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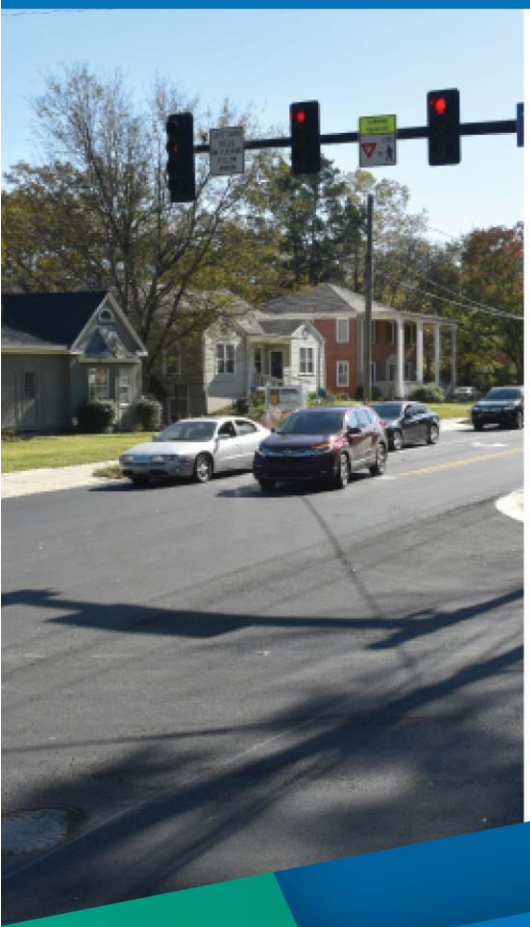
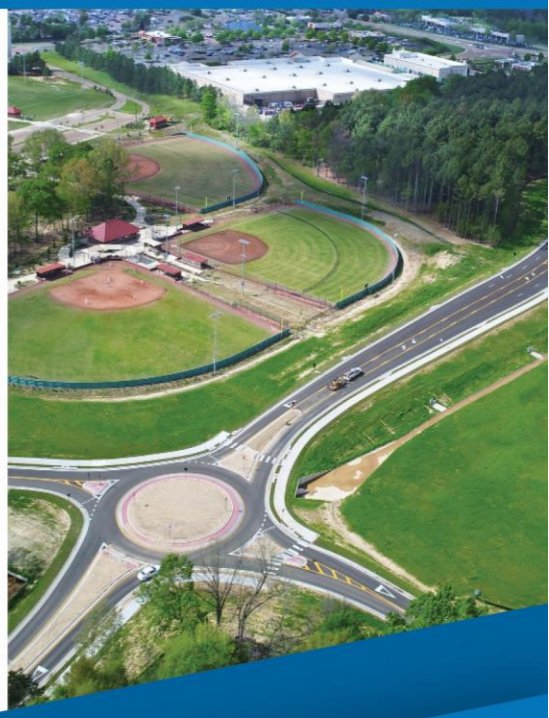
CENTRAL MISSISSIPPI
PLANNING AND DEVELOPMENT DISTRICT

2050 Metropolitan Transportation Plan





Technical Report #4

DRAFT – Needs Assessment

DRAFT – September 2025

Prepared by:

NEEL-SCHAFFER

CMPDD

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CENTRAL MISSISSIPPI
PLANNING AND DEVELOPMENT DISTRICT

Central Mississippi Planning & Development District

2050 Metropolitan Transportation Plan

This Plan was prepared as a cooperative effort of the U.S. Department of Transportation (USDOT), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), Mississippi Department of Transportation (MDOT), and local governments in partial fulfillment of requirements in Title 23 USC 134 and 135, amended by the IIJA, Sections 11201 and 11525, October 1, 2021. The contents of this document do not necessarily reflect the official views or policies of the USDOT.

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1.0 Introduction

This report discusses transportation needs for the Central Mississippi Planning & Development District (CMPDD) Metropolitan Planning Organization (MPO) planning area. It is informed by the analysis in *Technical Report #2: State of Current Systems* and an assessment of future needs based on:

- current and forecasted trends,
- existing plans, and
- public and stakeholder input.

In addition to analyzing area needs, this assessment also identifies improvement recommendations to best support the MPO region as it continues to grow and evolve.

2.0 Special Considerations

Within the Metropolitan Transportation Plan (MTP), special considerations are given to context-specific conditions that impact the transportation network. These vary and may be based off a specific location or be related to specific events. This section describes the special transportation network considerations within the MPO planning area, including those related to resilience, regional considerations, and tourism.

2.1 Resilience

Within the context of transportation planning, resilience is the ability of transportation systems to withstand extreme or changing conditions and continue to provide or restore reliable mobility and accessibility throughout the region. As such, resiliency measures consider the impacts of weather, natural disasters, and human-induced events on transportation networks.

Resilience is the ability to respond to, or recover from, a negative impact event or disruption.

This section reviews and builds upon existing local, regional, and statewide plans to define a comprehensive approach to increasing transportation system resiliency throughout the MPO region, which includes the urbanized areas within Hinds, Madison, and Rankin counties. Through the identification of high-risk areas within the region, mitigation and maintenance strategies are identified and may be selected to address resiliency concerns where appropriate.

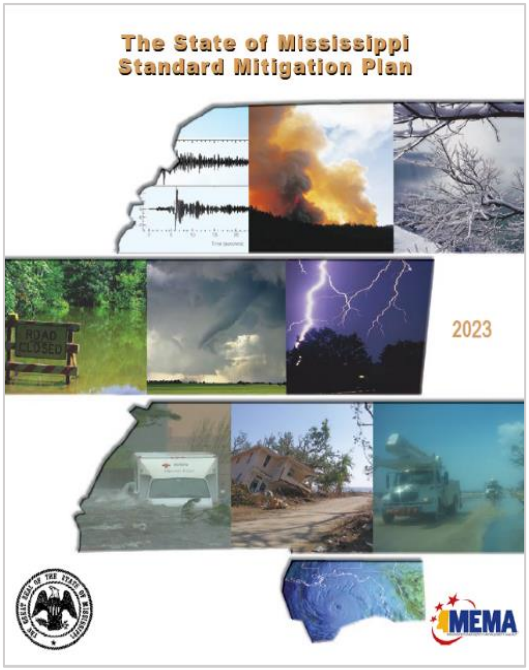
Statewide Plans

The *State of Mississippi Standard Mitigation Plan*[1] is updated every five years in accordance with the Federal Disaster Mitigation Act of 2000, to serve the central purpose of "saving lives and reducing future losses". The plan guides hazard mitigation strategies that consider technical feasibility, cost effectiveness, and environmental integrity to address the following statewide concerns:

- Flooding
- Extreme Weather
- Drought
- Earthquakes
- Wildfires
- Hurricanes
- Tornadoes
- Dam/Levee Failure
- Sea Level Rise
- Cyberterrorism
- Infectious Disease

[1] 2023-State-of-Mississippi-Hazard-Mitigation-Plan-10.11.23.pdf

The most recent plan, updated in 2023, does not separate data by MPO region, but does divide the analysis and findings by county. As such, data from Hinds, Madison, and Rankin Counties were used to identify regional characteristics. Specific hazards that impact the region are discussed in Section 2.2, and strategies to mitigate these hazards are discussed in Section 2.3.



Topography and Soils

Within the MPO counties, there are four different physiographic zones. These zones help describe the soil and geological traits of the area. Information about the zones present within the MPO region, their characteristics, and their location by county are shown in **Table 2.1**.

Table 2.1: Physiographic Zones Within the MPO by County

Zone	Characteristics	County
Jackson Prairie	The predominate soil types in this region are both acidic and non-acidic. The topography is somewhat rolling hills with areas of ridges and valleys.	Rankin
Loess Hills	The predominant soil type is both acidic and non-acidic. This zone is also considered to be the Brown Loam Region. The topography is characterized by narrow ridges and steep-sided ravines.	Hinds Madison
North Central Hills	The soils in this region are mostly acidic. The topography is characterized by both ridges and valleys.	Madison
South Central Hills	The soil found here is primarily sandy loam. The topography includes rolling hills with broad valleys.	Hinds Madison Rankin

The region also has areas with high concentrations of Yazoo clay, a type of clay that is known to change in volume as it absorbs moisture. This clay can cause damage to foundations and roadway infrastructure built on top of it, as it expands and shrinks more than other soil types. Additionally, as clay slows the permeation of water into the soil, it can exacerbate concerns related to flood hazards.

River Basins

The State of Mississippi is located within the drainage area for the Gulf of Mexico. As such, the nine river basins within the state help to bring fresh water throughout Mississippi before draining into the Gulf. Of these, the Big Black and Pearl River Basins impact the MPO region. While being important ecologically, areas within river basins are more prone to riverine and other flooding hazards.

Weather Readiness

Hinds and Rankin Counties, and the Cities of Brandon, Clinton, Jackson, Madison, Pelahatchie, and Richland, were identified as being National Weather Service (NWS) StormReady communities. To receive a StormReady designation, communities must:

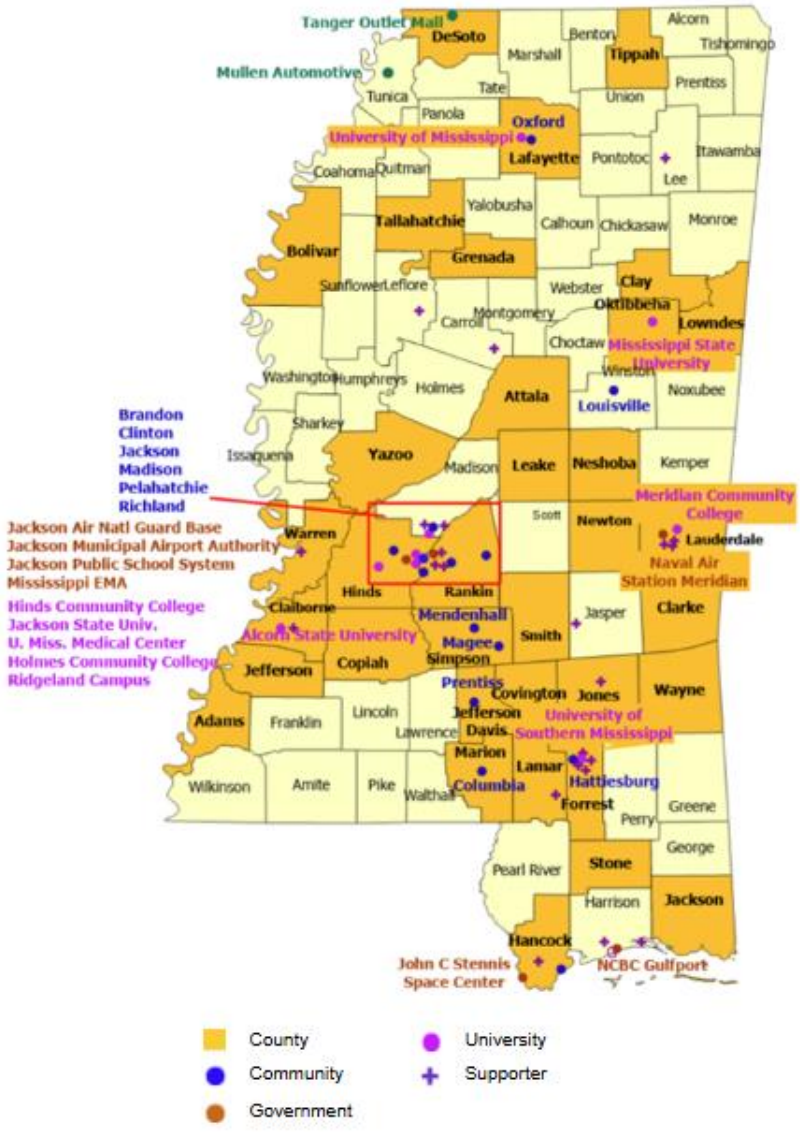
- Establish a 24-hour warning point and emergency operations center
- Have multiple ways to receive weather warnings/forecasts and alert the public
- Promote the importance of public readiness through community programs
- Develop a formal hazardous weather plan encompassing all components of the operation

Additional StormReady supporters and agencies within the region include:

- Jackson Air National Guard Base
- Mississippi Emergency Management Agency
- Hinds Community College
- Holmes Community College
- Jackson Public School System
- Jackson Municipal Airport Authority
- Jackson State University
- University of Mississippi Medical Center
- Mississippi Baptist Medical Center
- Mississippi State Hospital
- Vertex Aerospace
- Simon Northpark Mall
- Nucor Steel and General Recycling

Figure 2.1 illustrates the location of StormReady sites in Mississippi.

Figure 2.1: StormReady Sites in Mississippi



Source: State of Mississippi Standard Mitigation Plan

To mitigate the risks associated with hurricanes, tornadoes, and other extreme weather hazards, Rankin and Madison Counties were listed as having either a FEMA 361 shelter or community safe room[2].

FEMA 361 shelters are those that are certified to be built to specific design standards and criteria laid out by FEMA. They may be for individual or community use.

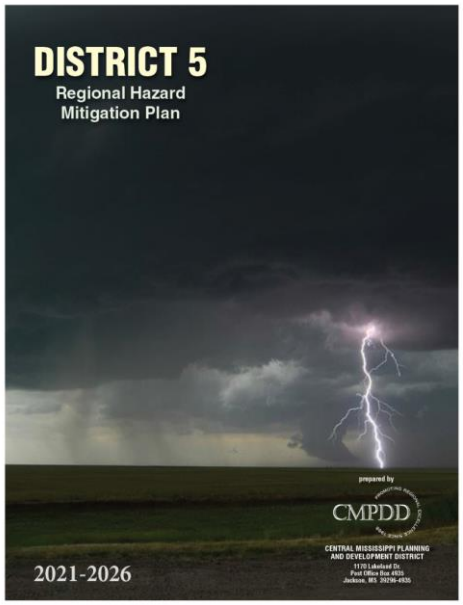
Community safe rooms serve the larger community, are often public, and may double as a community center, such as a gymnasium, when not in use.

While community safe rooms are often built to FEMA design standards, FEMA-361 goes further by including risk, emergency management, and shelter operation into considerations.

[2] https://www.fema.gov/sites/default/files/documents/fema_rsl_fema-p-361-safe-rooms-for-tornadoes-and-hurricanes_042025.pdf

Regional and Local Plans

Mississippi Emergency Management Agency Hazard Mitigation Plan



The Mississippi Emergency Management Agency provides a regional approach to emergency management within the State of Mississippi. To facilitate this approach, Mississippi counties are divided into nine emergency management districts, which are each responsible for the development of a regional hazard mitigation plan for their respective area.

The MPO planning area falls within District 5 and is included within the *District 5 Hazard Mitigation Plan*, last updated in 2020[3]. This plan works to identify, characterize, and mitigate natural hazards and the vulnerability and risks they introduce within the region over a five-year period[4].

The plan will undergo an update beginning in 2025 and include four jurisdictions located within the MPO planning area. When available, the updated regional hazard mitigation plan should be reviewed and recommendations considered alongside those within the MTP.

Local Hazard Mitigation Plans

Many jursidctions that opted out of the regional hazard mitigation planning process aim to adopt their own individual hazard mitigation plans. When available, these should be reviewed for additional considerations not addressed by State or Regional hazard mitigation plans.

2.2 Regional Considerations

The CMPDD is the agency responsible for transportation policy development, planning, and programming within the planning area. As such, it considers transportation resiliency needs that impact the region as a whole. This includes weather-related and hazardous events that threaten the transportation network.

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[3] https://cmpdd.org/images/publications/mema/2020-07-District-5-Hazard-Mitigation-Plan-DRAFT.pdf

[4] https://cmpdd.org/mitigation-planning/#:~:text=CMPDD%20is%20currently%20working%20with,Mississippi%20Valley%20State%20University

The *State of Mississippi Standard Mitigation Plan* includes information related to hazards and extreme events throughout the State of Mississippi. As such, it was the primary source of information regarding the vulnerabilities discussed in this section.

The following hazards identified within the plan present a moderate or higher risk to the region:

- Extreme Winter Weather
- Dam and Levee Failure
- High Wind Events
- Flooding
- Drought

These hazards, and their impact on the region, are discussed in this section. Additionally, temperature extremes were also included due to the strain they can place on transportation infrastructure. Mitigation for these events is further described in Section 2.3.

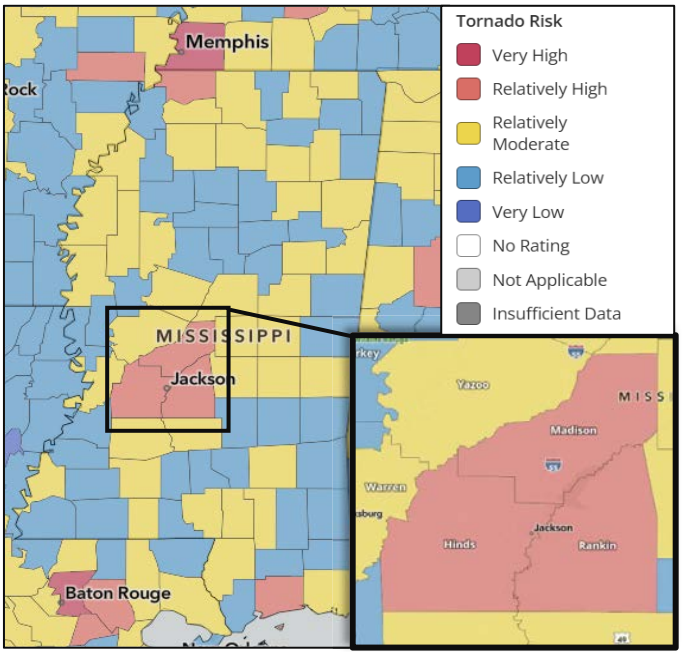
Weather and Climate Events

High Wind Events

High wind events that impact Mississippi include both hurricanes and tornadoes. Of these, tornadoes pose the highest wind-related hazard risk to the region. This, depicted in **Figure 2.2**, was identified as being "relatively high" within the MPO counties.

From 1950 – 2023, Hinds and Rankin counties had the most tornado events within the MPO region, with 112 and 99 events respectively. Highly destructive wind events which impacted the region include the:

Figure 2.2: FEMA Relative Tornado Risk



Source: FEMA National Risk Index Map

- April 2017 – Tornado Outbreak,
- April/May 2014 – Tornado Outbreak and Severe Supercell Thunderstorms, and
- Historic 1969 F4 Tornado.

As the MPO is further inland, hurricanes and tropical storms present more of a heavy rain and flooding risk than a high wind risk to the region. As such, these major tropical systems are discussed along with other flooding events.

Floods

Floods are a primary concern throughout the State of Mississippi and, consequently, the MPO planning area. Riverine, flash, and drainage are the primary flood hazards which impact the region.

Major recent flood events include the:

- **2011 Mississippi River Flood,**
- **2005 Hurricane Katrina, and**
- **2003 125-Year Rainfall Event.**

The MPO planning area includes multiple river basins, areas with clay soils, and low-laying plains that make it more susceptible to riverine and flash flood events. These events pose a severe threat to residents and properties, and can result in significant damage to transportation systems, such as roads being washed out or bridge supports being damaged. During periods of flooding, roadways located in floodways are more likely to experience most of the damaging effects and have the greatest impact on the natural flow of water.

Extreme Winter Weather

Source: MDOT

Like most regions within the Southern United States, the MPO region does not usually experience significant winter weather. However, even small amounts of winter precipitation can have a significant impact on the regional transportation system. Icy conditions can result in road and bridge closures and drivers unfamiliar with traveling during winter weather events may not be able to do so safely.

Since 2010, there have been notable winter weather events that impacted at least one county within the MPO region. These events include:

- February 2021 – Ice/Snow Storm
- January 2021 – Snow Storm
- December 2017 - Snow Storm
- January 2017 - Winter Storm
- February 2015 - Snow Storm
- January 2014 - Winter Storm
- January 2013 – Ice/Snow Storm
- January 2010 – Prolonged Freezing

Drought

Drought, while a moderate risk to the State of Mississippi, does not currently have a high impact on the MPO planning area. However, as the region has soils that expand when saturated with water, these soils are also prone to shrinking and cracking when

dry. This could impact the integrity of roadway networks, especially when coupled with severe hot temperatures.

Temperature Extremes

The MPO planning area is in an area that is classified as Humid, Subtropical (Cfa) according to the Köppen Climate Classification System. This is due to the region's average daily temperatures and the amount of rainfall that is expected. Severe hot and cold temperatures, especially with variations in precipitation, can affect transportation systems. Extremely high temperatures can affect the integrity of the pavement, and extremely low temperatures, especially during winter weather events, can cause road and bridge closures due to icing.

Additional Considerations

Dams and Structures

Dams and structures present specific vulnerabilities that can impact the roadway network. Dam failures, such as those caused by heavy rains, can exacerbate the impact of flooding events. Bridges are more at-risk during winter weather and extreme wind events. Additionally, bridge failures can cut off residents from evacuation routes, emergency services, and disrupt the transportation network.

The Surface Water and Dam Safety Divisions of the Office of Land and Water Resources within the Mississippi Department of Environmental Quality is responsible for developing dam safety regulations for the state. Dams are categorized as **low**, **significant**, or **high hazard** based off the potential downstream impact of a dam failure.

- **Low Hazard** is a class of dam in which failure would at the most result in damage to agricultural land, farm buildings (except residences), or minor roads.
- **Significant Hazard** is a class of dam in which failure poses no threat to life, but may cause significant damage to main roads, minor railroads, or cause interruption of use or service of public utilities.
- **High Hazard** is a class of dam in which failure may cause loss of life, serious damage to residential, industrial, or commercial buildings; or damage to, or disruption of, important public utilities or transportation facilities such as major highways or railroads.

12 Significant Hazard and **83 High Hazard** dams are located within MPO counties.

Within MPO counties, 874 dams were identified. Most dam structures, 779, were identified as being low hazard, unclassified, or require additional information. **Table**

2.2 lists the recorded failures of dams located within MPO counties from 2012 to 2022.

