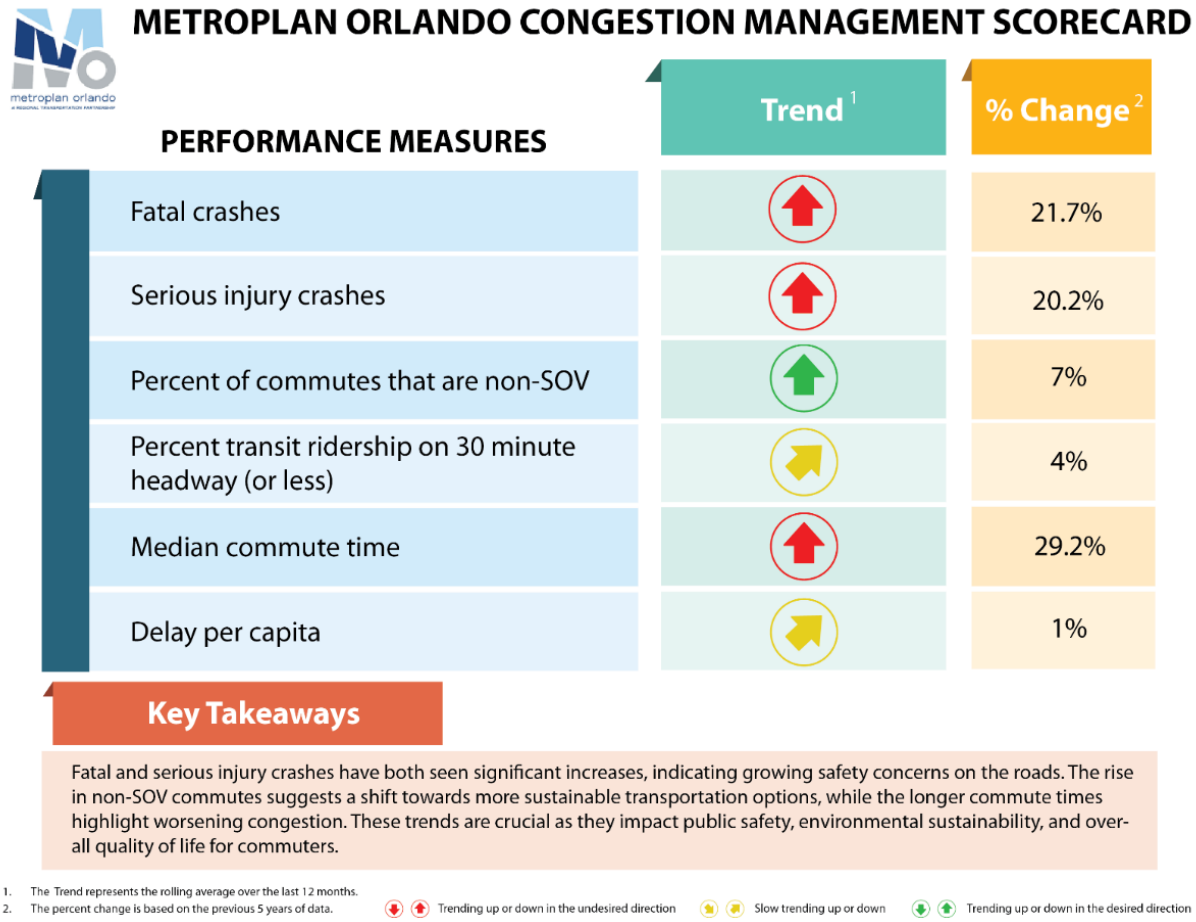
4.6 Evaluation Plan

FHWA's guidelines call for CMPs to include provisions to monitor the performance of strategies implemented to address congestion. MetroPlan Orlando will track progress towards the CMP's targets via a Congestion Management Scorecard that is updated and published twice per year, and on an annual basis through the development of a Congestion Management Update memo that provides a "state of the system" summary of how key measures have trended over the preceding year. MetroPlan Orlando may conduct before and after studies for implemented strategies to assess their effectiveness in alleviating congestion on the system. The annual memorandum will summarize the direction each indicator is trending in and key takeaways, it will also report findings for any before and after studies completed for projects related to the congestion management strategies noted in Section 4.5.

4.6.1 CMP PERFORMANCE SCORECARD

MetroPlan Orlando has developed a CMP Performance Scorecard to monitor progress. MetroPlan Orlando staff will make the latest performance scorecards available on the agency website and will also include them in Board and Advisory Committee agenda packets to keep local staff and decision-makers informed about progress. Figure 4-7 shows a sample CMP Performance Scorecard. On a semi-annual basis, MetroPlan Orlando will compile and analyze all available new data and use the findings of this analysis to update the CMP Performance Scorecard and provide a snapshot in time of system performance with respect to both measures that impact congestion (crashes, VMT) and those that are impacted by congestion (reliability, delay). and note progress towards the targets for each measure. For those measures where data is available less frequently, the data from the previous reporting period will stand until new data is available.

Figure 4-7 | Example CMP Performance Scorecard



Every five years, the entire CMP will be reevaluated to determine appropriate adjustments to the various components including the goals and objectives, performance measures, data availability, targets, and recommended strategies.

4.6.2 2050 CMP TARGETS

23 CFR 490.101 defines a target as "a quantifiable level of performance or condition, expressed as a value for the measure, to be achieved within a time period required by the Federal Highway Administration." Table 4-9 shows the 2029 targets for each performance measure defined in the CMP.

Table 4-9 | 2050 CMP Targets

Safety Objectives	Performance Measures	Target
Eliminate deaths and serious injuries on the transportation system	Number of bike and pedestrian fatal crashes	0
	Number of fatal and serious injury crashes	0
	Speeding related crashes	0
	Crash rates	0
Improve incident clearance times	Average incident clearance time	45 minutes
	Average incident response times	4 minutes
Connectivity Objectives	**Performance Measures**	**Target**
Increase accessibility for non-drivers	% Population within ½ mile of frequent transit	33%
	% Jobs within ½ mile of frequent transit	50%
Improve connectivity to key destinations	Daily VMT, per capita	28.2 mi
	% Transit Ridership, by headway	75% 30-minute headways
	% Population within a 10-minute walk/bike ride of essential services	20% walk 50% bike
Expand bicycle, transit, and pedestrian infrastructure	Annual unlinked trips	20,000,000 LYNX 1,000,000 SunRail
	% of Network with active transportation facilities	90% pedestrian 75% bicycle
Reliability Objectives	**Performance Measures**	**Target**
Improve travel time reliability	% of Reliable interstate miles	>70%
	% of Reliable non-interstate miles	>65%
	% of Speed limit achieved by drivers	85%
Promote projects that improve reliability	% System connected with fiber	40%
	% of system with connected signals	95%
Provide travelers with more predictable travel times	Transit on-time performance	90%
Community Objectives	**Performance Measures**	**Target**
Maintain Air Quality	Air quality index	<45
	Rates of asthma, obesity and diabetes	<8% asthma < 30% obesity < 10% diabetes
Decrease reliance on single occupancy vehicles	% of commutes using non-SOV modes	33%
	% of Network with active transportation facilities	90% pedestrian 75% bike
Prosperity Objectives	**Performance Measures**	**Target**
Improve reliability for shippers, goods, and commerce	Truck travel time reliability	<2.00
Enhance mobility on key tourist corridors	Delay on visitor corridors	1,800 hours
Increase access to jobs, with emphasis on essential service workers	Median commute time	28 minutes
	Annual delay per capita	<11.0 hours

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