Table 2.2: Dam Failures in CMPDD MPO Counties (2012 – 2022)

County	Date	Structure Name	Type of Failure
Rankin	Aug. 2022	Easthaven Lake Dam	Flooding/Overtopping
Hinds	Aug. 2022	Raymond Sewage Lagoon	Backslope erosion
Rankin	Aug. 2022	Jones Lake Dam	Flooding/Overtopping
Madison	Apr. 2021	JF Jackson Lake Dam	Conduit/Infrastructure Collapse
Hinds	Mar. 2021	Linda Drive	Downstream slope seepage
Madison	Jul. 2020	Lake Cavalier	Downstream slope erosion
Rankin	Apr. 2020	Southern Acres Lake	Headcutting
Madison	Feb. 2020	Lake Cavalier	Downstream slope erosion
Hinds	Jan. 2020	Holmes Lake Dam	Piping
Madison	Jan. 2019	MS06004	Unknown
Rankin	Mar. 2018	NOI	Piping
Rankin	Feb. 2018	Piney Woods Lake Dam	Overtopping
Hinds	Mar. 2016	Regency Estates Lake Dam	Erosion around the siphon pipe causing significant damage.
Rankin	Feb. 2016	Piney Woods Lake Dam	Overtopping, large slide on the downstream slope.
Hinds	Nov. 2015	Latham Pond Dam	Overtopping of a section constructed by the owner.
Madison	Dec. 2012	Madison Baptist Fellowship Dam	Seepage due to animal burrows.

Source: State of Mississippi Standard Mitigation Plan

Bridges that are particularly vulnerable were identified in the *State of Mississippi Standard Mitigation Plan* using the Scour Index, which scores bridges based off their vulnerability during a flood and their foundation stability. Bridges with a scour index between 1 and 3 are considered "scour critical", which would indicate a higher vulnerability to floods or observed foundational instability. Within the MPO counties, there are 13 bridges that have a scour critical designation. Six of these are located within Hinds County, four in Madison County, and three in Rankin County.

2.3 Resiliency Action Plan

Resilience in transportation relies on a multifaceted approach utilizing data analysis, targeted remediation, and preventive maintenance. This allows for the transportation system to be developed with efficient and sustainable characteristics, increasing its overall resiliency. The resiliency action plan section considers the hazards and their resulting impacts that threaten the region, and identifies mitigation efforts to support resiliency throughout the transportation network.

Identification of Mitigation Strategies

The following mitigation strategies were developed to address the hazards which are most likely to impact the MPO planning area. These are informed by the data and analysis described in *The State of Mississippi Standard Mitigation Plan, Technical Report #2: State of Current Systems,* and additional analysis provided in this report, *Technical Report #4: Needs Assessment*.

Stormwater Mitigation

Source: pxfuel.com

How land is used and developed evolves along with the changes in area population and growth over time. New development often removes pervious areas such as grass, wetlands, and wooded areas, and replaces them with impervious surfaces such as new roadways, sidewalks, driveways, foundations, and parking lots. Increases in impervious surfaces can lead to excess runoff where existing drainage systems cannot properly manage the increased waterflow.

This can result in property damage, environmental concerns, and public health hazards as stormwater contaminants leech into new areas. Without proper drainage and stormwater mitigation efforts, new transportation projects can potentially worsen existing drainage issues. To reduce the impacts of stormwater runoff, green

infrastructure design elements can be utilized in addition to project planning and coordination efforts.

Green infrastructure is a cost-effective approach to managing weather events, while providing added benefits to the community.

The purpose of green infrastructure is to create more permeable surfaces that mimic the beneficial characteristics of the natural environment. This strategy uses vegetation, soil, and other elements to treat stormwater at its source and filter potential pollutants. This supports stormwater drainage systems by slowing runoff and reducing stormwater discharge, which helps to mitigate flood risk. Green infrastructure may also decrease the size of systems needed and reduce the overall cost of materials, maintenance, and future repairs.

Effective examples of green infrastructure, shown in **Figure 2.3**, include permeable pavements, bio- or vegetative-swales, green streets and alleys, and green parking.

Figure 2.3: Green Infrastructure Examples

Source: EPA

In addition to being applicable within transportation projects, green infrastructure can also be applied to commercial buildings and residential homes through incorporating green roofs, additional tree cover, rain gardens, bioswales, and

rainwater collection and reuse systems. Benefits of this include reductions in flood damage and lower energy costs, with the potential for higher property values and rental rates, tax savings, rebates, or other incentives.

Strategies that incorporate green infrastructure design elements can be implemented by the MPO and its partner agencies to minimize the associated stormwater and flooding risks of infrastructure development projects. These strategies include:

Source: ensia.com

- Minimizing impervious surfaces and alterations to natural landscapes;
- Promoting the use of Low-Impact Development practices;
- Encouraging local agencies to adopt ordinances that include stormwater mitigation practices[5];
- Developing a Standard Urban Stormwater Mitigation Plan[6];
- Identifying and prioritizing mitigation efforts in areas most likely to flood during heavy storm events;
- Developing emergency response measures that feature specified contract mechanisms in place for asset repair;
- Adopting open space preservation plans to balance land use and local development initiatives with preservation and conservation of the existing open space;
- Establishing stormwater fees to support the funding of stormwater management projects and practices[7];
- Offering incentives to encourage the use of pervious surfaces.

In addition to these, public involvement and education efforts can help to inform the public and stakeholders of stormwater runoff impacts and how they can assist with mitigation.

Flooding and High Wind Event Mitigation

Flooding and high wind events are closely associated with extreme weather. Due to the nature of these events, mitigation efforts largely fall into incorporating specific

[5] https://www.mdeq.ms.gov/wp-content/uploads/2017/05/Volume_3.pdf
[6] susmp_rbfinal.PDF (ca.gov)
[7] FY25 Stormwater Budget Adoption - 2nd Reading (takomaparkmd.gov)

elements into project construction and design. The following construction adaptation methods can be utilized to support infrastructure in regions vulnerable to events such as tropical storms, hurricanes, and tornadoes.

- Bridge scour countermeasures
- Resizing culverts and widening bridge openings
- Cable and tower damping on bridges
- Raising vulnerable roadway segments
- Detention and retention basins
- Floodgates and stormwater pump stations

Figure 2.4: Construction Adaptation Method Examples




Snow and Ice Mitigation

In southern climates, it is more common for ice or snow on roads to be mitigated through road salting. However, salting roads with traditional rock salt may lead to both environmental and public health concerns. As the salt dissolves, it drains with stormwater and may contaminate water supplies, exacerbate erosion, endanger wildlife, and increase soil salinity levels, which can inhibit the ability of plants to absorb water from their roots.

To address this, more sustainable options are available that can reduce the risk of environmental pollution while addressing winter precipitation accumulation on network roadways. The alternatives to the current use of sodium chloride include reducing the amount of sodium chloride use overall or changing the type of road treatment to calcium chloride or brine solutions made from agriculture byproducts (i.e. beet juice, molasses, corn, and soybean oil).

Source: MDOT

Although none of the alternatives completely reduce the negative impacts associated with salting, they have a smaller environmental impact and can be integrated into roadway de-icing efforts over time. The MPO can coordinate with MDOT and local jurisdictions to begin the process of selecting and using de-icing alternatives.

Maintenance

An important element of resilience is the continued maintenance of transportation assets to fortify the system against external damage. Examples of maintenance practices that promote network resiliency include:

- Prioritizing sites that are especially susceptible to natural hazard effects when implementing infrastructure updates
- Coordinating with the MDOT and partner agencies to increase inspection frequency of bridges and roadways, ensuring the infrastructure is structurally sound and that storm erosion has not degraded it
- Designing drainage systems and conducting regular inspections to ensure that roadways will not contribute to runoff that can lead to pooling
- Implementing tree trimming in high-risk areas to proactively mitigate downed tree occurrences

It is beneficial to adopt a wide range of preventive measures combining natural, constructed, and policy and education-based mitigation strategies. This ensures that the infrastructure can support regional weather impacts while limiting risks to asset structural integrity and public safety.

2.4 Tourism

Tourism plays an increasingly important role in economies as jobs shift into the service and information sectors[8]. As tourism grows, the resiliency of the transportation network and how it relates to tourism should be considered. This includes identifying what transportation options currently serve tourists and travelers, their related needs, and the recommended improvements to meet those needs.

State and Regional Tourism Overview

The Mississippi Development Authority is the agency responsible for growing tourism within the State of Mississippi. To this end, the agency collects data to better understand the impact of tourism, such as the economic contribution of tourism to Mississippi depicted in **Figure 2.5.**

Additionally, the development authority maintains its own tourism website, www.visitmississippi.org, which serves as a hub for traveling and tourism information across the State. This webpage also allows tourists to sort experiences, events, and amenities by tourist region. These regions are grouped together by geographical proximity and related historic and cultural ties. Due to this, all MPO counties fall into the Capital/River tourist region.

Figure 2.5: Contributions of Tourism to the Mississippi Economy (2023)

Source: https://visitmississippi.org/wp-content/uploads/2025/05/MDA13869-VisitMississippi-PartnerResourceGuide-P9.pdf

[8] *OECD Tourism Trends and Policies*, 2018, Organization for Economic Cooperation and Development

Additionally, several MPO cities have their own tourism webpages dedicated to attracting tourists to their area. These are:

- City of Jackson, MS – www.visitjackson.com
- City of Clinton, MS – www.clintonms.org/visitclinton/
- City of Ridgeland, MS - www.exploreridgeland.com
- Ciy of Flowood, MS – www.visitflowoodms.com
- City of Canton, MS – www.cantontourism.com

While there is no one website that is specific for tourism within the MPO region, the Capital Area Tourism webpage provides tourism information for the cities of Canton, Jackson, Ridgeland, and Vicksburg. This site, found at www.capitalareatourism.com, includes a calendar of events and links to the city's individual tourism webpage, if available.

Welcome Centers

A welcome center is a facility located near state lines or major entry points that provides a rest stop for travelers, offers tourist information, and showcases State amenities and attractions. In Mississippi, and in many other states, welcome centers are state-operated and maintained. There are a total of 12 welcome centers within the State, however none are located within the MPO planning area. Additional information about the location of welcome centers within Mississippi can be found at: https://visitmississippi.org/welcome-centers/.

Visitors Centers

Visitors centers, although similar to welcome centers, are locally operated and provide tourist and visitor information for local or regional attractions. Within the MPO region, these are located in: Clinton, Ridgeland, Jackson, Flowood, and Pearl.

Visit Mississippi, the Tourism Division of the Mississippi Development Authority, has a brick-and-mortar location, which serves as a hub for tourist information across the State, located in the City of Jackson.

Transportation Options

Accessible transportation is an important part of getting tourists into and around the region. Roadways that serve the region include:

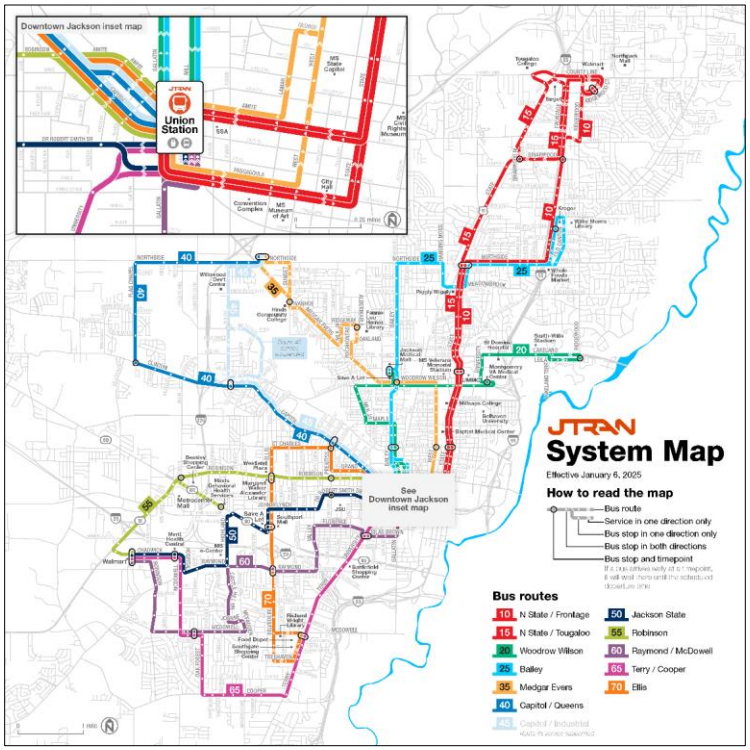
- I-55
- I-20
- I-220
- US 51
- US 49
- US 80
- MS 16
- MS 18
- MS 22
- MS 25
- MS 43
- MS 463
- MS 467
- MS 468
- MS 469
- MS 471
- MS 475

In addition to the highway and interstate corridors, the area is serviced by the Jackson-Evers International, Hawkins Field, Bruce Campbell Field, and John Bell Williams Airports. Greyhound, FLIXBUS, and Amtrak also operate in the region and stop at Union Station in the City of Jackson.

Once inside the region, visitors have more transportation options. Transportation Networks Companies, such as Uber and Lyft, operate in the area, and public transit, provided through the Jackson Transit System, or JTRAN, has both scheduled fixed-route and paratransit services.

Currently, the JTRAN system has eleven fixed-routes, which are displayed in **Figure 2.6**. Information on the services provided, such as fares, specific routes, service areas, and changes in the service map or routes, can be found on their website at: https://www.ridejtran.com.

Figure 2.6: 2025 Jackson Transit System Map

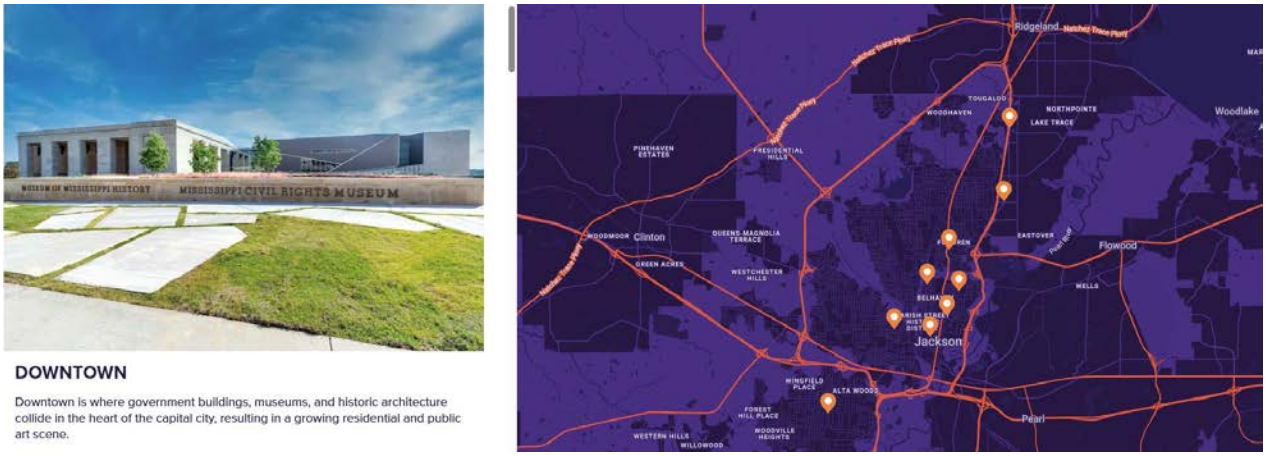


Regional Tourism Attractions and Amenities

The region offers diverse tourist attractions and boasts a variety of activities and venues. Top attractions within the region include historical locations, outdoor trails, tours, parks, shopping centers, museums and cultural centers, and other notable landmarks and locations.

Interactive maps, such as the one available on the Visit Jackson webpage shown in **Figure 2.7.**, allow visitors to plan their trips around the different neighborhoods and communities within their respective cities.

Figure 2.7: Visit Jackson Interactive Map (2025)



Source: Visit Jackson

The following list describes some of the many attractions within the MPO region. This list, though extensive, does not include all attractions that may bring tourists to the region. The information was gathered from the Visit Mississippi, Visit Jackson, and Canton Tourism webpages, as well as the 2025 Official Mississippi Tour Guide[9].

- Mississippi State Capitol Building
- Mississippi Museum of Art
- Mississippi Sports Hall of Fame and Museum
- Museum of Mississippi History
- Mississippi Civil Rights Museum
- Mississippi Museum of Natural Science
- Mississippi Children's Museum
- Canton Courthouse Square
- Ross Barnett Reservoir
- Bill Waller Crafts Center
- Canton Movie Musems and Tours
- Dogwood Festival Market
- Highland Village
- Mississippi Coliseum
- Jackson Convention Complex
- Chisha Foka Multi-Use Trail
- Renaissance at Colony Park

Figure 2.8: Mississippi State Capitol Building

Source: Visit Jackson

[9] https://visitmississippi.org/tour-guide/

- Olde Town Clinton
- LeFleu's Bluff State Park
- Ridgeland Mountain Bike Trail
- Historic Mansions and Architectural Sites

Regional amenities also vary and can be tailored to the interests of the visitor and tourist. Lodging options range from downtown hotels, to boutique bed and breakfasts, to camping sites, to budget and convenience options.

Figure 2.9: Mississippi Museum of Natural Science

Source: Visit Mississippi

Tourism Needs

As the area develops, it is important to identify both where tourism needs exist and where they are anticipated. Identifying these needs can help to mitigate future resliency concerns as they relate to the transportation network. These include expansions to public transportation facilities and multi-modal networks, establishing a regional hub for tourism information, and expanding tourism opportunities beyond the dense population centers.

Expanding Public Transportation will provide access to tourist locations by transit and help to reduce the impact of tourism on the roadway network. Currently, traveling solely by transit may be impractical due to the geographic spread of the region. While JTRAN does provide service within the City of Jackson, expanding public transit routes to include tours that service attractions in other cities can help to grow toursim within a regional context. This would also remove vehicle trips as more tourist destinations are connected via bus route.

Additional public transit recommendations, beyond those for tourism, are discussed in Section 7.

Creating a Regional Hub for Tourist Information will help visitors to plan their trip and find attractions across the region. Currently, there is no central hub that makes finding tourist information for the MPO area easy or intuitive. The Visit Mississippi webpage, though useful, does not follow MPO boundaries regarding the tourism regions it creates, and the Capitol Area Tourism website only provides information on some of the MPO municipalities.

Although many tourist attractions are within the City of Jackson, and thus are included on the Visit Jackson webpage, having a single virtual hub that showcases the top

attractions, dining options, amenities, festivals, and events in the region can help tourists find where they want to go and better plan on how to get there. This can help tourists better plan their trip while providing the MPO an opportunity to showcase available mobility options in the region.

Expanded Sidewalks and Bike Facilities near attractions and the downtown areas makes walking and bicycling viable transportation modes. In less dense areas, recreational multi-use paths can also help to attract visitors that prefer the outdoors. Improving, connecting, and expanding bicycle and pedestrian facitilies will improve visitor mobility and reduce the need for additional vehicular traffic while promoting healthy activity and non-motorized user safety.

Wayfinding can promote areas of interest and help visitors make the most of the local amentities. As it is most helpful to pedestrians and cyclists, wayfinding can also encourage alternative modes of transportation, keeping excess vehicular traffic off roadways while providing helpful information to visitors and tourists.

Interactive Route Mapping has become more prevalent in urban areas to help visitors identify their transportation options and plan their routes. While information does exist about individual facilities and bus routes, interactive maps that include transit, cycling, and pedestrian routes together can help promote alternative transportation options as a viable way to travel.

Especially in the more densely populated areas, interactive maps can help increase the utilization and efficiency of public transit and multi-modal networks, reducing the strain on the region's roadways. To incorporate multi-modal route planning, the MPO and partner agencies can utilize or develop their own websites or mapping platforms, or work with a third-party app to provide this information.

3.0 Emerging Trends

In recent years, travel patterns have changed dramatically due to demographic changes and technological advances. Many of these changes are part of longer-term trends, while others are newer, and more emergent. This section details these trends, their potential impacts, and related mitigation strategies within the region.

The data presented in this chapter is based upon national trends, as local data is not readily available.

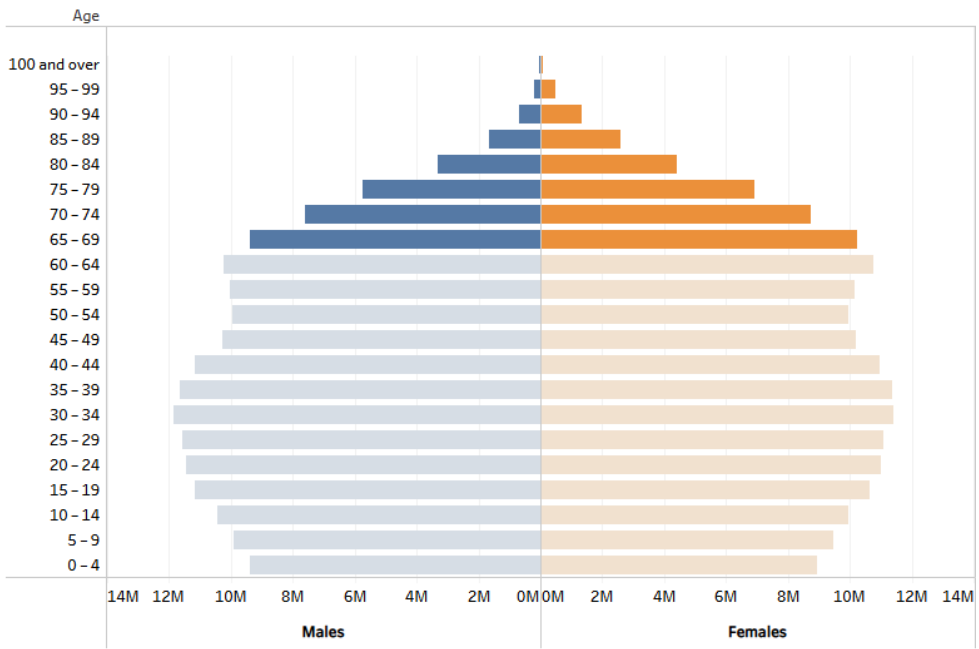
3.1 Changing Demographics and Travel Patterns

Demographic and travel data can be used to identify the potential impacts that accompany larger, national trends. Although these are broad in scope, they provide insight into what can be expected in the long term and help to identify mitigation strategies.

An Aging Population

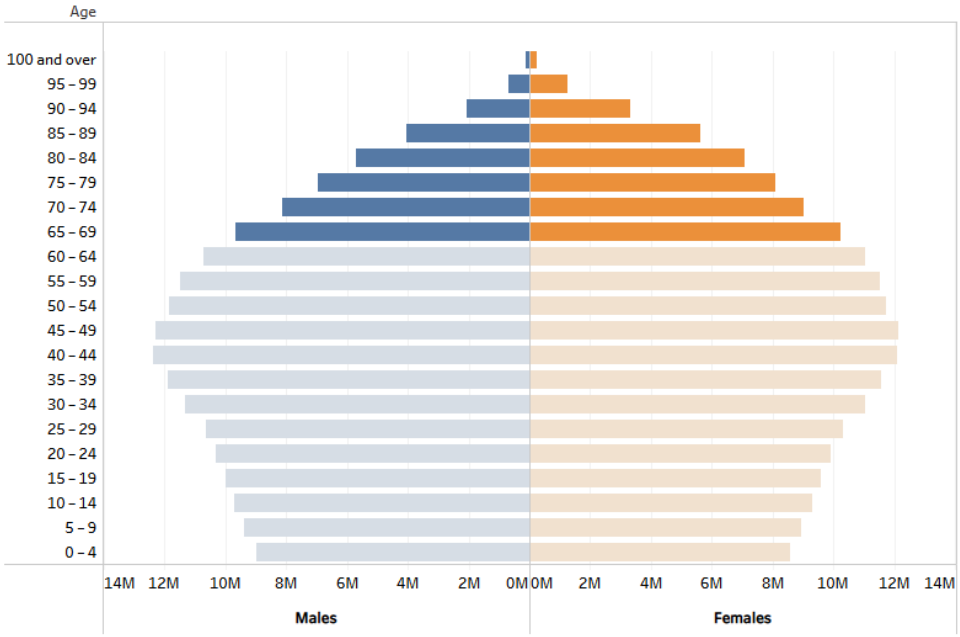
The average population of the Unites States is aging. According to the U.S. Census Bureau, persons aged 65 and older will grow in both number, from 63,327,000 to 82,130,000, and percent of total population, from 18.7% to 22.8%, between 2025 and 2050. This is illustrated in **Figure 3.1** and **Figure 3.2**.

Figure 3.1: 2025 Population Projections by Age and Sex



Source: US Census Bureau 2023 National Population Projections

Figure 3.2: 2050 Population Projections by Age and Sex



Source: US Census Bureau 2023 National Population Projections

Aging populations come with unique challenges as older adults are more likely to have a disability or other challenge that restricts their mobility options. This is expected to increase the demand for public transit and alternative modes of transportation.

People are Traveling Less

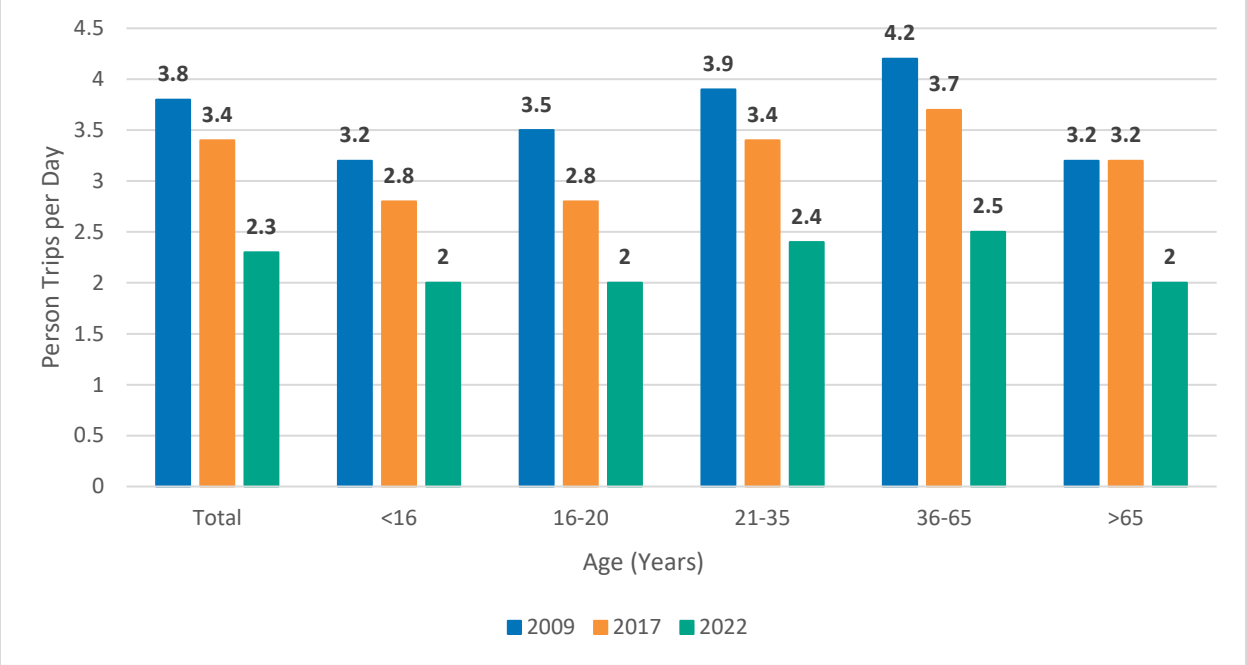
Traveling trends are impacted by reduced in-person socializing, an increase in the use of online shopping, and an increase in remote work policies.

According to the 2022 National Household Travel Survey[10], published by the Federal Highway Administration, people are traveling less than they have in the past. This trend can be seen in each age group, as illustrated in **Figure 3.3**, as well as in the different trips by purpose and sex of the traveler, as seen in **Figure 3.4**.

While travel patterns have largely returned to pre-pandemic levels, remote work policies, and whether they will continue, expand, or decrease over time, will impact the traveling habits and future transportation needs of the commuting public. This will directly inform which roadway improvement types are needed, as demand could potentially decline, requiring different solutions to be identified, or removing the need for previously planned improvements altogether.

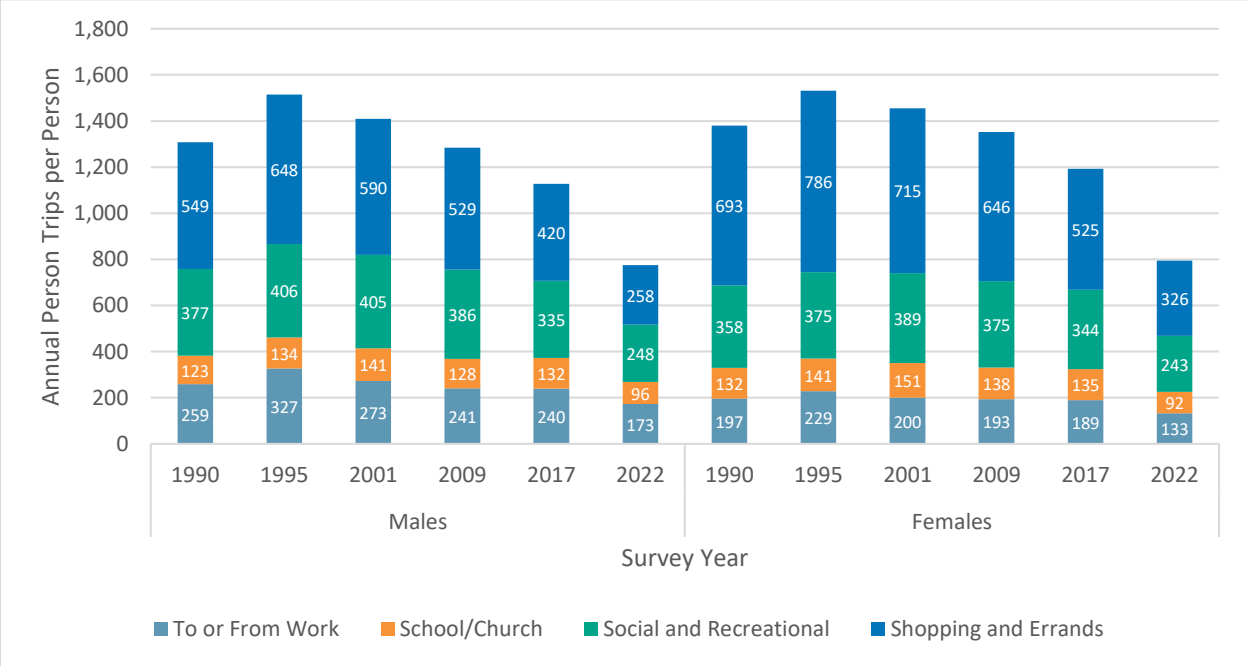
[10] https://rosap.ntl.bts.gov/view/dot/73764

Figure 3.3: Average Daily Person Trips by Age Group



Source: 2022 National Household Travel Survey

Figure 3.4: Number of Annual Person Trips per Person by Sex and Trip Purpose



Source: 2022 National Household Travel Survey

3.2 Shared Mobility

Recent trends show that people, especially within younger generations, are increasingly interested in car-free or car-lite lifestyles. As shown in **Figure 3.3**, people who are between the ages of 16 – 20 years old have the same average trips per day as those 65 or older. The short-term impacts of this would include people being more willing to pay a premium for housing in walkable and bikeable neighborhoods, and a more frequent use of ride-hailing and shared mobility services. These trends could result in a long-term decrease in car ownership rates, increasing the need for investments in non-single occupancy vehicle mobility options.

Micromobility

Bike and scooter-sharing are the most common types of micromobility options. These offer a unique solution by allowing for people to "rent" the bike or scooter for only the amount of time or distance it is needed[11].

On average, **Micromobility trips** are less than two miles long and take less than twenty minutes.

According to the most recent National Association of City Transportation Officials (NACTO) Micromobility Report[12], micromobility ridership in the United States rose by approximately 19 million trips from 2022 to 2023. While this does not equate to a new peak ridership for the US, the rates of ridership, shown in **Figure 3.5**, are rising quickly.

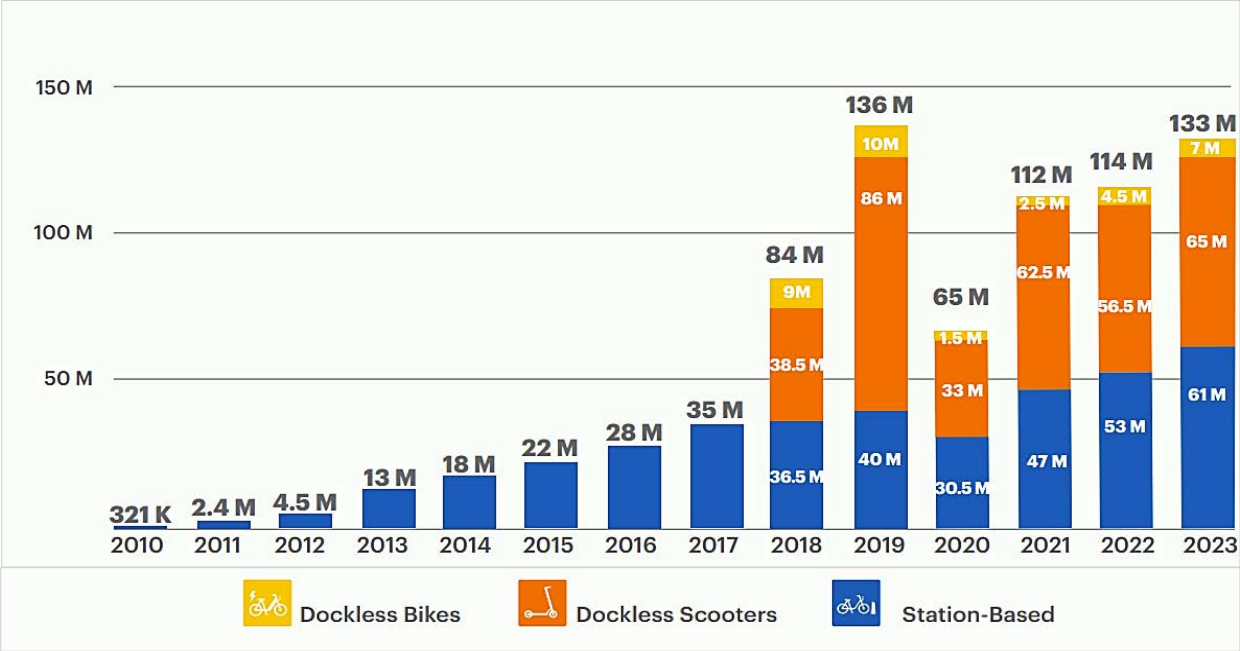
Additionally, this report identified three recommendations for increasing micromobility options, which include:

1. Invest public funds in shared micromobility capital and operating costs, which may include public-private partnerships to reduce the cost of mobility on the individual user.
2. Eliminate sales tax on micromobility services as other mobility options do not incur a sales tax.
3. Build infrastructure to support the safe use of micromobility, such as through the construction of protected bike lanes and placing shared micromobility devices near residential areas and popular destinations.

[11] https://nacto.org/wp-content/uploads/2019/04/NACTO_Shared-Micromobility-in-2018_Web.pdf

[12] https://nacto.org/wp-content/uploads/Shared-micro-in-2023-snapshot_FINAL_July22-2024.pdf

Figure 3.5: Micromobility Ridership in the United States (2010 – 2023)



Source: NACTO Data Snapshot, July 2024

Within the region, micromobility options are limited. One micromobility option within the region is a bike-share program available in Ridgeland. Unlike many other programs, there is no cost to rent the bike, as the cost of the bicycles is paid by the city through a sales tax on hotels and restaurants[13].

Transportation Network Companies

Ride-hailing and ridesharing are the terms typically used to describe the services provided by Transportation Network Companies, like Uber and Lyft. These companies have grown rapidly, surpassing taxis in many metropolitan areas, since their inception in the early 2010's. Today, while these and similar companies are operating in most urban areas in the United States, service is limited or non-existent outside of these areas. Currently, both Uber and Lyft provide service within the region.

[13] https://www.wlbt.com/2024/03/28/city-ridgeland-launches-new-bike-share-program-it-wont-cost-you-dime/

Car Sharing

Car-sharing allows for short-term car rental services on a per day, hour, or even per minute basis. As the cost of utilizing the car is immediately felt, those who use this method to travel have shown an increase in walking and biking, a reduction in vehicle miles traveled, and a reduction in fuel consumption[14]. Additionally, there is the benefit to households without access to a vehicle to rent one as needed.

There are three models of car sharing, which are described below.

1. **Roundtrip car-sharing**, such as through Zipcar, serve a market for longer or day trips, particularly where carrying supplies is a factor. These car-share trips are typically calculated on a per hour or per day basis.
2. **One-way car-sharing** allows members to pick up a vehicle at one location and drop it off at another location. These car-sharing operations are typically calculated on a per minute basis.
3. **Peer-to-Peer car-sharing** is characterized by short-term access to privately owned vehicles. An example of a P2P car-sharing operation is Turo.

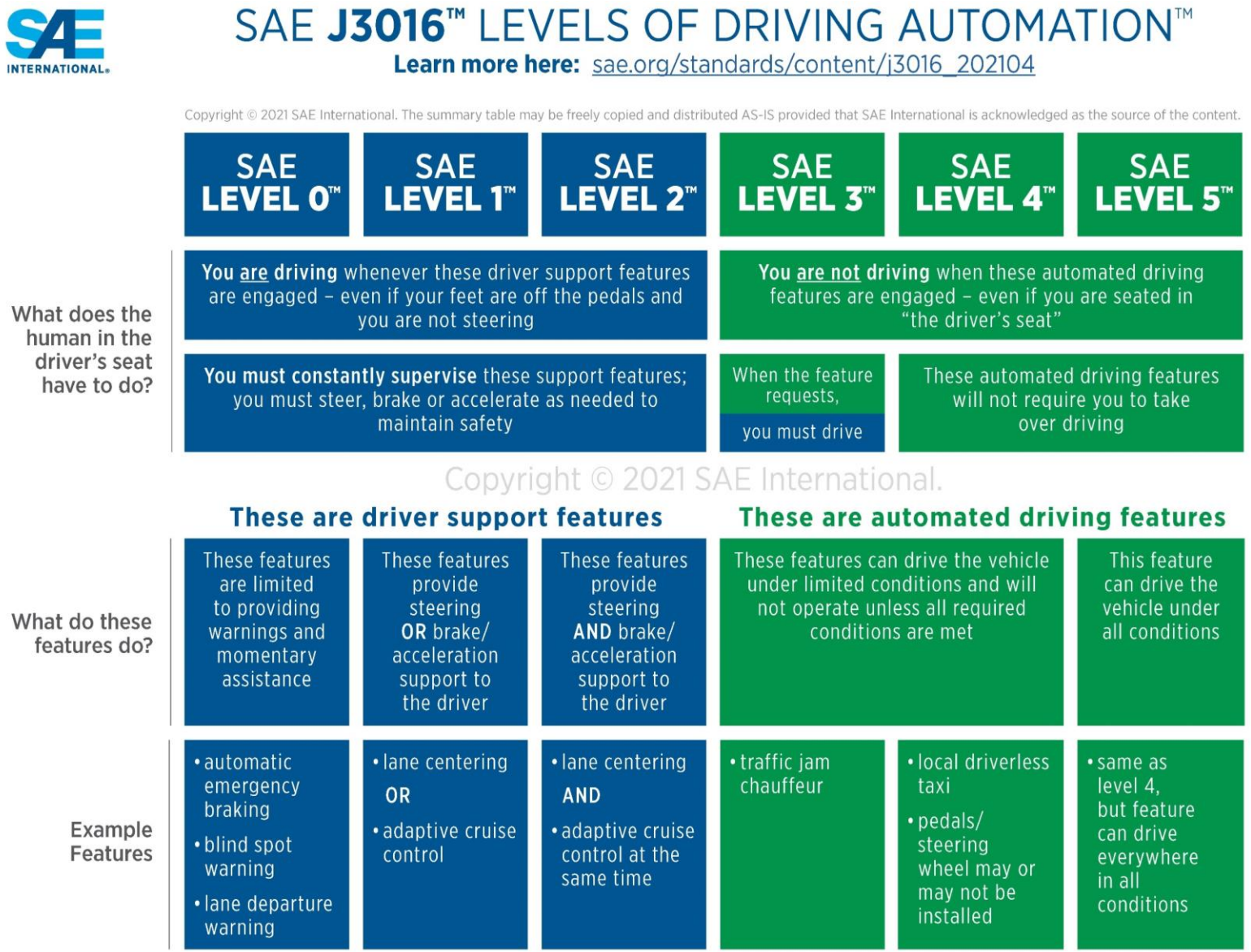
Due to the varied car-sharing models, there are no typical usage patterns. Some car-sharing trips are short and local, while others may be longer distance, and trips can be recurring or infrequent. Outside of large urban areas, car-sharing is not common, and car-sharing services are limited in the region. Turo, an option for peer-to-peer car sharing, has vehicles available for rent within the MPO planning area.

3.3 Connected and Autonomous Vehicles

Today, most newer vehicles have some elements of both connected and autonomous vehicle technologies. Connected and autonomous vehicle types, seen in **Figure 3.6**, are discussed in *Technical Report #2: State of Current Systems*. While these vehicles have not seen widespread application within the region, it is expected that future developments of these technologies will eventually bring them to the roadways.

[14] https://www.planning.org/publications/report/9107556/

Figure 3.6: Levels of Automation



Potential Timeline

While mid-level connected and autonomous vehicles are already on the market and traveling on roadways, there is uncertainty about the long-term future of these vehicles, especially fully autonomous vehicles. However, over the past couple of years, some level of consensus has emerged about the timeline of autonomous vehicle deployment, particularly[15,16]:

- Level 1 and 2 autonomous vehicles are expected to be more common, accounting for 50-60 percent of all new vehicles sold, by 2035.
    - These levels, which include lane/traffic jam assist, adaptive cruise control, and self-park, will continue to improve and become less expensive, fueling this growth in market share.
- Vehicles with higher degrees of autonomy (levels 3 and 4) will take longer to be available in the personal car market due to safety risks, liability concerns, and high costs.
- Most personal vehicles are expected to be autonomous in 2045 and are expected to become affordable to most middle and lower income motorists by 2050.
- Autonomous trucks are projected to account for up to 30% of new truck sales in the US by 2035. Unlike personal vehicles, cost savings may be experienced by the use of autonomous trucks, motivating the market forward in this sector.

Additionally, market or economic fluctuations or instability may reduce how frequently new vehicles are purchased. This could slow the adoption of autonomous vehicles and may decrease the amount of new technology testing.

Potential Impacts

The development of connected and autonomous vehicles will change travel patterns, safety, and planning considerations. Ultimately, the actual impact of these vehicles will depend on how prevalent it's technology is and the extent to which vehicles are privately owned or shared.

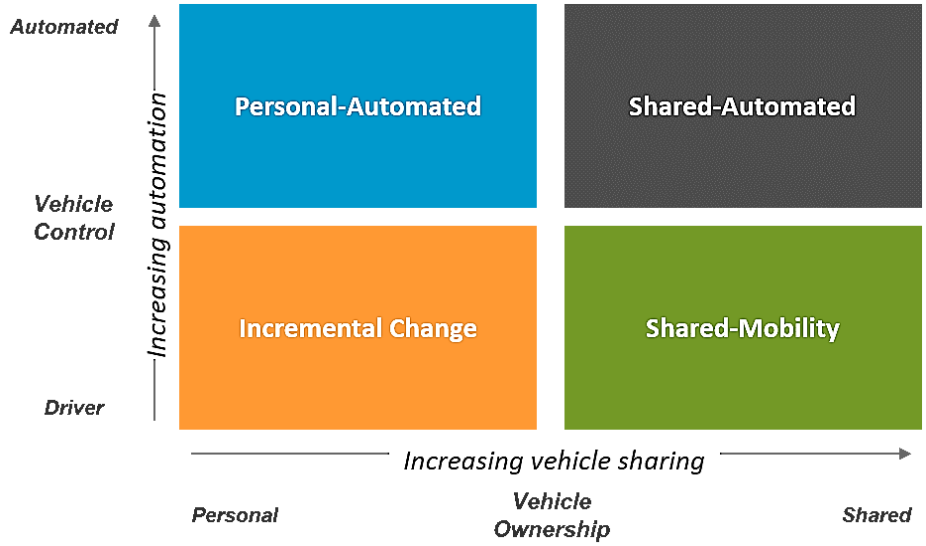
As shown in **Figure 3.7**, there are four potential scenarios, each with unique implications for transportation planning. These are:

1. Personal-Automated
2. Shared-Automated
3. Incremental Change
4. Shared-Mobility

[15] https://reports.weforum.org/docs/WEF_Autonomous_Vehicles_2025.pdf

[16] https://www.vtpi.org/avip.pdf

Figure 3.7: Future Mobility Scenarios



Source: US Dept. of Energy/Deloitte

Safety Impacts

In the long term, connected and autonomous vehicle technology is anticipated to reduce human error and improve overall traffic safety. Some of these vehicles are capable of sensing and quickly reacting to the environment via external sensors, connectivity to other vehicles, and GPS. This allows these vehicles to have a 360-degree visual of their surroundings to detect lane and roadway changes, as well as other vehicles, pedestrians, buildings, and obstacles. [17]

According to the U.S. DOT, advanced connected and autonomous vehicle technology has the potential to address about 95% of all vehicle crashes involving unimpaired drivers.

Although this technology has immense long-term potential, it may decrease safety in the short term if drivers misuse partial automation and are not ready to take control of the vehicle in an emergency, particularly near work zones or when bicyclists and pedestrians enter the roadway. It may also present a safety concern if drivers have access to multiple vehicles, some with and some without this additional safety technology. This could result in a scenario where a driver expects to be notified of vehicles or road hazards while operating a vehicle without the enhanced safety features.

[17] U.S. DOT; Volpe, The National Transportation Systems Center

3.4 Electric and Alternative Fuel Vehicles

Alternative fuel vehicles are those that use substantially non-petroleum products as fuel. Although electric or hybrid-electric vehicles are the most commonly recognizable types, this category of vehicles also includes those that use:

- Hydrogen
- Liquefied Petroleum Gas
- Compressed Natural Gas
- Liquefied Natural Gas
- 85% and 100% Methanol
- 85% and 95% Ethanol

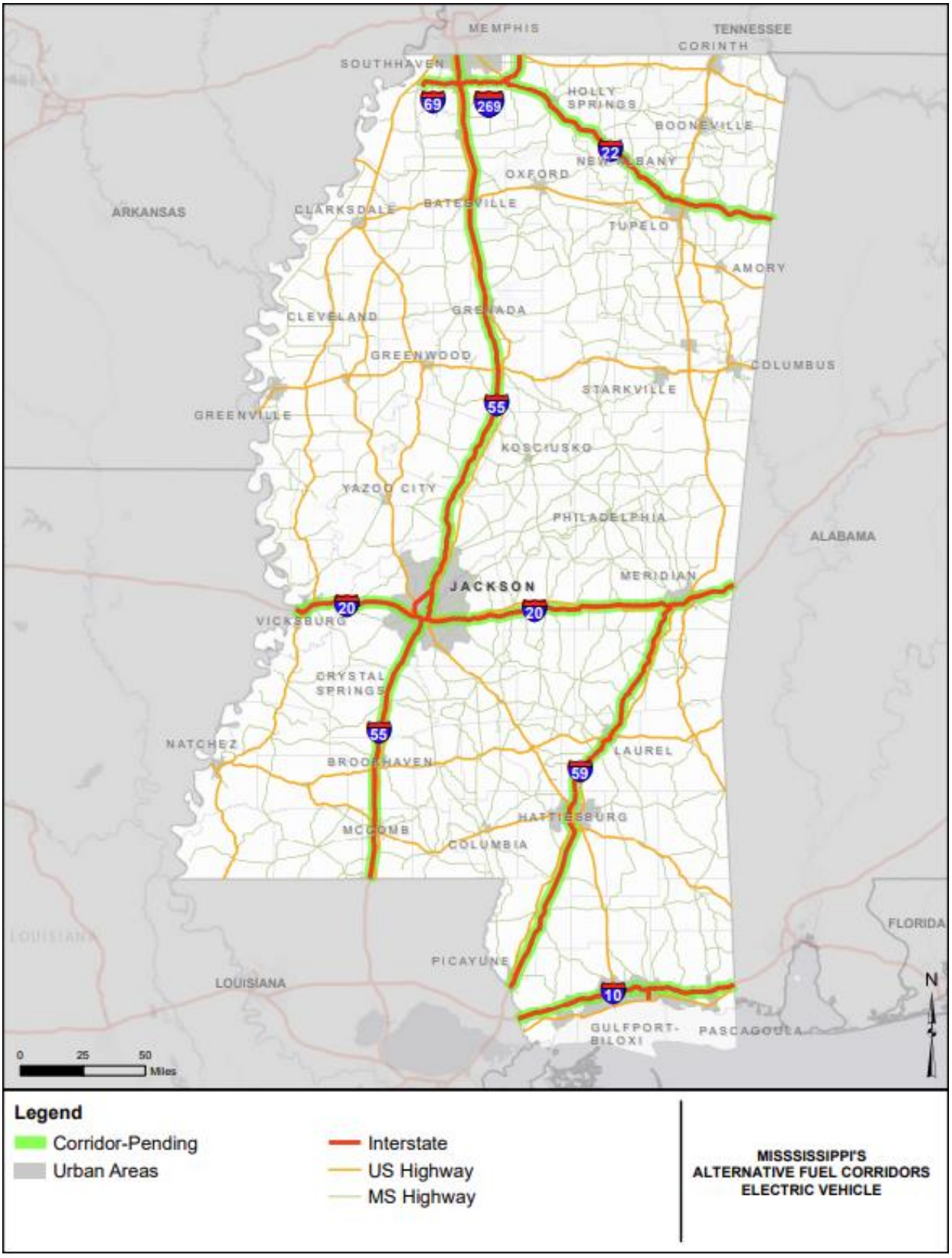
To meet the needs of current and future electric vehicles, many states are developing an alternative fuels corridor network. Within the planning area, as seen in **Figure 3.8**, Interstates 20 and 55 are pending on Mississippi's alternative fuels corridor network for electric vehicles. This map and additional information about the network can be found on the MDOT website at https://mdot.ms.gov/portal/nevi-ms_afcs.

Growth Projections

Long-term projections for electric vehicles and other alternative fuels vary considerably. On the higher end, some projections estimate that electric vehicles will make up 30 percent of all cars in the United States by 2030.[18] The U.S. Energy Information Administration is more conservative, projecting that light-duty vehicles will take up about a third of the higher-end estimations, and freight vehicles will make up only two percent of the market share for electric vehicles by 2045. The projected share of vehicles by fuel type is depicted in **Figure 3.9.**

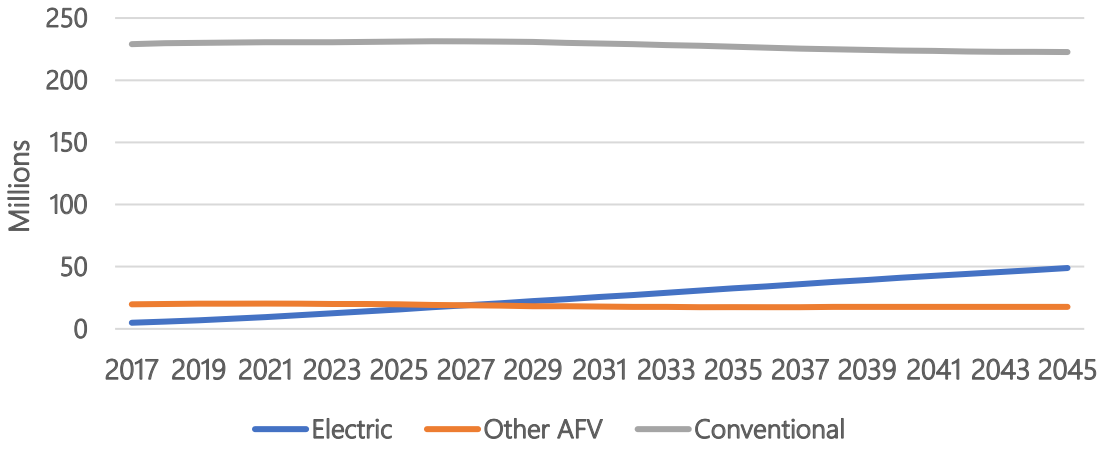
[18] https://www.iea.org/reports/global-ev-outlook-2019

Figure 3.8: Alternative Fuels Corridors within Mississippi



Source : MDOT

Figure 3.9: Light-Duty Vehicles on the Road by Fuel Type, 2017 to 2045



Source: U.S. Energy Information Administration, 2019 Annual Energy Outlook

Outside of electric vehicles, including both full- and hybrid-electric vehicles, the U.S. Energy Information Administration does not project other alternative fuels to grow significantly for light-duty vehicles. It does, however, predict ethanol-flex fuel vehicles to grow significantly for light and medium freight vehicles.

EV Transit Growth

In the United States, electric buses are becoming more common as transit agencies pursue long-term operations and maintenance savings in addition to environmental and rider benefits. While electric buses have a high initial cost, these prices are anticipated to go down and utilization is likely to become more widespread. By 2030, it is anticipated that between 25 and 60 percent of new transit vehicles purchased will be electric.[19]

Within the region, JTRAN utilizes hybrid-electric buses as part of their fleet and has plans to increase the number of these vehicles in the future[20].

Potential Impacts

Air Quality Improvement

Electric and other alternative fuel vehicles have the potential to reduce automobile-related emissions. While alternative fuels still have environmental impacts, they can

[19] https://www.reuters.com/article/us-transportation-buses-electric-analysi/u-s-transit-agencies-cautious-on-electric-buses-despite-bold-forecasts-idUSKBN1E60GS

[20] https://ridejtran.com/wp-content/uploads/jtran-connectjxn-transit-plan-20220126.pdf

reduce overall and direct tailpipe emissions substantially. This benefits the region as it seeks to maintain air quality conformity.

Actions and strategies that can be implemented to improve air quality include:

- **Enforce stricter emission standards** on both diesel and gas cars. Private and public vehicles could be tested more frequently based on real-world, rather than laboratory, emissions. However, these standards are governed by federal regulations unless stricter state standards are adopted.
- **Reduce the number of car trips** through cycling or a combination of public transit and walking. This, also known as active travel, can help improve air quality, reduce urban noise pollution, and encourage healthy habits and more active lifestyles. Encouragement for such activities, however, requires adding connected multi-modal networks to make cycling more appealing for commuting, and not just leisure. When addressing multi-modal networks, cities should consider the demand for cycling, accessibility of this mode of travel, destinations that can be accessed by bicycle, and potential network interruptions.
- **Reduce the impact of pollutants** on children and people with underlying health conditions due to age or other illness. Numerous studies have shown that a vehicle occupant breathes in higher amounts of pollution than a cyclist or pedestrian on the same road as they travel in an enclosed space where pollutants remain trapped.
- **Make transit more attractive** to encourage higher transit ridership. Increased public transit ridership can greatly improve air quality. However, shifting trip modes from private vehicles to public transit depends on making it attractive to potential users. This is especially true in urban areas, where mobility and accessibility continue to present challenges.

Infrastructure Needs

While planning for the benefits and changes that accompany electric vehicles, it is also important to understand the specific infrastructure that is needed to support electric vehicle adoption. Consumers and fleets considering electric vehicles and plug-in hybrid electric vehicles benefit from access to charging stations. For most drivers, the initial charging will be done at home or at fleet facilities, however, charging stations at workplaces and public destinations may also bolster market acceptance.

According to the U.S. Department of Energy, there are 30 electric vehicle charging stations within the planning area[21]. These are located in:

- Brandon (5)
- Canton (1)
- Flowood (1)
- Jackson (12)
- Pearl (1)
- Richland (1)
- Ridgeland (9)

Of these, about half (16) are Level 1 or 2, with the remainder (14) charging stations being Level 3 equivalent or greater charging stations. The MPO and its partner agencies can explore expanding this infrastructure, especially near the pending alternative fuel corridors, to create a network of roadways that will support this emerging technology.

Gas Tax Revenues

It should be noted that as adoption rates of alternative fuels increase substantially, gas tax revenues will be reduced, and new user fees may need to be considered to replace the lost revenue. As electric and other alternative fuel vehicles use less or no gasoline compared to their conventional counterparts, their operation does not generate as much revenue from a gas tax. To mitigate this, many states have begun considering pilot programs for taxes based on vehicle miles traveled.[22]

Currently, gas taxes are one of the primary revenue sources that Mississippi uses to fund transportation projects. The current gas tax rate is 18 cents per gallon but is set to increase up to 27 cents per gallon by July 1, 2027[23]. Although raising the gas tax can help provide short-term relief to reductions in revenue and cost increases, it is important to include alternative revenue sources that can sustainably fund the construction, maintenance, and repair of Mississippi's bridges and roadways.

To this end, Mississippi requires all-electric vehicle owners to pay an annual fee of $150 and plug-in hybrid electric vehicle and HEV owners to pay an annual fee of $75 in addition to standard vehicle registration fees. Beginning July 1, 2021, the Mississippi Department of Revenue will increase the fee annually to account for inflation, equal to the increase in the Consumer Price Index for urban consumers for the prior year[24].

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[21] https://afdc.energy.gov/fuels/electricity-locations#/analyze?region=US-MS&tab=station&fuel=ELEC&ev_levels=all

[22] https://www.ncsl.org/transportation/special-registration-fees-for-electric-and-hybrid-vehicles/maptype

[23] https://www.dor.ms.gov/business/gasoline-and-petroleum-faqs

[24] Mississippi Code 27-19-21 and 27-19-23

3.5 Travel Demand Management

Travel Demand Management involves a set of strategies designed to change travel behavior and reduce single occupancy vehicle trips. When these strategies are implemented on an area-wide basis with support from government organizations, businesses, state and private universities, and residents, they may be able to reduce delay during peak periods on local roadway networks.

Short-Term Recommendations

While some organizations and partners that already promote or use travel demand management exist within the region, there are additional short-term actions the MPO, local jurisdictions, and employers/residents can take to improve this within the area, including:

- Conduct a survey to identify the strengths and weaknesses of existing Travel Demand Management programs.
- Improve and expand existing JTRAN Transit services based on input from passenger surveys, feasibility studies, and the transit plan.
- Use Emerging Technologies.
    - With the latest technologies, "big data" about travel behavior and congestion can be collected and used to develop policies and infrastructure improvements that helps in reducing single occupancy vehicle use and congestion.
- Promote an increased use of ridesharing services.
    - Use of shared trip options like UberPool and Lyft Shared can replace single occupancy vehicle travel thereby reducing congestion during peak periods.
    - Use of bike and scooter share systems for short trips and to provide last mile connections for transit passengers.
- Provide on-street and off-street bicyclist and pedestrian facilities near downtown areas, libraries, schools, and community centers.
- Work with local employers to develop programs and incentives that encourage employees to use transit to commute to work, such as creating programs that provide discounted transit passes.
- Encourage future developments with a large footprint to have a bicycle and pedestrian circulation plan.
- Encourage major traffic generators within the region, like government agencies, hospitals, and major private businesses to adopt travel demand management strategies for employees and visitors.
- Manage transportation system impacts of freight and deliveries.

Many of the most commonly used travel demand management strategies are displayed in **Figure 3.10**.

Figure 3.10: Travel Demand Management Strategies

Carpooling

This strategy involves a group of people who live and work near each other commuting together in a single vehicle.

Vanpooling

This strategy involves allowing a group of people to share the ride, similar to a carpool but on a larger scale.

Transit

This strategy involves using transit to reach workplaces and other tasks. Generally, under this program, employers provide employees transit passes at discounted prices to encourage the use of transit to work.

Bike

This strategy involves using a bike to reach nearby destinations instead of a motor vehicle.

Telecommuting

This strategy involves allowing employees to work from home or another off-site location part-time or full-time.

Walking

This strategy involves encouraging students and employees to walk to their school or workplace.

4.0 Roadways and Bridges

4.1 Roadway Congestion Relief Needs

Trips are modeled to increase by **30.5%** within the region from 2022 to 2050.

Given the population and employment growth forecasted to occur by 2050, the Travel Demand Model indicates that the number of person trips produced in the region will increase from approximately 1,870,000 per day in 2022 to about 2,400,000 per day in 2050.

Table 4.1 shows that if only the transportation projects that currently have committed funding are constructed, the centerline miles of the roadway network will increase from 1,727 miles in 2022 to 1,739 miles in 2050. The table also shows the forecast change in Vehicle Miles Traveled, Hours Traveled, and Hours of Delay. This data indicates that by 2050, the vehicle miles traveled will increase by approximately 36 percent, hours traveled will increase by over 43 percent, and hours of delay will increase by approximately 153 percent.

Table 4.1: Travel Demand Impact of Growth and Existing and Committed Projects, 2022 to 2050

Centerline Miles of Roadways				
Classification	**2022 (Existing)**	**2050 (E+C Projects)**	**Change**	**Percent Difference**
Interstate	112.7	112.7	0.0	0.0%
Principal Arterial	324.7	324.7	0.0	0.0%
Minor Arterial	384.3	391.6	7.3	1.9%
Major Collector	705.0	709.7	4.7	0.7%
Minor Collector	17.5	17.5	0.0	0.0%
Local	182.3	182.3	0.0	0.0%
Total	**1,726.5**	**1,738.5**	**12.0**	**0.7%**
Daily Vehicle Miles Traveled				
Interstate	5,992,932.9	7,753,942.5	1,761,009.6	29.4%
Principal Arterial	4,537,101.5	6,214,477.2	1,677,375.7	37.0%
Minor Arterial	1,736,743.9	2,478,481.6	741,737.7	42.7%
Major Collector	1,264,309.4	1,970,088.1	705,778.7	55.8%
Minor Collector	14,693.8	24,148.2	9,454.4	64.3%
Local	1,054,361.6	1,494,282.1	439,920.5	41.7%
Total	**14,600,143.1**	**19,935,419.7**	**5,335,276.6**	**36.5%**

Table 4.1: Travel Demand Impact of Growth and Existing and Committed Projects, 2022 to 2050 Cont.

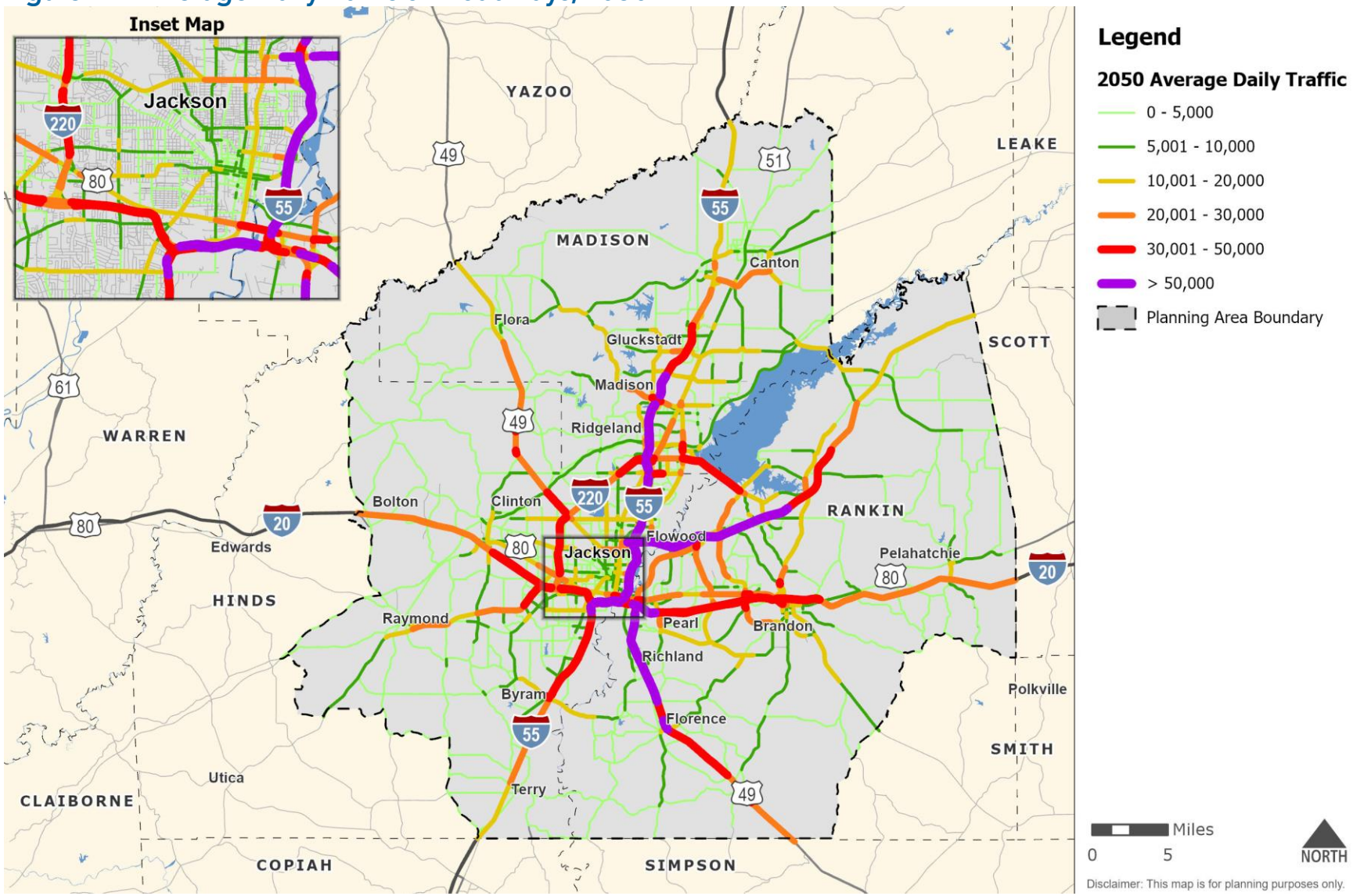
Daily Vehicle Hours Traveled				
Classification	**2022 (Existing)**	**2050 (E+C Projects)**	**Change**	**Percent Difference**
Interstate	98,531.9	133,331.3	34,799.4	35.3%
Principal Arterial	102,551.3	148,198.0	45,646.7	44.5%
Minor Arterial	43,258.4	63,424.0	20,165.6	46.6%
Major Collector	33,090.5	53,574.6	20,484.1	61.9%
Minor Collector	353.3	615.7	262.4	74.3%
Local	66,111.4	93,358.2	27,246.8	41.2%
Total	**343,896.8**	**492,501.8**	**148,605.0**	**43.2%**
Daily Vehicle Hours of Delay				
Interstate	3,971.3	11,616.9	7,645.6	192.5%
Principal Arterial	9,526.0	22,624.4	13,098.4	137.5%
Minor Arterial	2,882.7	6,384.2	3,501.5	121.5%
Major Collector	1,453.2	4,487.5	3,034.3	208.8%
Minor Collector	2.1	16.5	14.4	685.7%
Local	95.7	253.4	157.7	164.8%
Total	**17,931.0**	**45,382.9**	**27,451.9**	**153.1%**

Note: Values above exclude ramps.
Source: CMPDD MPO Travel Demand Model.

Figure 4.1 displays the vehicular traffic in the region for 2050 if only the existing and committed projects are implemented. The number of roadway segments that experience a volume to capacity ratio of 1.0 or greater would increase significantly by 2050, as illustrated in **Figure 4.2**.

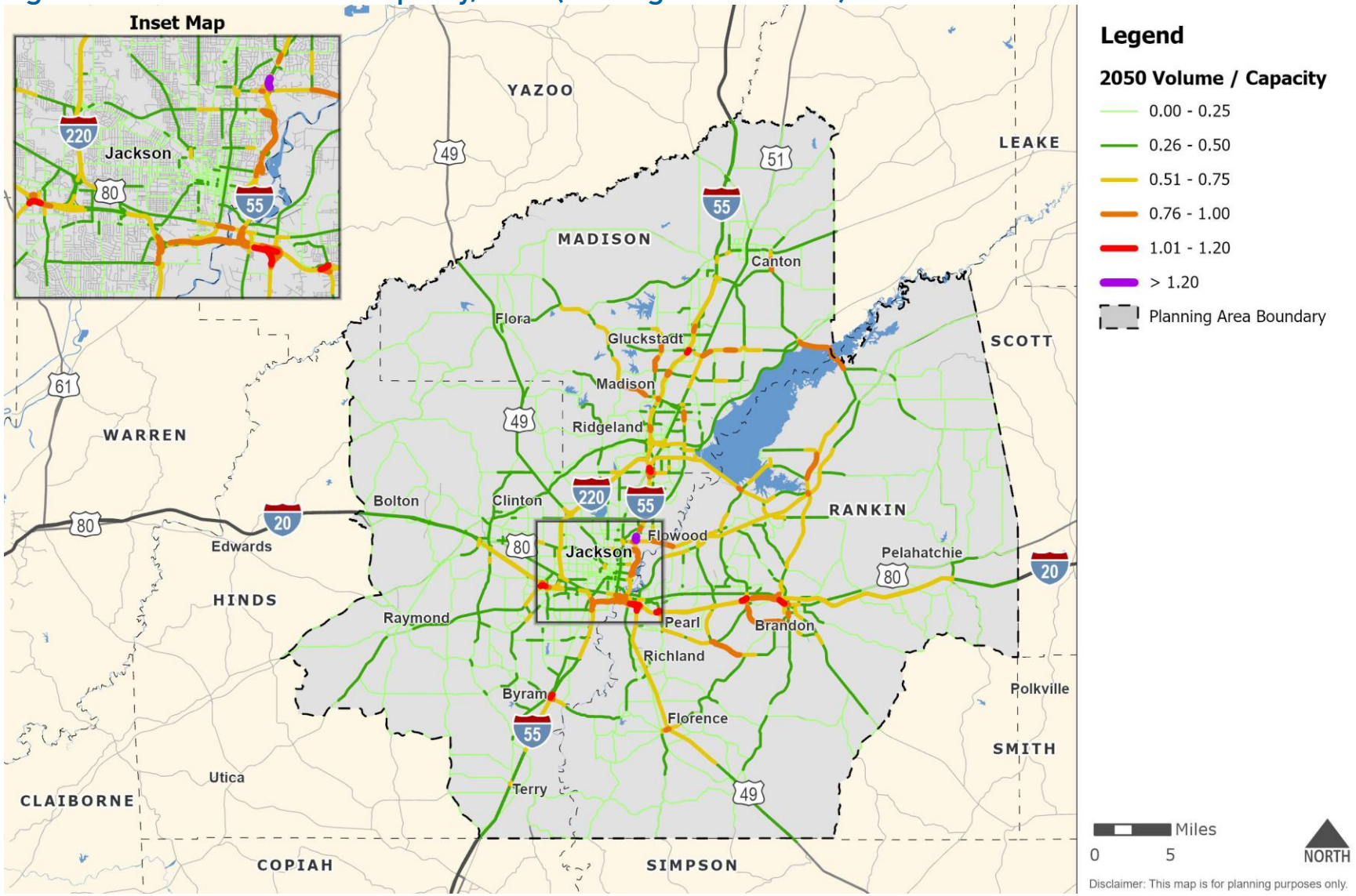
It is important to note that not all congested street and highway segments should be widened with additional through lanes or turning lanes. In urban settings, it may be more appropriate to consider intelligent transportation system improvements or Travel Demand Management strategies. Congestion may also be reduced by improving pedestrian, bicycle, and/or transit conditions that will encourage alternative means of transportation. These strategies are discussed in *Technical Report #5: Plan Development*.

Figure 4.1: Average Daily Traffic on Roadways, 2050



Source: CMPDD MPO Travel Demand Model

Figure 4.2: Future Volume to Capacity, 2050 (Existing + Committed)



Source: CMPDD MPO Travel Demand Model

Public and Stakeholder Input

During the public and stakeholder involvement process, respondents were asked to identify the roadways and intersections they felt were most congested. The list below describes the areas that were most often identified.

- I-20
- Interchange of I-20 and I-55
- US 80
- MS 18

Intersection and Corridor Recommendations

Table 4.2 displays the locations identified through public involvement and engineering review, the observed issues, and recommendations to address the intersection and corridor needs.

Table 4.2: Recommended Intersection/Interchange or Corridor Improvement Projects for Congestion

Location	Limits	Observed Issues	Short-term Solution	Long-term Solution
I-20	MS 18 interchange (Brandon)	Short turn lanes at intersections; numerous businesses along MS 18; congestion along • MS 18 northbound during AM peak • MS 18 during PM peak • As MS 18 southbound narrows from two lanes to one lane after the intersection of MS 18 and Greenfield Rd	Signal retiming; interchange study; improve ITS	Add one left turn lane on MS 18 at ramp terminals; extend left turn lanes on MS 18 at ramp terminals
I-20	I-55 interchange	Road work along I-55 north of interchange; congestion along • I-20 westbound ramp to I-55 during AM peak • I-20 eastbound ramp to I-55 during AM peak • US 49 merging ramp to I-55 during AM peak	Improve ITS	Reconstruct interchange
I-55	S Siwell Rd interchange	Congestion along • I-55 Frontage Rd west of I-55 during AM peak • S Siwell Rd westbound, I-55 Frontage Rd, and I-55 off-ramps during PM peak	Signal retiming; improve ITS; interchange study	Add one left turn lane at I-55 off-ramps
I-55	MS 25 interchange	Speed reduction advisory along I-55 southbound near Waterworks curve; congestion along MS 25 and I-55 southbound during PM peak; multiple businesses along MS 25	Signal retiming; improve ITS	Corridor study along MS 25
I-55	W County Line Rd/E County Line Rd interchange	Short right turn lane on E County Line Rd to I-55; multiple businesses along E County Line Rd; congestion along • W County Line Rd,I-55 northbound, I-55 northbound off-ramp, E County Line ramp during PM peak	Signal retiming; improve ITS; restripe intersections	Extend the right turn lane on E County Line Rd to I-55; add one left turn lane at intersections on W County Line Rd/E County Line Rd;
US 80	US 51 to Old Brandon Rd	Bridge work along US 80; congestion/bottleneck as southbound Old Hwy 49 S narrows from two lanes to one lane; proximity of intersections along US 80 at Childre Rd and Old Brandon Rd; congestion along • Eastbound US 80 at Old Hwy 49 S during off peak • US 80 at Old Hwy 49 S, US 49, and Childre Rd during AM and PM peak • Old Brandon Rd during PM peak	Signal retiming; intersection study at US 80 and Old Brandon Rd; restripe intersections; improve ITS	Reconstruct intersections of US 80 at Childre Rd and Old Brandon Rd; extend southbound merging lane along Old Hwy 49 S
MS 18	MS 468 to Louis Wilson Dr	Short left turn lanes on MS 18 to Brandon High School intersections; short turn lanes on MS 18 to Stonebridge Blvd; short right turn lane on MS 18 to Louis Wilson Dr.; congestion along • MS 18 near Brandon High School and Stonebridge Elementary School during school in and out periods • MS 18 at MS 468 during AM and PM peaks • MS 18 at Star Rd during AM peak • MS 18 at Louis Wilson Dr during PM peak	Signal retiming; improve ITS; intersection study for MS 18 at Louis Wilson Dr for roundabout	Add dedicated right turn lane on MS 18 to Louis Wilson Dr; Widen MS 18 from 2 lanes to 4 lanes with center turn lanes from Stonebridge Blvd to Greenfield Rd; extend turn lanes at intersections with short turn lanes

Source: CMPDD MPO, NSI

4.2 Roadway Maintenance Needs

Pavement Maintenance

Few of the regions roadways have poor pavement conditions; however, all segments are likely to experience maintenance needs that will lead to decreased safety or emergency roadway repairs which can increase congestion. In addition, pavements in fair condition will eventually fall into poor condition before the plan's horizon year of 2050. **Figure 3.5** in *Technical Report #2: State of Current Systems* displays the pavement conditions of the National Highway System monitored roadways within the region.

In the short-term, particular attention should be given to roadway segments with particularly long stretches of poor pavement. In the MPO planning area, these segments include various areas along:

- US 51
- US 80
- MS 16
- MS 25
- MS 43
- MS 475
- Terry Rd/University Blvd
- Woodrow Wilson Ave/ Bullard St/Clinton Blvd
- Northside Dr
- Bobby Rush Blvd
- W Capitol St
- Bailey Ave
- N West St/Hanging Moss Rd
- Medgar Evers Blvd
- Ridgewood Rd
- Old Canton Rd
- County Line Rd
- Main St (Madison)
- Gluckstadt Rd

Bridge Maintenance

Addressing the maintenance needs of bridges in the MPO planning area will improve safety, reduce overall maintenance costs, and avoid future bridge shutdowns. Bridges are rated by the National Bridge Inventory based on the conditions of the following categories:

- Decks
- Superstructure
- Substructure
- Stream Channel and Channel Protection

The analysis within *Technical Report 2: State of the Current Systems* revealed that less than 0.1 percent of bridges within the region are in poor condition. Of these, 13 are located on the National Highway System.

A bridge is considered in Poor condition if any of the above categories are rated "Poor". Some of the deficient bridges identified in this plan may be improved as part of other transportation projects, such as a roadway widening, or through operations

and maintenance efforts. Bridges in poor condition are recommended for improvements as funding becomes available.

4.3 Roadway Safety Needs

Within the region, nearly 77,000 crashes occurred between 2019 and 2023. Of these, 380 were fatal crashes and 1,643 were serious injury or suspected serious injury crashes. Recommendations for reducing the most common types of crashes are outlined below.

The highest number of crashes in the region were rear-end crashes, comprising over a third of collisions.

Reducing Rear-End Collisions

Rear-end collisions can be attributed to several factors, such as:

- driver inattentiveness
- large turning volumes
- slippery pavement
- inadequate roadway lighting
- crossing pedestrians
- poor traffic signal visibility
- congestion
- inadequate signal timing
- an unwarranted signal

In general, the recommendations for reducing rear-end crashes include:

- Analyzing turning volumes to determine if a right-turn lane or left-turn lane is warranted.
    - Providing a turning lane separates the turning vehicles from the through vehicles, preventing through vehicles from rear-ending turning vehicles.
    - If a large right-turn volume exists, increasing the corner radius for right-turns is an option.
- Checking the pavement conditions.
    - Rear-end collisions caused by slippery pavement can be reduced by lowering the speed limit with enforcement or by providing overlay pavement, adequate drainage, grooved pavement, and/or a “Slippery When Wet” sign.
- Ensuring roadway lighting is sufficient for drivers to see the roadway and surroundings.
- Determining if there is a large amount of pedestrian traffic.
    - Pedestrians crossing the roads may impede traffic and force drivers to stop suddenly.
    - If crossing pedestrians are an issue, options include installing or improving crosswalk devices and providing pedestrian signal indicators.

- Checking the visibility of the traffic signals at all approaches.
    - In order to provide better visibility of the traffic signal, options include installing or improving warning signs, overhead signal heads, installing 12" signal lenses, visors, back plates, or relocating signal heads.
- Verifying that the signal timing is adequate to serve the traffic volumes at the trouble intersections.
    - Options include adjusting phase-change intervals, providing or increasing a red-clearance interval, providing progression, and utilizing signal actuation with dilemma zone protection.
- Verifying that a signal is warranted at the given intersection.

Table 4.3 displays the roadway locations with the greatest frequency of rear end crashes within the MPO area.

Table 4.3: Top 5 Rear End Crash Locations and Recommendations by County

Location	Rear End Crashes (2019-2023)	Observation	Recommendation
Hinds County			
I-55 NB at E County Line Rd Interchange	349	Only black backplates (or missing) on signals, poor pavement striping	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, conduct intersection study
US 80 at Springridge Rd/Clinton Pkwy	126	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing
MS 18 at Greenway Dr	113	Only black backplates (or missing) on signals, poor pavement striping	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, convert protected/permitted left turn phasing to protected left turn phasing
I-55 SB Ramps at Briarwood Dr Interchange	107	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing
E County Line Rd at Ridgewood Ct Dr/Centre St	90	Only black backplates (or missing) on signals, poor pavement striping	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, convert protected/permitted left turn phasing to protected left turn phasing, add left turn lanes on Ridgewood Ct Dr and Centre St
Madison County			
I-55 at MS 463 Interchange	138	Only black backplates (or missing) on signals, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve intersection lighting, add signal ahead warning beacons that activate when light is about to turn red
MS 463 at Highland Colony Pkwy/Bozeman Rd	101	Only black backplates (or missing) on signals, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing
US 51 at W Jackson St	100	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing
I-55 SB at W County Line Rd Interchange	88	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing, extend left turn lane on WB W County Line Rd

Location	Rear End Crashes (2019-2023)	Observation	Recommendation
Rankin County			
US 80 at MS 18/Crossgates Blvd	209	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting
US 80/MS 18 at MS 475	172	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting
MS 25 at E Metro Pkwy/Old Fannin Rd	153	Only black backplates (or missing) on signals, poor pavement striping	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, conduct intersection study
MS 468 at Treetops Blvd	103	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing
I-20 EB at MS 18 Interchange	94	Only black backplates (or missing) on signals, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing

Improvements have been observed at the following location that appeared in the safety analysis : US 51 @ W Jackson St

Reducing Side Impact / Angle Crashes

Angle crashes were the second most common within the region. These crashes can be caused by several factors, such as:

- restricted sight distance
- excessive speed
- inadequate roadway lighting
- poor traffic signal visibility
- inadequate signal timing
- inadequate advance warning signs
- running a red light
- large traffic volumes

In general, the recommendations for reducing side impact and angle collisions include:

- Verifying that the sight distance at all intersection approaches is not restricted.
    - Options to alleviate restricted sight distance include removing the sight obstruction and/or installing or improving warning signs.
- Conducting speed studies to determine whether speed was a contributing factor.
    - To reduce crashes caused by excessive speeding, the speed limit can be lowered with enforcement, the phase change interval can be adjusted, or rumble strips can be installed.
- Ensuring roadway lighting is sufficient for drivers to see the roadway and surrounding area.
- Checking the visibility of the traffic signal at all approaches.
    - To provide better visibility of the traffic signal, options include installing or improving warning signs, overhead signal heads, installing 12" signal lenses, visors, back plates, and/or relocating signal heads.
- Verifying that the signal timing is adequate to serve the traffic volumes.
    - Options include adjusting phase change intervals, providing or increasing a red-clearance interval, providing progression, and/or utilizing signal actuation with dilemma zone protection.
- Verifying that the intersection is designed to handle the traffic volume.
    - If the traffic volumes are too large for the intersection's capacity, options include adding one or more lane(s) and retiming the signal.
- Conducting a roundabout study.
    - By design, roundabouts reduce the likelihood of angle collisions.

Table 4.4 displays the roadway locations with the greatest frequency of angle crashes within the MPO planning area.

Table 4.4: Top 5 Angle Crash Locations and Recommendations by County

Location	Angle Crashes (2019-2023)	Observation	Recommendation
Hinds County			
I-55 NB at E County Line Rd Interchange	47	Only black backplates (or missing) on signals, poor pavement striping	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, conduct intersection study
I-55 SB Ramps at Briarwood Dr Interchange	39	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing
US 80 at University Blvd	39	High posted speed limit on US 80 (50 MPH), only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing
I-55 NB Frontage Rd at Adkins Blvd Interchange	38	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting
I-55 NB Frontage Rd at Canton Mart Rd	38	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting
Madison County			
Highland Colony Pkwy at Old Agency Rd	61	Poor intersection lighting	Improve intersection lighting, install rumble strips, conduct intersection study
I-55 SB at W County Line Rd Interchange	28	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing, extend left turn lane on WB W County Line Rd
E County Line Rd at S Pear Orchard Rd	21	Only black backplates (or missing) on signals, poor pavement striping, poor sight distance	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, convert protected/permitted left turn phasing to protected left turn phasing, ensure adequate sight distance
Old Canton Rd at Rice Rd	20	Only black backplates (or missing) on signals, poor pavement striping	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, convert protected/permitted left turn phasing to protected left turn phasing
Rankin County			
MS 468 at Riverwind Dr	30	Only black backplates (or missing) on signals, poor pavement striping	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, conduct intersection study
MS 468 at Greenfield Rd	22	Poor pavement striping, poor intersection lighting	Improve pavement striping, improve intersection lighting, add advanced warning signs

Location	Angle Crashes (2019-2023)	Observation	Recommendation
US 49 at MS 469	22	Only black backplates (or missing) on signals, poor pavement striping, poor intersection lighting	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, improve intersection lighting, convert protected/permitted left turn phasing to protected left turn phasing
US 49 at Harper St	21	Only black backplates (or missing) on signals, poor pavement striping	Ensure adequate signal clearance intervals, add reflective backplates, improve pavement striping, conduct intersection study

Improvements have been observed at the following location that appeared in the safety analysis : Highland Colony Pkwy @ Lake Castle Rd ; International Dr at Old Brandon Rd

Reducing Other Collision Types

The remaining representative crash types can be attributed to incidents involving animals, backing up, bicycle/pedestrian encounters, fixed objects, head on collisions, jackknifing, rollovers, running off the road, and vehicle defects. Recommendations for increasing safety and reducing the number of crashes for these crash types include:

- Determining if the speed limit is too high or if vehicles in the area are traveling over the speed limit.
    - Reducing the speed can reduce the severity of crashes and make drivers more attentive to their surroundings.
- Verifying the clearance intervals for all signalized intersection approaches and ensuring that there is an "all red" clearance.
    - For larger intersections, it is particularly important to have a long enough clearance interval for vehicles to safely make it through the intersection before the light changes.
- Checking for proper intersection signage, especially if the roadway geometry may be confusing for the driver.
- Verify that all one-way streets are marked "One-Way", and "No Turn" signs are placed at appropriate locations.
- Verifying that pavement markings are visible during day and night hours.
- Verifying that the roadway geometry can be easily maneuvered by drivers.
- Evaluating left and right turning volumes to determine if a right turn and/or left turn lane is warranted.
- Ensuring roadway lighting is sufficient for drivers to see roadway and surroundings.
- Checking the visibility of the traffic signals from all approaches.
- Verifying that lanes are marked properly and provide turning and through movement directions, as well as signage that indicates lane configurations.
    - These directions will prevent cars from dangerously switching lanes at the last minute thereby reducing crash potential.

Stakeholder and Public Input

During the stakeholder and public involvement process, respondents were asked to identify the roadways and intersections they perceived with the most safety issues. The locations that were most often identified are described below and are potential candidates for additional safety studies within the MPO planning area.

- I-55 and I-20 Interchange
- I-55 Waterworks Curve
- I-20
- MS 18
- MS 468 at Greenfield Rd

5.0 Freight Analysis and Needs

This chapter includes an analysis on the mobility, safety, and asset conditions that impact the different modes that transport freight, as well as the impact that those freight modes themselves have on the local infrastructure.

5.1 Freight Overview

Freight projections from the Freight Analysis Framework[25] indicate that commerce and trade will continue to grow throughout the region from 2022 to 2050, which will lead to an increase in freight tonnage, value, and transported volume. Increases in freight traffic will increase the demand for transportation facilities, leading to roadway congestion as more vehicles are needed to move the goods from one mode, or location, to another.

The following sections address this growth, its impact on current and future transportation infrastructure, and recommendations to help reduce the strain on roadway networks within the MPO planning area.

5.2 Freight Transported by Truck

This section summarizes future freight truck movement and needs. As the movement of goods via truck as a mode increases, so too does the number of heavy vehicles on the roadways.

The movement of freight by truck strains both the physical infrastructure of the road and roadway network operations. As such, roadways that support freight movement need to be resilient enough to handle these large, heavy vehicles while providing adequate capacity, reliable service, and sufficient facilities.

When considering freight moved by truck, planners need to include:

- **truck volumes and congestion**
- **truck parking availability**
- **roadway designs**
- **pavement and bridge conditions**

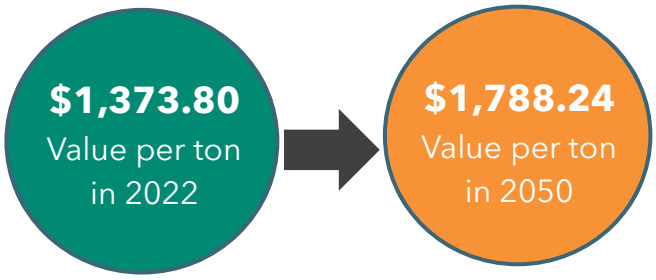
[25] https://ops.fhwa.dot.gov/freight/freight_analysis/faf/

Table 5.1: Changes in Commodity Flows by Truck, 2022 to 2050

State of Mississippi								
Direction	Tons (Thousand)				Value ($ million)			
	2022	2050	Change	Percent Change	2022	2050	Change	Percent Change
Inbound (Interstate)	33,999	59,774	25,775	76%	73,884	159,287	85,403	116%
Inbound (Intrastate)	76,136	121,071	44,935	59%	34,173	64,719	30,546	89%
Outbound (Interstate)	30,009	53,549	23,540	78%	84,473	195,144	110,671	131%
Total	**140,144**	**234,394**	**94,250**	**67%**	**192,530**	**419,150**	**226,620**	**118%**

Source: Freight Analysis Framework 5.5, 2025

Commodity Flow Growth



According to the *Freight Analysis Framework, Version 5*, within the Mississippi region, truck as a mode is expected to increase by both tonnage and value of freight transported. From 2022 to 2050, the tonnage of freight will increase by about 67 percent and the value of freight per ton transported by approximately 30 percent. The truck commodity flow growth for the region is displayed in **Table 5.1**.

Infrastructure Impacts

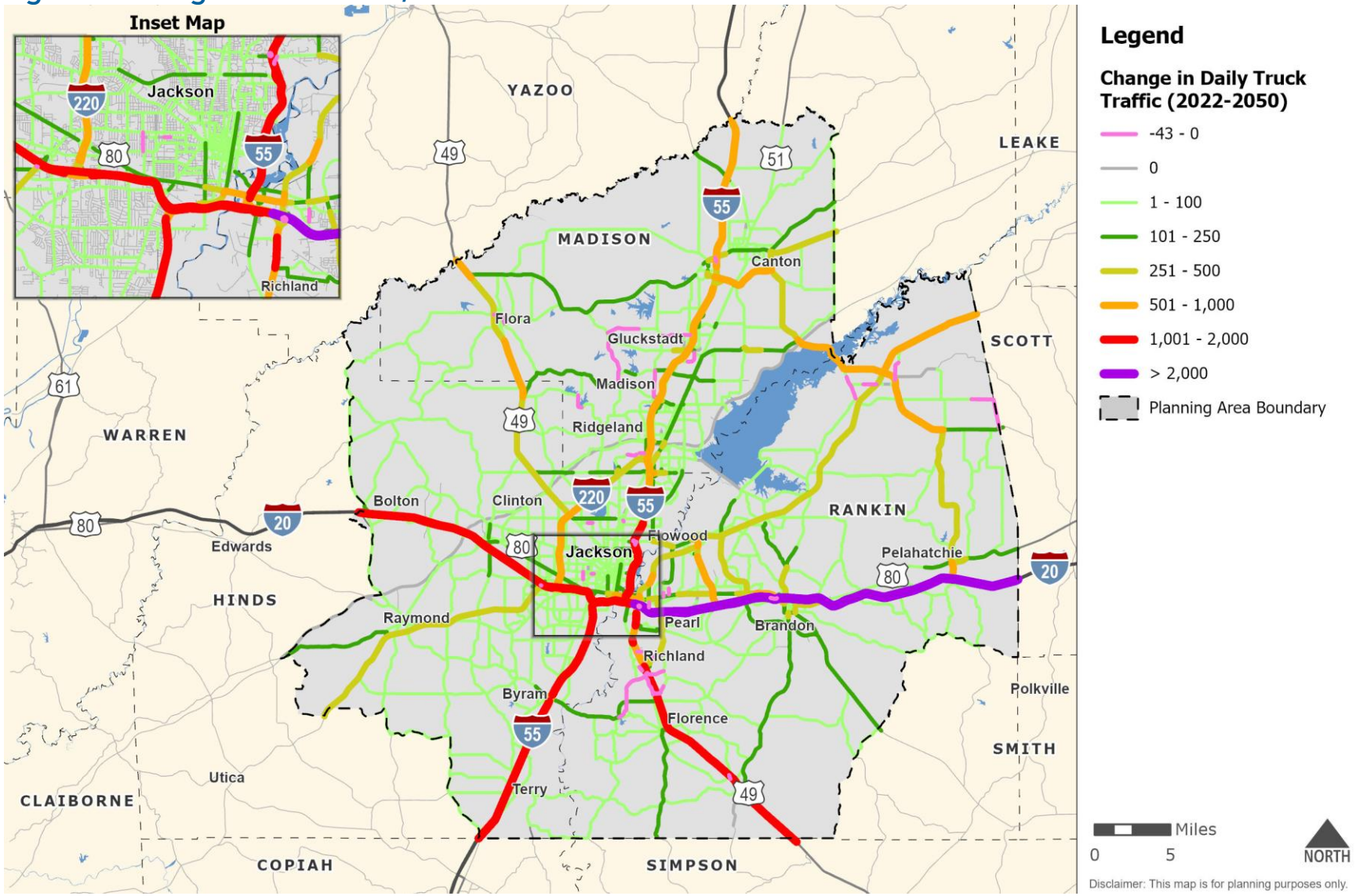
Roadway Volumes

The roadways with the highest freight truck traffic in 2022 are shown in *Technical Report #2: State of Current Systems*. As additional commodities are transported throughout the region and trips increase from 2022 through 2050, these roadways are expected to see an increase in truck traffic as well. **Figure 5.1** displays the anticipated growth in freight truck traffic while **Figure 5.2** shows the region's estimated 2050 truck volumes on its roadway network.

High truck volumes are locations where pavement conditions are most likely to be impacted by heavy vehicles, whereas locations with a high volume/capacity indicate not only congestion, but potential bottlenecks. **Figure 5.3** displays the roadway network by truck volume and volume/capacity ratio. Areas within the planning area that are anticipated to have a high volume/capacity ratio and significant number of trucks include:

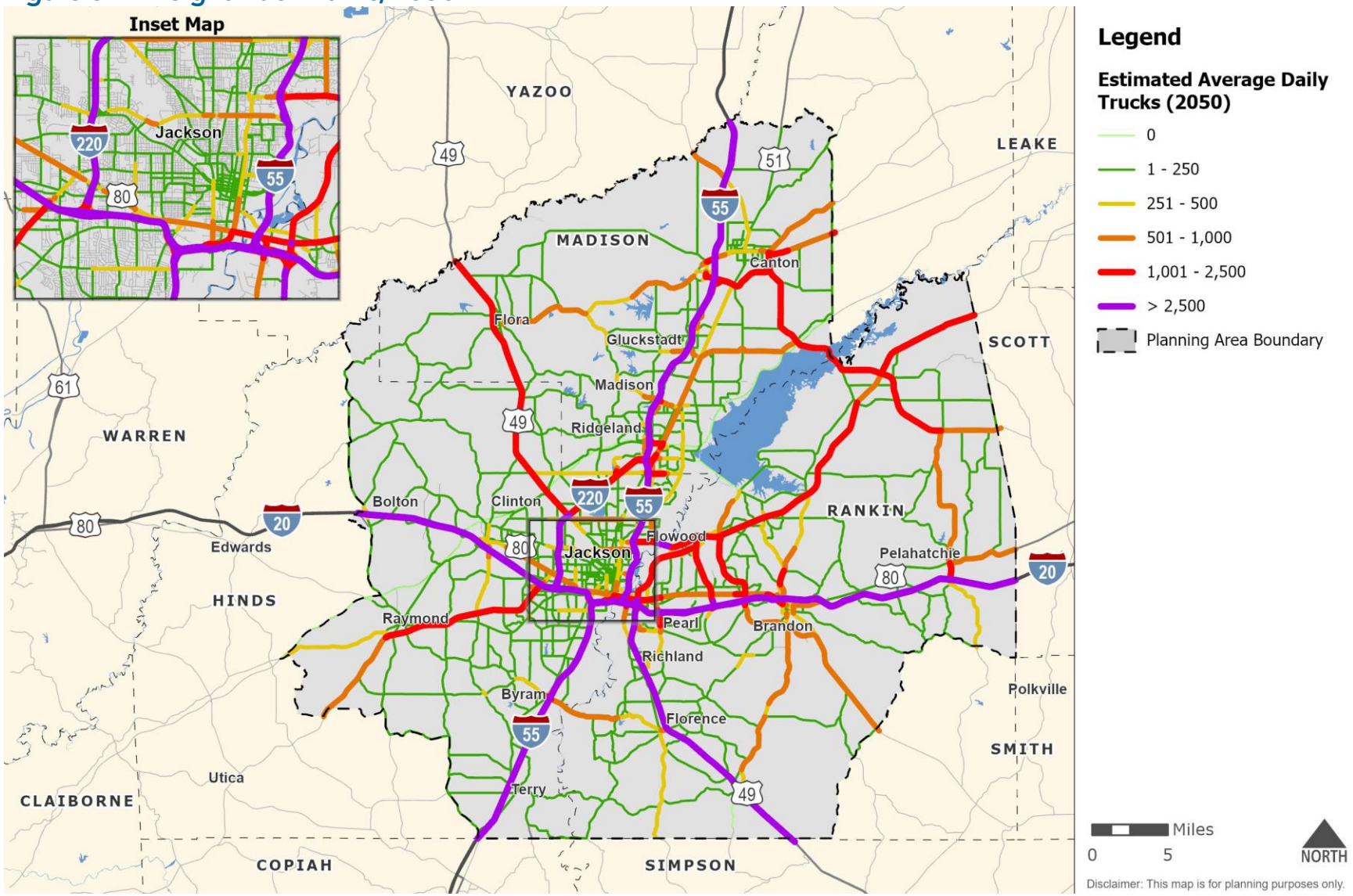
- I-20 eastbound Off-Ramp at MS 18
- I-20 eastbound Off-Ramp at US 49
- I-20 eastbound from 47A On-Ramp to Off-Ramp at US 49
- I-55 southbound Off-Ramp at W County Line Rd
- I-55 northbound On-Ramp at E County Line Rd
- US 80 from E Mark Dr to Old US 80

Figure 5.1: Freight Truck Growth, 2022 to 2050



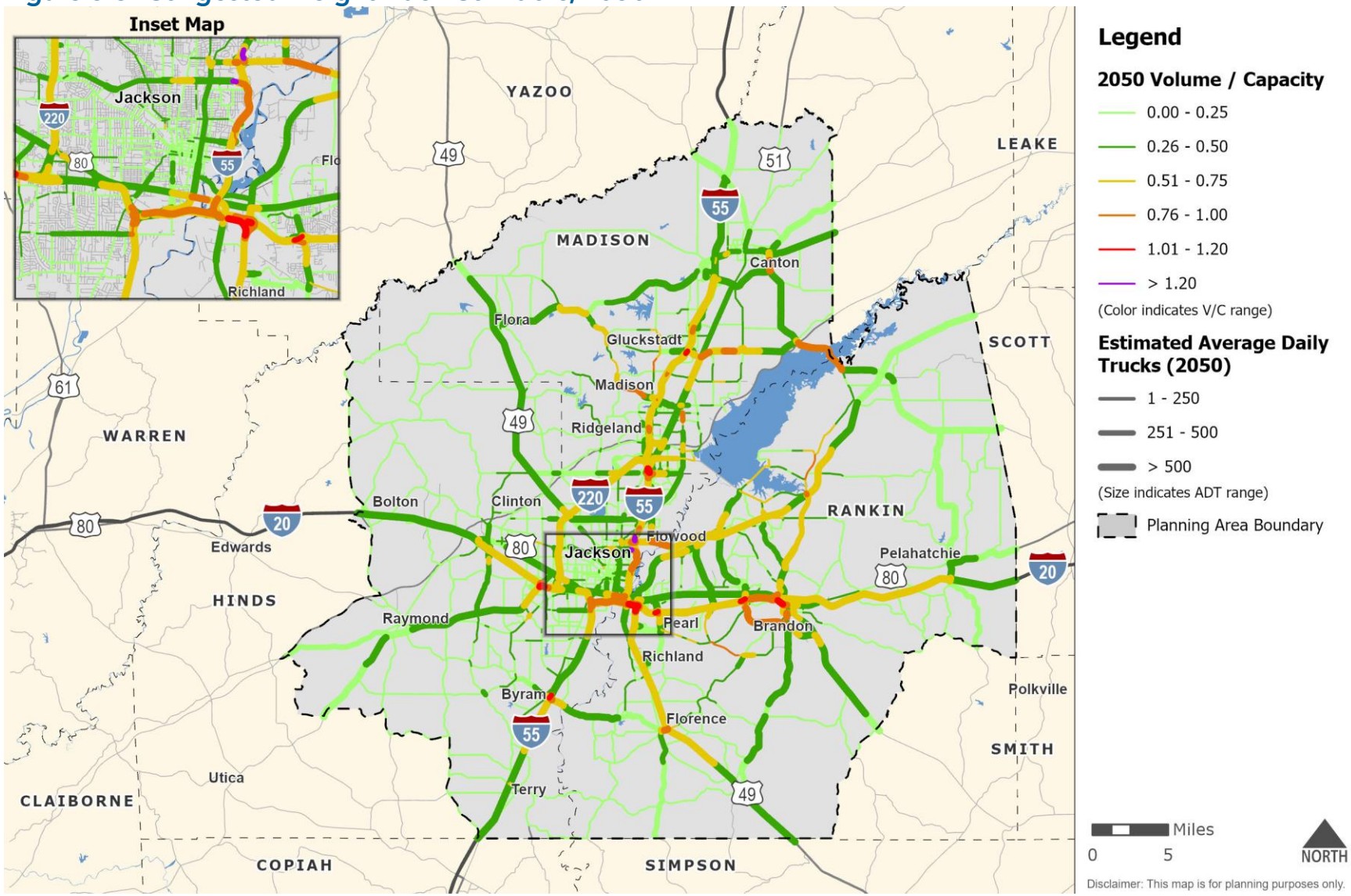
Source: CMPDD MPO Travel Demand Model

Figure 5.2: Freight Truck Traffic, 2050



Source: CMPDD MPO Travel Demand Model

Figure 5.3: Congested Freight Truck Corridors, 2050



Source: CMPDD MPO Travel Demand Model

Pavement and Bridge Conditions

Poor pavement conditions can result in increased wear and tear on all vehicles, which also increases the operating costs for heavy vehicles. Additionally, heavy vehicles greatly contribute to the degradation of pavement and bridge conditions, creating a cycle of damage to infrastructure and vehicles alike. Within the MPO planning area, approximately 55 percent of pavements are in Fair condition and will need preventative maintenance to avoid them becoming Poor condition in the future.

Additionally, those anticipated to see the greatest truck traffic growth should be monitored further so that pavement conditions on those routes can be maintained in, or brought up to, Good condition. These locations include:

- US 51
- US 80
- MS 18
- MS 475
- W Northside Dr
- E County Line Rd

Bridge conditions should be monitored to ensure that bridges can handle the increases in freight traffic and that bridges with low vertical clearances require trucks to detour to avoid the risk of striking the bridge infrastructure, which can result in bridge and road closures.

Safety

The increases in truck traffic are also likely to increase heavy vehicle crashes. All crashes can result in delays, and thus increased operating costs, for freight truck traffic. However, crashes involving heavy vehicles, especially those that involve hazardous chemicals, often result in a greater amount of congestion when compared to a crash between only passenger vehicles.

Safety recommendations that can significantly contribute to reducing the frequency and severity of crashes involving heavy vehicles are shown in **Figure 5.4**[26].

[26] https://www.fmcsa.dot.gov/ourroads/tips-truck-and-bus-drivers

Figure 5.4: Recommendations for Reducing Heavy Vehicle Crash Frequency and Severity

Enhanced Driver Training - Implement mandatory advanced driver training programs focusing on defensive driving techniques, hazard recognition, and safe driving practices specifically tailored for operators of heavy vehicles.

Incident Response Training - Provide specialized training for emergency responders on handling incidents involving heavy vehicles to ensure swift and safe resolution of accidents.

Regular Vehicle Maintenance - Establish stringent maintenance schedules for heavy vehicles to ensure all safety-critical components, such as brakes, tires, and lights, are in optimal condition.

Speed Management - Enforce stricter speed limits for heavy vehicles in high-risk areas and consider the use of speed governors to automatically limit the maximum speed of heavy vehicles.

Fatigue Management - Continue to implement comprehensive fatigue management programs, including improved monitoring and enforcement of rest breaks and monitoring of driving hours.

Collision Avoidance Technology - Encourage the adoption of Advanced Driver-Assistance Systems (ADAS) such as automatic emergency braking, lane departure warning, and blind-spot detection in heavy vehicles.

Improved Roadway Design - Enhance roadway infrastructure by improving signage, lighting, and adding dedicated lanes for heavy vehicles where feasible to reduce interactions with smaller vehicles.

Public Awareness Campaigns - Conduct regular public awareness campaigns to educate all road users about the limitations and safety practices associated with sharing the road with heavy vehicles.

Data-Driven Enforcement - Utilize crash data analytics to identify high-risk locations and times for heavy vehicle crashes and deploy targeted enforcement and safety measures in those areas.

Collaborative Stakeholder Engagement - Foster collaboration between government agencies, trucking companies, and safety organizations to continuously evaluate and improve heavy vehicle safety policies and practices.

5.3 Freight Transported by Rail

This section summarizes future freight moved by rail and its impact on the infrastructure.

Commodity Flow Growth

The freight analysis framework data shows that, between 2022 and 2050, freight moved by rail is expected to increase by nearly 84 percent. This will result in either additional rail cars as part of the existing trips, or an increase in the number of rail trips. As a result, there will be additional maintenance needs along these facilities and an increase in the duration or frequency of traffic stoppages when trains cross over a roadway.

Infrastructure Impacts

As actual volumes and capacities are not known for all rail segments within the region, it is difficult to forecast future capacity utilization rates and needs by segment. However, the MPO and its partner agencies can consider several things when planning for the future of freight moved by rail. These considerations include: weight limits, traffic control and signaling, and safety and highway-railroad crossings.

Weight Limits

Consistent railroad weight capacity is important to maintaining freight rail movement efficiency and cost advantage. Shippers on rail lines that exceed standard 286,000 pound gross carloads may either be forced to use trucks, increasing the load on the roadway infrastructure, or to break loads inefficiently, increasing the number of freight trips and traffic stoppages.

The mainline railroads in the region accommodate the industry standard of 286,000 pounds. No information is available for lines that branch from the main lines.

Traffic Control and Signaling

A traffic control system, called positive train control, is designed to automatically stop a train before certain incidents occur. These systems integrate command, control, communications, and information systems to control train movements with safety, security, precision, and efficiency. Additionally, positive train control systems must be designed to prevent the following:

- Train to train collisions
- Derailments caused by excessive speed
- Unauthorized movements by trains onto sections of track where maintenance activities are taking place
- Movement of a train through a track switch that was left in the wrong position

To support the implementation and ongoing maintenance of positive train control technology in the region, the MPO and its rail partners can consider incorporating the following recommendations into their coordination and advocacy, funding, emergency response planning, and public outreach and education efforts.

1. Coordination and Advocacy

- Collaborate with local rail operators, regulatory agencies, and stakeholders to ensure a coordinated and efficient rollout of positive train control technology.
- Advocate for the adoption of this technology on rail lines within the region to enhance rail safety and operational efficiency.

2. Funding Support

- Assist rail operators in identifying and applying for state or federal funding opportunities to support the implementation of positive train control technology, including grants, loans, or other financial assistance programs.
- Explore opportunities for leveraging partnerships to help offset the costs associated with technology implementation and maintenance.

3. Emergency Response Planning

- Collaborate with emergency response agencies and first responders to develop comprehensive emergency response plans specific to incidents involving trains equipped with positive train control technology.

4. Public Outreach and Education

- Raise public awareness about the benefits of this technology for rail safety and the community at large through outreach campaigns, public meetings, and educational materials.
- Engage with local schools, community organizations, and media outlets to promote understanding and support for positive train control implementation efforts in the MPO region.
- By incorporating these actionable items into their plan, the MPO can actively support and facilitate the successful implementation of this technology on rail lines within their jurisdiction, contributing to enhanced rail safety and operational effectiveness in the region.

Safety

Between 2019 and 2023, there were nine crashes involving an automobile and a train within the MPO region. In addition to injuries and fatalities that can result from these crashes, these incidents can result in significant delays for all road and rail users and increased operational costs for freight. The MPO can work with its local rail partners to continue maintaining railroad safety in the region.

Highway-Railroad Crossings

Technical Report #2: State of Current Systems shows that there are 250 public highway-rail grade crossings within the MPO planning area. Of these, 91 possesses only passive warning devices. Passive warning devices, such as cross bucks, warning signs, regulatory signs, and pavement markings, do not actively warn traffic of approaching trains. Active crossing devices, such as bells, flashing lights, and gates, improve safety at rail crossings by informing travelers when a train is approaching. The MPO can work with rail partners to add active crossing devices at these locations to improve safety.

5.4 Freight Transported by Air

Historically, while only a small amount of freight is typically shipped by air, the commodities transported by air tend to be high-value and time sensitive.

There are four public-use airports within the MPO planning area: Jackson-Evers International Airport[27], Hawkins Field Airport[28], Bruce Campbell Field Airport[29], and John Bell Williams Airport[30]. While all airports serve general aviation, the Jackson-Evers International Airport is the only airport in the region that serves both general and commercial aviation.

Roadways that help support freight movement around the Jackson-Evers International Airport, including US 80, MS 475, MS 25, and E Metro Pkwy, experience truck volumes greater than 500 daily truck trips. Additionally, a portion of MS 25 is considered a tier 1 bottleneck, indicating this route can have a significant economic impact within the region.

To address the anticipated congestion, the MPO and its freight partners can:

- Coordinate with the MDOT to conduct a signal retiming and coordination study.
- Coordinate and stagger freight truck trips leaving the airport, trucking, oilfield, and offshore businesses to spread the number of truck trips out across a longer period of time.

[27] https://jmaa.com/

[28] https://jmaa.com/hawkins-field/

[29] https://www.madisonthecity.com/government/airport/

[30] https://www.hindscc.edu/locations/john-bell-williams-airport

Commodity Flow Growth

According to the freight analysis framework, air freight tonnage is anticipated to increase by approximately 135 percent and the value of air freight is estimated to change by nearly 180 percent between the years 2022 and 2050.

5.5 Freight Transported by Waterway

There are no port facilities within the MPO planning area. The closest major port is the Port of Vicksburg, located along the Mississippi River. Although the Yazoo County Port is nearby, it is a small river port and does not serve as part of the region's waterway network.

Commodity Flow Growth

While there are no ports in the MPO planning area, freight will continue to grow, including the amount arriving at ports. To ensure efficient delivery of freight from the ports to or through the region, the MPO and its partner agencies can monitor the pavement conditions along freight routes to keep them in Good condition.

5.6 Freight Transported by Pipeline

The region's pipeline network consists of approximately 631 miles of pipelines. The majority of the pipelines by length are natural gas pipelines, while the remainder are for crude oil products.

Commodity Flow Growth

According to the freight analysis framework, from 2022 to 2050, the tonnage and value of pipeline freight is anticipated to increase by about 36 percent and 32 percent, respectively.

Infrastructure Impacts

As pipelines are typically private investments, their needs and conditions are not publicly available. Nonetheless, last-mile transportation of liquid bulk is often completed by trucks, meaning that additional truck trips are likely to occur to support pipeline freight. Roadways that service pipeline facilities can be monitored by the MPO and its partner agencies to ensure pavements are kept in Good condition and congestion is minimized.

6.0 Bicycle and Pedestrian

This chapter includes an overview on the needs for bicycle and pedestrian infrastructure within the MPO planning area. This includes an analysis of bicycle and pedestrian needs, as well as applicable recommendations to meet those needs.

6.1 Infrastructure and Facilities

Within the planning area, there are over 1,300 miles of bike routes, sidewalks, and shared pathways. These facilities are located throughout the region on functionally classified roadways and within local neighborhoods.

Source: www.VisitJackson.com

Recognizing the importance of bicycle and pedestrian facilities and their connectivity, the MPO supports the development of bicycle and pedestrian focused facilities along all existing and proposed roadways, where right-of-way and safety permit.

The CMPDD and its partner agencies value the region's existing bicycle and pedestrian infrastructure and have demonstrated the desire to expand the existing network.

Needs

This report supports the efforts undertaken as part of the CMPDD *Safe Streets and Roads for All Comprehensive Safety Action Plan* developed in 2024, combining the plan's findings and recommendations with those developed using the Metropolitan Transportation Plan's safety and gap analyses.

Growing Demand for Active Transportation

There is a significant demand for safe and convenient walking, bicycling, and other non-motorized transportation options in the region. This reflects a growing desire for healthier lifestyles and alternatives to car-dependent travel but a lack of infrastructure available to provide it in some areas.

Need for Collaboration

The region contains a strong, but spread-out network that experiences gaps in connectivity. This is partially due to the geographic spread of the region, but also the way that different agencies and jurisdictions within the region coordinate. The MPO and its partner agencies can collectively address the needs of bicyclists and

pedestrians by beginning a collaborative approach to maintenance schedules, identification of unsafe areas, pinpointing projects that will improve connectivity between jurisdictions, researching additional funding opportunities, and more.

Limited Infrastructure and Connectivity

While the existing portions of the network have a significant presence in their immediate vicinity, they largely serve portions of a jurisdiction, individual neighborhoods, or a selection of city blocks. This means there are several existing infrastructure and connectivity gaps, making it challenging for residents to safely bicycle or walk between communities, schools, workplaces, and recreational areas.

As population and employment within the region increases, there will be more users needing access to bicycle and pedestrian facilities. This will require expanding existing capacity and improving overall connectivity. Based on the information within *Technical Report #2: State of Current Systems*, within the region, gaps exist at/in:

- Eastern Madison
- Flowood
- Pearl
- Canton
- Richland
- Southern Clinton

The gaps listed above constitute the largest areas where there is little or no bicycle and pedestrian facilities available and where people would wish to travel for home, recreation, or work. The remaining gaps in the region's non-motorized network occur between existing infrastructure and are gaps in connectivity, rather than service.

Funding Availability

Funding limitations are often a bottleneck in multi-modal project construction or implementation efforts. This is especially true for stand-alone projects, as funding sources, such as grants, frequently have strict project type and utilization guidelines. Bicycle and pedestrian projects incorporated within roadway or other larger projects may have fewer funding challenges.

Stand-alone projects are those that are not a part of a larger roadway, bridge, or other project, and may have reduced access to additional funding sources.

Recommendations

Develop a Connected Network

The MPO and its partner agencies can prioritize the development of a connected network of safe and accessible bicycle and pedestrian infrastructure throughout the region. This network should connect communities, schools, workplaces, and key destinations, beginning with addressing connectivity between pre-existing

infrastructure. Addressing the largest gaps will further enhance connectivity within the region and provide greater access throughout the planning area.

Prioritize Safety

The non-motorized network would benefit greatly from safety improvements to existing infrastructure, including traffic calming measures, high-visibility crosswalks, and bike lanes to mitigate safety risks for vulnerable road users. Additionally, the MPO can draw from the CMPDD *Safe Streets and Roads for All Comprehensive Safety Action Plan 2024*[31] to determine the location of high-risk locations and potential solutions.

Implement a Multimodal Approach

The region can also consider a multimodal approach to transportation, promoting the use of public transit, walking, and bicycling as complementary modes of travel to traditional vehicular travel. The development of a multi-modal network can reduce the number of vehicles on the roadway, reduce congestion, increase safety, and improve air quality.

Additional Funding Strategies

The MPO and its partner agencies can set aside funding, or seek additional funding sources[32] and grants, to improve existing sidewalk infrastructure, reconstruct facilities to meet the Americans with Disabilities Act (ADA) standards, and close gaps within the pedestrian network.

Additionally, bicycle and pedestrian projects can be reviewed to identify any planned roadway projects along the same corridor segment, and an analysis can be conducted to determine if construction can be completed simultaneously. If so, this may help to reduce both construction costs and the impact of construction times on roadway congestion and safety, while potentially increasing the number of funding sources that can be applied to the bicycle and pedestrian infrastructure projects.

6.2 Maintenance

Maintenance is, and will always be, a major challenge for any type of transportation infrastructure. However, it is the responsibility of all applicable jurisdictions that these facilities retain their functionality and utility within their respective networks. As bicycle and pedestrian facilities are added to the region's transportation network,

[31] https://cmpdd.org/images/transportation/2025/Safety_Action_Plan_Report.pdf

[32] https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.pdf

they must be designed in compliance with ADA requirements. Additionally, older facilities may require repairs, maintenance, and/or updates to comply with ADA requirements.

Along with maintaining or developing maintenance schedules for bicycle and pedestrian facilities, local jurisdictions should begin identifying funding sources for annual maintenance of these facilities. Failure to have dedicated maintenance funding sources in place can result in the degradation of these facilities. Unchecked, this could render the facilities unusable to the traveling public who may depend on them to access everyday needs.

If there is a lack of available funding for maintenance, local jurisdictions should explore alternative maintenance strategies through partnerships with other organizations and/or the creation of maintenance programs, such as the "Adopt-a-Trail" program.

Adopt-a-Trail programs allow groups, such as clubs or homeowner associations, to be responsible for the maintenance of an identified segment of a bicycle or pedestrian facility.

6.3 Safety and Security Needs

States and MPOs are required to annually set safety targets and report progress towards achieving those targets as it relates to the total number of non-motorized fatalities and serious injuries. This requirement is identified in Performance Measure 1, as part of the transportation performance management process. The existing safety performance of the planning area is discussed in *Technical Report #2: State of Current Systems* and *Technical Report #3: Transportation Performance Management*.

Safety

Traffic crashes between motorists and non-motorized users of the transportation system can be caused by the lack of effective safety infrastructure. However, distracted driving plays an even more significant role in these types of incidents. Distracted driving is any activity that diverts attention from driving, including:

- Talking and texting on a phone or device
- Eating and/or drinking
- Talking to people in the vehicle
- "Rubber Necking"
- Operating entertainment
- Navigation system

Distracted walking can also be a contributing factor to crashes involving pedestrians, resulting in more injuries per mile than distracted driving. Though injuries from auto accidents involving a distracted driver are often more severe, physical harm resulting from distracted walking occurs more frequently as pedestrians step into the roadway unaware.

Studies have shown that 3,275 people died in motor vehicle crashes in 2023 involving distracted driving in the United States. In most cases, addressing driver inattentiveness could have a more profound impact on reducing automobile crashes than infrastructure improvements.

Source: https://www.nhtsa.gov/risky-driving/distracted-driving

To improve safety for both bicyclists and pedestrians, local jurisdictions within the MPO planning area can coordinate with MDOT and local police departments to obtain detailed crash records. This can aid in identifying high crash locations and identify safety measures that, when implemented, will have the greatest impact on reducing the total amount and severity of crashes. High crash locations between motorists and bicyclists/pedestrians can also be identified and should assess:

- The primary cause for repeated incidents,
- appropriate safety countermeasures that are suitable to address the underlying causes of the problem, such as:
    - traffic calming measures,
    - improved signage,
    - pavement markings,
    - signalization at intersections, or
    - education programs.

Additionally, the MPO can conduct a corridor or intersection safety study when it considers other improvements to the roadway infrastructure, including the consideration of:

- signal retimings to accommodate pedestrians
- road diets
- geometry changes
- installation of new pedestrian signals
- restriping to renew or add crosswalks
- installation of lighting
- construction of sidewalks at intersections

Security

In addition to safety concerns, there are also numerous security concerns to a bicycle and pedestrian network. These include, but are not limited to, the possibility of a criminal attack, theft, and vandalism.

These concerns are primarily along portions of shared use bicycle and pedestrian paths that are isolated from the roadway right of way. To provide a greater sense of security for users, project engineers and managers should strongly consider incorporating additional security features in the development of all new facilities, which can include:

- increased lighting
- cameras
- emergency phone boxes

Priority should also be placed on consulting with local law enforcement agencies to request that officers periodically patrol these facilities. Increasing law enforcement presence is a major factor in deterring crime before it happens. Local advocates willing to participate should consider the feasibility of organizing bicycle and pedestrian safety watch groups to intermittently patrol the facilities. Safety watch groups can provide a secondary deterrent to crime when law enforcement officials are unavailable.

Implementing prevention measures to aid in reducing theft and vandalism of support facilities along bicycle and pedestrian corridors is also a need. Installing Closed Circuit Television systems to constantly monitor high value support facilities would greatly diminish the potential of these assets from being stolen or vandalized. Additionally, providing physical barriers, such as fencing, limits access to these areas and serves as an additional security deterrent.

6.4 Recommended Short-Term Non-Motorized Projects

CMPDD maintains a list of bicycle and pedestrian projects as part of ongoing planning efforts. These projects are brought into the Metropolitan Transportation Plan and cover an extensive list of improvements. As shown in *Technical Report #2: State of Current Systems*, there are already several planned non-motorized transportation improvements within the MPO planning area. Given how many of these address existing gaps, the Metropolitan Transportation Plan recommends that the planned improvements are prioritized, with additional projects displayed in *Technical Report #5: Plan Development*, for consideration if funds are available and for continuation in future updates.

Table 6.1: Proposed Bicycle and Pedestrian Projects

Project ID	Roadway	Limits	Project Description
BP-1001	Shiloh Pkwy	Shiloh Rd. to US 80	Multi-use path
BP-1002	Marquette Rd.	Hwy 18 to Boyce Thompson Dr.	Bike Lane
BP-1003	Bozeman Rd.	MS 463 to Gluckstadt Rd.	Multi-use path
BP-1004	Highland Colony Pkwy	0.05 miles south of Southtowne Ave to Southtowne Ave	Multi-use path
BP-1005	Highland Colony Pkwy	W Parkway Pl to Steed Rd.	Multi-use path
BP-1006	Old Canton Rd	Nichols Dr. to St. Augustine Dr.	Multi-use path
BP-1007	St. Augustine Dr.	Old Canton Rd. to Sherbourne Dr.	Multi-use path
BP-1008	Steed Rd.	Hallmark Hyundai entrance to Sunnybrook Rd.	Multi-use path
BP-1009	Steed Rd.	Highland Colony Pkwy to W Frontage Rd.	Multi-use path
BP-1010	Steed Rd.	W Parkway Pl to Highland Colony Pkwy	Multi-use path
BP-1011	Steed Rd.	0.02 miles west of The Blake at Township entrance to The Blake at Township entrance	Multi-use path
BP-1012	Grants Ferry Pkwy.	MS 471 to Cornerstone Dr.	Multi-use path
BP-1013	Fannin Landing Cir.	Fannin Landing Boat Ramp to Arbor Landing	Multi-use path
BP-1014	Flowood Dr.	Lakeland Dr. to Liberty Rd.	Multi-use path
BP-1015	Lakeland Dr.	Liberty Rd. to E Metro Pkwy	Multi-use path
BP-1016	Calhoun Station Pkwy.	Germantown Middle School to Gluckstadt Rd.	Multi-use path
BP-1017	Gluckstadt Rd.	Weisenberger Rd. to Bozeman Rd.	Bike route
BP-1018	Weisenberger Rd.	Gluckstadt Rd. to Hwy. 51	Multi-use path
BP-1019	Parkway East	Weisenberger Rd. to Gluckstadt City Limits	Multi-use path
BP-1020	Byram Pkwy.	Siwell Rd. to Terry Rd.	Multi-use path
BP-1021	Gary Rd.	Terry Rd. to Davis Rd.	Multi-use path
BP-1022	Gary Rd. Extension	Terry Rd. to I-55	Bike lane
BP-1023	Big Creek Greenway	Terry Rd. to Davis Rd. & Siwell Rd.	Multi-use path

Project ID	Roadway	Limits	Project Description
BP-1024	Davis Rd.	Siwell Rd. to Davis Road Park	Multi-use path
BP-1025	Siwell Rd.	Byram Pkwy. to Davis Road	Multi-use path
BP-1026	Terry Rd.	Byram Pkwy. to Gary Rd.	Multi-use path
BP-1027	Arlington St.	Lindale St. to Post Rd.	Bike route
BP-1028	Baseball Alley	Cynthia Rd. to Dead End	Bike route
BP-1029	Baseball Alley Connector	Baseball Alley to Laurelwood Dr.	Multi-use path
BP-1030	Bellevue St.	Berkshire St. to Dunton Rd.	Bike route
BP-1031	Belmont St.	Monroe St. to Jefferson St.	Bike route
BP-1032	Berkshire St.	Northside Dr. to Bellevue St.	Bike route
BP-1033	Beverly Dr.	Dogwood Dr. to Pineview Dr.	Bike route
BP-1034	Camp Garraway Rd.	Longwood Dr. to Clinton-Raymond Rd.	Bike route
BP-1035	Church St.	Masonic Dr. to Morrison Dr.	Bike route
BP-1036	Clinton Blvd.	Easthaven Dr. to College St.	Bike lane
BP-1037	Clinton Business Park Dr.	Industrial Park Dr. to Old US 80	Bike route
BP-1038	Clinton Utility Route 1	W. Sproles St. to W. College St.	Multi-use path
BP-1039	Clinton Utility Route 2	Arrow Dr. to Pinehaven Rd.	Multi-use path
BP-1040	Clinton Utility Route 3	Hwy. 80 to Clinton-Raymond Rd.	Multi-use path
BP-1041	Clinton Utility Route 4	Clinton Utility Route 3 to Woodchase Park Dr.	Multi-use path
BP-1042	Clinton Utility Route 5	Clinton Utility Route 3 to Sherry Cv.	Multi-use path
BP-1043	Clinton Utility Route 6	Clinton Utility Route 3 to Grand Oak Blvd.	Multi-use path
BP-1044	Clinton Utility Route 7	Brighton Park Dr. to Natchez Trace Pkwy.	Multi-use path
BP-1045	Clinton Utility Route 8	St. Thomas Pkwy. to Arrow Dr.	Multi-use path
BP-1046	Clinton-Raymond Rd.	College St. to Brighton Park Dr.	Bike route
BP-1047	Clinton-Raymond Rd.	Brighton Park Dr. to Midway Rd.	Multi-use path
BP-1048	Clinton-Raymond Rd.	Midway Rd. to S. Norrell Rd.	Bike route

Project ID	Roadway	Limits	Project Description
BP-1049	College St./Old Hwy. 80	Lasseter St. to Natchez Trace Pkwy.	Bike route
BP-1050	Cynthia Rd.	Existing Path to Northside Dr.	Multi-use path
BP-1051	Dogwood Dr.	Tanglewood Dr. to Beverly Dr.	Bike route
BP-1052	Dunton Rd.	Bellevue St. to Clinton Pkwy.	Bike route
BP-1053	Easthaven Dr.	Clinton Blvd. to Church St.	Bike route
BP-1054	Hampstead Blvd.	Existing Terminus to Hwy. 80	Multi-use path
BP-1055	Hester St.	Dunton Rd. to E. Leake St.	Bike route
BP-1056	Hester St.	E. Leake St. to Oakwood Dr.	Bike route
BP-1057	Huntcliff Way	Pinehaven Rd. to Tanglewood Dr.	Bike route
BP-1058	I-20 Frontage Rd.	St. Thomas Pkwy. to S. Norrell Rd.	Bike route
BP-1059	Industrial Park Dr.	W. Northside Dr. to Clinton Business Park Dr.	Bike route
BP-1060	Jefferson St.	Belmont St. to College St.	Bike route
BP-1061	Laurel Wood Dr.	Pineview Dr. to Tanglewood Dr.	Bike route
BP-1062	Leake St.	Hester St. to Hester St.	Bike route
BP-1063	Leake St.	Clinton Pkwy. to Jefferson St.	Bike route
BP-1064	Lindale Cir.	Lindale St. to Parker Dr.	Bike route
BP-1065	Lindale St.	Arlington St. to Lindale Cir.	Bike route
BP-1066	Live Oak Dr.	Tanglewood Dr. to Northside Dr.	Bike route
BP-1067	Longwood Dr.	Royal Oak Dr. to Camp Garraway Rd.	Bike route
BP-1068	Masonic Dr.	Church St. to Hwy. 80	Bike route
BP-1069	McRaven Rd.	Midway Rd. to Clinton City Limits	Bike route
BP-1070	Midway Rd.	Clinton-Raymond Rd. to McRaven Rd.	Bike route
BP-1071	Monroe St.	W. Sproles St. to Belmont St.	Bike route
BP-1072	Morrison Dr.	Church St. to Clinton Blvd.	Bike route
BP-1073	N. Frontage Rd.	College St. to Natchez Trace Pkwy.	Bike route

Project ID	Roadway	Limits	Project Description
BP-1074	Neal St.	Northside Dr. to W. Sproles St.	Bike route
BP-1075	Northside Dr.	Park Place to Clinton-Tinnin Rd.	Bike lane
BP-1076	Oakwood Dr.	Hester St. to Clinton Blvd.	Bike route
BP-1077	Old U.S. 80	Clinton Business Park Dr. to Natchez Trace Pkwy.	Bike route
BP-1078	Parker Dr.	Lindale Cir. to Clinton Blvd.	Bike route
BP-1079	Pebble Brook Dr.	Willow Brook Dr. to Royal Oak Dr.	Bike route
BP-1080	Pinehaven Rd.	Arrow Dr. to Williamson Rd.	Multi-use path
BP-1081	Pineview Dr.	Beverly Dr. to Laurelwood Dr.	Bike route
BP-1082	Post Rd.	Arlington St. to Bellevue St.	Bike route
BP-1083	Railroad Route	Eastern City Limits to Western City Limits	Multi-use path
BP-1084	Royal Oak Dr.	Pebble Brook Dr. to Longwood Dr.	Bike route
BP-1085	S. Norrell Rd.	I-20 Frontage Rd. to Clinton-Raymond Rd.	Bike route
BP-1086	Soccer Row	Cynthia Rd. to Dead End	Bike route
BP-1087	Soccer Row Connector	Soccer Row to Cynthia Rd.	Multi-use path
BP-1088	Springridge Rd.	McRaven Rd. to Clinton Center Dr.	Multi-use path
BP-1089	Tanglewood Dr.	Huntcliff Way to Dogwood Dr.	Bike route
BP-1090	Tanglewood Dr.	Laurelwood Dr. to Arlington St.	Bike route
BP-1091	W. Northside Dr.	Williamson Rd. to Clinton-Tinnin Rd.	Bike route
BP-1092	W. Sproles St.	Neal Ave. to Monroe St.	Bike route
BP-1093	Willow Brook Dr.	Springridge Rd. to Pebble Brook Dr.	Bike route
BP-1094	Beasley Rd.	State St. to Hilda Dr.	Multi-use path
BP-1095	Clinton-Raymond Rd.	Clinton City Limits to Raymond City Limits	Multi-use path
BP-1096	Ellis Ave.	Capitol St. to Robinson Rd.	Multi-use path
BP-1097	Hanging Moss Rd.	Beasley Rd. to Northside Dr.	Multi-use path
BP-1098	Hinds County Pkwy.	Parks Rd. to I-20	Lane/Sidewalk

Project ID	Roadway	Limits	Project Description
BP-1099	Railroad Route	Airport Rd. to Clinton City Limits	Multi-use path
BP-1100	Ridgewood Rd.	Eastover Dr. to Old Canton Rd.	Multi-use path
BP-1101	Terry Rd.	Wynndale Rd. to Lebanon-Pinegrove Rd.	Multi-use path
BP-1102	West Northside Dr.	Bolton City Limits to Clinton City Limits	Multi-use path
BP-1103	Adkins Blvd.	I-55 to Colonial Cir.	Multi-use path
BP-1104	Anna Lisa Dr.	Castle Hill Dr. to Shady Lane Dr.	Bike route
BP-1105	Avondale St.	Kings Hwy. to Wood Dale Dr.	Bike route
BP-1106	Bailey Ave.	Woodrow Wilson Ave. to W Monument St.	Bike lane
BP-1107	Beasley Rd.	NW Industrial Pkwy. to Watkins Dr.	Bike route
BP-1108	Beasley Rd.	Watkins Dr. to I-55	Multi-use path
BP-1109	Bellevue Place	North St. to Jefferson St.	Bike route
BP-1110	Briarfield Rd.	River Thames Rd. to Briarwood Dr.	Bike route
BP-1111	Briarwood Dr.	Briarfield Rd. to Carolwood Dr.	Path/Route
BP-1112	Brookwood Dr.	W. McDowell Rd. to Glen Erin St.	Bike route
BP-1113	Buckley Dr.	Old Canton Ln. to Meadowbrook Rd.	Bike route
BP-1114	Capitol St.	Boling St. to Gallatin St.	Bike lane
BP-1115	Carolwood Dr.	Briarwood Dr. to Stanton Dr.	Bike route
BP-1116	Castle Hill Dr.	Raymond Rd. to Raymond Rd.	Bike route
BP-1117	Cedars of Lebanon Rd.	Manhattan Rd. to Keele St.	Multi-use path
BP-1118	Charles Tillman Bridge	Corner of Pleasant and Maple St. to Mill St.	Multi-use path
BP-1119	Clinton Blvd.	Magnolia Rd. to I-220	Bike route
BP-1120	Coleman Ave.	Sunset Dr. to Delta Dr.	Bike route
BP-1121	Colonial Cir.	Adkins Blvd. to Old Canton Rd.	Multi-use path
BP-1122	Concord Dr.	Stanton Dr. to Plantation Blvd.	Bike route
BP-1123	Cooper Rd.	Forest Hill Rd. to Terry Rd.	Bike lane

Project ID	Roadway	Limits	Project Description
BP-1124	County Line Rd.	Highway 49 to Highland Colony Pkwy.	Bike route
BP-1125	County Line Rd.	Hanging Moss Rd. to State St.	Multi-use path
BP-1126	Decelle St.	Northview Dr. to Oxford Ave.	Bike route
BP-1127	E. Manor Dr.	Quail Run Rd. to Wedgeworth St.	Bike route
BP-1128	Eastover Dr.	I-55 to District Blvd.	Multi-use path
BP-1129	Eastover Dr.	Ridgewood Rd. to Meadowbrook Rd.	Bike route
BP-1130	Echelon Pkwy.	Watkins Dr. to County Line Rd.	Bike lane
BP-1131	Forest Hill Rd.	Raymond Rd. to McCluer Rd.	Multi-use path
BP-1132	Forest Hill Rd.	McCluer Rd. to Terry Rd.	Bike lane
BP-1133	Fortification St.	Martin Luther King Jr. Dr. to Jefferson St.	Bike route
BP-1134	Franklin D. Roosevelt Dr.	Flag Chapel Rd. to Presidential Dr.	Bike route
BP-1135	Gallatin St.	Capitol St. to Pearl St.	Bike route
BP-1136	Greymont St.	Pinehurst St. to Lyncrest Ave.	Bike route
BP-1137	Hanging Moss Rd.	County Line Rd. to Northside Dr.	Bike route
BP-1138	Hwy. 49	Northside Dr. to County Line Rd.	Bike route
BP-1139	Jefferson St.	Poplar Blvd. to Mississippi St.	Bike route
BP-1140	John F Kennedy Blvd.	Presidential Dr. to Hwy 49	Bike route
BP-1141	Katherine Blvd.	Wild Valley Dr. to Northside Dr.	Bike route
BP-1142	Kaywood Dr.	Old Canton Rd. to River Thames Rd.	Bike route
BP-1143	Keele St.	Cedars of Lebanon Rd. to Briarwood Dr.	Multi-use path
BP-1144	Kings Hwy.	Warrior Trail to Avondale St.	Bike route
BP-1145	Kristen Dr.	Plantation Blvd. to Pear Orchard Rd.	Bike route
BP-1146	Lakeland Dr.	Cool Papa Bell/Museum Blvd. to Ridgewood Rd.	Multi-use path
BP-1147	Lakeland Dr.	Old Canton Rd. to I-55 Frontage Rd.	Multi-use path
BP-1148	Laurel St.	Myrtle St. to Lyncrest Ave.	Bike route

Project ID	Roadway	Limits	Project Description
BP-1149	Livingston Ln.	Livingston Rd. to Watkins Dr.	Bike route
BP-1150	Livingston Rd.	Beasley Rd. to County Line Rd.	Bike route
BP-1151	Livingston Rd.	Northside Dr. to W. Woodrow Wilson Ave.	Bike lane
BP-1152	Lynch St.	Maddox Rd. to Yarbro St.	Multi-use path
BP-1153	Lynch St.	W. Highland Dr. to Wiggins St.	Multi-use path
BP-1154	Maddox Rd.	Raymond Rd. to Hwy. 18	Multi-use path
BP-1155	Maddox Rd.	Hwy. 18 to McRaven Rd.	Bike lane
BP-1156	Magnolia Rd.	John Hopkins Rd. to Clinton Blvd	Bike route
BP-1157	Manhattan Rd.	Meadowbrook Rd. to Cedars of Lebanon Dr.	Multi-use path
BP-1158	Maple St.	Martin Luther King Jr. Dr. to Pleasant Ave.	Bike route
BP-1159	Martin Luther King Jr. Dr.	W Ridgeway St. to Bailey Ave.	Bike route
BP-1160	Mayes St.	Livingston Rd. to Northview Dr.	Bike lane
BP-1161	McCluer Rd.	Siwell Rd. to Forest Hill Rd.	Multi-use path
BP-1162	McCluer Rd.	Forest Hill Rd. to Terry Rd.	Bike lane
BP-1163	McDowell Rd.	Hwy. 18 to Raymond Rd.	Multi-use path
BP-1164	McFadden Rd.	Dardanelle Dr. to W McDowell Rd.	Bike route
BP-1165	McRaven Rd.	Jackson City Limits to Maddox Rd.	Multi-use path
BP-1166	Meadow Ln.	Woody Dr. to McClure Rd.	Bike route
BP-1167	Meadowbrook Rd.	Ridgewood Rd. to Pearl River water line trail	Bike route
BP-1168	Meadowbrook Rd.	Buckley Dr. to Ridgewood Rd.	Multi-use path
BP-1169	Medgar Evers Blvd.	Northside Dr. to Sunset Dr.	Multi-use path
BP-1170	Mill St.	W. Mitchell Ave. to Taft St.	Bike lane
BP-1171	Mississippi St.	Congress St. to Jefferson St.	Bike route
BP-1172	Mitchell Ave.	Mill St. to State St.	Bike lane
BP-1173	Mitchell Ave.	Booker Washington St. to Mill St.	Bike lane

Project ID	Roadway	Limits	Project Description
BP-1174	Monticello Dr.	Glen Erin St. to Woody Dr.	Bike route
BP-1175	Montrose Cir.	Wood Dale Dr. to I-55 Frontage Rd.	Bike route
BP-1176	Monument St	Capitol St. to Mill St.	Bike lane
BP-1177	Museum to Market Trail	Children's Museum Entrance to Lakeland Dr.	Multi-use path
BP-1178	N. Canton Club Cir.	Old Canton Rd. to Sedgwick Dr.	Bike route
BP-1179	N. Flag Chapel Rd.	Cynthia Rd. to Clinton Blvd.	Bike lane
BP-1180	Natchez Trace Pkwy. Connector Trail	Natchez Trace to County Line Rd. @ NW Industrial Pkwy.	Multi-use path
BP-1181	North St.	Mississippi St. to Bellevue Place	Multi-use path
BP-1182	Northbrook Dr.	Meadowbrook Rd. to Northside Dr.	Bike route
BP-1183	Northpointe Pkwy.	Old Canton Rd. to County Line Rd.	Bike lane
BP-1184	Northtown Dr.	Old Canton Rd. to River Oaks Blvd.	Bike lane
BP-1185	Northview Dr.	Mayes St. to Decelle St.	Bike route
BP-1186	Northview Dr.	Mayes St. to Meadowbrook Rd.	Multi-use path
BP-1187	NW Industrial Pkwy.	Beasley Rd. to County Line Rd.	Bike route
BP-1188	Old Canton Ln.	Old Canton Rd. to Buckley Dr.	Bike route
BP-1189	Old Canton Rd.	River Oaks Blvd. to Northpointe Pkwy.	Multi-use path
BP-1190	Old Canton Rd.	I-55 Frontage Rd. to Kaywood Dr.	Multi-use path
BP-1191	Old Canton Rd.	Old Canton Ln. to Meadowbrook Rd.	Multi-use path
BP-1192	Old Canton Rd.	Lakeland Dr. to State St.	Multi-use path
BP-1193	Oxford Ave.	Decelle St. to Mitchell Ave.	Bike route
BP-1194	Parkway Ave.	Utah St. to W. Ridgeway St.	Bike route
BP-1195	Peachtree St.	Woodrow Wilson Ave. to Riverside Dr.	Multi-use path
BP-1196	Peachtree St.	Riverside Dr. to Poplar Blvd.	Bike route
BP-1197	Pear Orchard Rd.	Old Canton Rd. to County Line Rd.	Multi-use path

Project ID	Roadway	Limits	Project Description
BP-1198	Pearl River Water Line Trail	Lakeland Dr. to Lake Harbour Dr.	Multi-use path
BP-1199	Pinehurst St.	Peachtree St. to Greymont St.	Bike route
BP-1200	Plantation Blvd.	Concord Dr. to Kristen Dr.	Bike route
BP-1201	Poplar Blvd.	Jefferson St. to Peachtree St.	Bike route
BP-1202	Presidential Dr.	Franklin D. Roosevelt Dr. to Hwy. 49	Bike route
BP-1203	Quail Run Rd.	Meadowbrook Rd. to E. Manor Dr.	Bike route
BP-1204	Raymond Rd.	Jackson City Limits to Terry Rd.	Bike route
BP-1205	Raymond Rd.	Will-O-Wood Blvd. to Maddox Rd.	Multi-use path
BP-1206	Ridgeway St.	Northview Dr. to State St.	Bike route
BP-1207	Ridgeway St.	Medgar Evers Blvd. to Livingston Rd.	Bike lane
BP-1208	Ridgeway St.	Livingston Rd. to Tougaloo St.	Bike route
BP-1209	Ridgewood Rd.	Lakeland Dr. to Eastover Dr.	Multi-use path
BP-1210	Ridgewood Rd.	Eastover Dr. to Old Canton Rd.	Multi-use path
BP-1211	River Oaks Blvd.	Northtown Dr. to Old Canton Rd.	Bike lane
BP-1212	River Thames Rd.	Kaywood Dr. to Briarfield Rd.	Bike route
BP-1213	Riverside Dr.	State St. to Peachtree St.	Bike route
BP-1214	Riverside Dr.	Peachtree St. to Myrtle St.	Multi-use path
BP-1215	Rose St.	Capitol St. to Pearl St.	Bike route
BP-1216	Sedgwick Dr.	N. Canton Club Cir. to Westbrook Rd.	Bike route
BP-1217	Shady Lane Dr.	Anna Lisa Ln. to Dardanelle Dr.	Bike route
BP-1218	Shaw Rd.	Hwy. 80 to Wiggins Rd.	Multi-use path
BP-1219	Siwell Rd.	Hwy. 18 to McCluer Rd.	Multi-use path
BP-1220	Smith Robinson St.	W Ridgeway St. to Stonewall St.	Bike route
BP-1221	Stanton Dr.	Carolwood Dr. to Concord Dr.	Bike route

Project ID	Roadway	Limits	Project Description
BP-1222	State St.	County Line Rd. to Sheppard Rd.	Multi-use path
BP-1223	State St.	Sheppard Rd. to Taylor St.	Bike route
BP-1224	State St.	Taylor St. to Woodrow Wilson Ave.	Multi-use path
BP-1225	Stonewall St.	Smith Robinson St. to Booker Washington St.	Bike lane
BP-1226	Sunset Dr.	Utah St. to Coleman Ave.	Bike route
BP-1227	Sunset Dr.	Medgar Evers Blvd. to Ivanhoe Ave.	Multi-use path
BP-1228	Sykes Park Trail	Cooper Rd @ Sykes Park to Leavellwoods Park	Multi-use path
BP-1229	Terry Rd.	Hwy. 80 to Raymond Rd.	Bike route
BP-1230	Terry Rd.	McCluer Rd. to Forest Hill Rd.	Multi-use path
BP-1231	Timber Falls Pkwy.	Forest Hill Rd. to Existing Path	Multi-use path
BP-1232	Tougaloo St.	Mayes St. to W. Ridgeway St.	Bike route
BP-1233	University Blvd.	Pascagoula St./Pearl St. to Hwy. 80	Bike route
BP-1234	Utah St.	Sunset Dr. to Parkway Ave.	Bike route
BP-1235	Valley St.	Lynch St. to Hwy. 80	Bike route
BP-1236	Valley St.	Hwy 80 to Raymond Rd.	Multi-use path
BP-1237	Walter Dutch Welch Dr.	Parkway Ave. to Livingston Rd.	Bike route
BP-1238	Warrior Trail	State St. to Kings Hwy.	Bike route
BP-1239	Watkins Dr.	Livingston Ln. to Echelon Pkwy.	Bike route
BP-1240	Wedgeworth St.	E. Manor Dr. to Wild Valley Dr.	Bike route
BP-1241	West Highland Dr.	Lynch St. to Raymond Rd.	Bike lane
BP-1242	West St.	Capitol St. to Meadowbrook Rd.	Bike route
BP-1243	Westbrook Rd.	Sedgwick Dr. to Proposed Pearl River Water Line Path	Bike route
BP-1244	Wiggins Rd.	Shaw Rd. to McRaven Rd.	Bike lane
BP-1245	Wild Valley Dr.	Wedgeworth St. to Katherine Blvd.	Bike route
BP-1246	Will-O-Wood Blvd	N. Siwell Rd. to Raymond Rd.	Bike route

Project ID	Roadway	Limits	Project Description
BP-1247	Wood Dale Dr.	Avondale St. to Montrose Cir.	Bike route
BP-1248	Woodrow Wilson Ave.	Bailey Ave. to Peachtree St.	Multi-use path
BP-1249	Woody Dr.	Monticello Dr. to Meadow Ln.	Bike route
BP-1250	Clinton Rd.	Raymond City Limits to Hinds Blvd.	Multi-use path
BP-1251	Hinds Blvd.	Clinton Rd. to Hwy. 18	Multi-use path
BP-1252	Main St.	Hwy. 18 to Railroad St.	Multi-use path
BP-1253	Railroad Route	Hwy. 18 to Airport Rd.	Multi-use path
BP-1254	Claiborne St.	Raymond St. to Proposed School Connector	Bike route
BP-1255	Morgan Dr.	Frontage Rd. to Park	Bike route
BP-1256	Proposed Path	Morgan Dr. to Claiborne St.	Multi-use path
BP-1257	Proposed School Connector	Claiborne St. to Terry High School	Multi-use path
BP-1258	George Washington Ave.	King Ranch Rd. to MLK Dr.	Multi-use path
BP-1259	Hwy. 51	Canton City Limits to Canton Pkwy.	Bike lane
BP-1260	King Ranch Rd.	Hwy. 22 to Heindl Rd.	Multi-use path
BP-1261	MLK Dr.	George Washington Ave. to North St.	Multi-use path
BP-1262	Peace St.	Virlilia Rd. to Canton City Limits	Bike lane
BP-1263	Woodland Dr.	E. Dinkins St. to Canton Pkwy.	Multi-use path
BP-1264	Yandell Ave.	Saab Park to Hwy. 43	Multi-use path
BP-1265	1st St.	Cox Ferry Rd. to Peach St.	Bike route
BP-1266	Cox Ferry Rd.	Flora City Limits to 1st St.	Bike route
BP-1267	Peach St.	1st St. to SW 4th St.	Bike route
BP-1268	Pocahontas Rd.	Hwy. 22 to Flora City Limits	Bike route
BP-1269	Bozeman Rd.	Gluckstadt Rd. to Gluckstadt City Limits	Multi-use path
BP-1270	Calhoun Station Pkwy.	Stout Rd. to Germantown Middle School	Bike route
BP-1271	Catlett Rd.	Gluckstadt City Limits to Gluckstadt Rd.	Multi-use path

Project ID	Roadway	Limits	Project Description
BP-1272	Church Rd.	Germantown Rd. to Calhoun Station Pkwy.	Multi-use path
BP-1273	Stout Rd.	Gluckstadt City Limits to Calhoun Station Pkwy.	Bike route
BP-1274	Stribling Rd. Ext.	Gluckstadt City Limits to Germantown Rd.	Multi-use path
BP-1275	Yandell Rd.	Hwy. 51 to Gluckstadt City Limits	Multi-use path
BP-1276	Bozeman Rd.	Madison City Limits to Hwy. 463	Multi-use path
BP-1277	Breezy Hills Dr.	Kingsbridge Rd. to Rice Rd.	Bike route
BP-1278	Cobblestone Dr.	Rockwood Dr. to Hwy. 51	Multi-use path
BP-1279	Cotton Hill Rd.	Madison Ave. to Madison City Limits	Multi-use path
BP-1280	Crawford St.	Hwy. 463 to Village Oaks Blvd.	Multi-use path
BP-1281	Drainage Bed Path	St. Augustine Dr. to Madison Ave.	Multi-use path
BP-1282	Galleria Pkwy.	Main St. - Madison to Milan Way	Multi-use path
BP-1283	Grandview Blvd.	Madison Ave. to Main St. - Madison	Multi-use path
BP-1284	Highland Colony Pkwy.	Main St. – Madison to Madison City Limits	Multi-use path
BP-1285	Highwoods Blvd.	Rice Rd. to Woodberry Place	Bike route
BP-1286	Hoy Rd.	W. Bradford Place to Madison City Limits	Multi-use path
BP-1287	Hwy. 463	Crawford St. to Main St. - Madison	Multi-use path
BP-1288	Hwy. 463	Old Mannsdale Rd. to Madison Middle School	Multi-use path
BP-1289	Kingsbridge Rd.	Wrights Mill Dr. to Wrights Mill Dr.	Bike route
BP-1290	Lake Castle Rd.	Madison City Limits to Berry Ln.	Multi-use path
BP-1291	Liberty Park Connector	Crawford St. to Grandview Blvd.	Multi-use path
BP-1292	Madison Ave.	Dominican Dr. to Hwy. 51	Multi-use path
BP-1293	Madison Middle School Path	Carmichael Blvd. to Madison Middle School	Multi-use path
BP-1294	Main St. - Madison	Hwy. 463 to Old Canton Rd.	Multi-use path
BP-1295	Main St. - Madison	Galleria Pkwy. to Bozeman Rd.	Multi-use path
BP-1296	North Bay Dr.	Hoy Rd. to St. Augustine Dr.	Bike lane

Project ID	Roadway	Limits	Project Description
BP-1297	North Old Canton Rd.	Hoy Rd. to Green Oak Lane	Multi-use path
BP-1298	Old Mannsdale Rd.	Bozeman Rd. to Hwy. 463	Multi-use path
BP-1299	Railroad Path	Main St. - Madison to Olympic Way	Multi-use path
BP-1300	Reunion Pkwy.	Bozeman Rd. to Hwy. 463	Multi-use path
BP-1301	Rice Rd.	Eastbrooke Cir. to St. Augustine Dr.	Multi-use path
BP-1302	Rice Rd.	Wellington Way to North Ridge Blvd.	Multi-use path
BP-1303	Ridgecrest Dr.	Old Canton Rd. to Ridgeland City Limits	Multi-use path
BP-1304	River Bed Path	Calumet Dr. to Tidewater Lane	Multi-use path
BP-1305	Rockwood Dr.	McClellan Dr. to Cobblestone Dr.	Multi-use path
BP-1306	St. Augustine Dr.	Church St. to Madison City Limits	Multi-use path
BP-1307	Sycamore Ln.	Woodberry Place to Proposed River Bed Path	Bike route
BP-1308	Woodberry Place	Highwoods Blvd. to Sycamore Ln.	Bike route
BP-1309	Woods Crossing Blvd.	Rice Rd. to Proposed River Bed Path	Bike route
BP-1310	Wrights Mill Dr.	Rice Rd. to Kingsbridge Rd.	Bike route
BP-1311	Bozeman Rd.	Gluckstadt City Limits to Madison City Limits	Multi-use path
BP-1312	Catlett Rd.	Hwy. 22 to Gluckstadt City Limits	Multi-use path
BP-1313	Lake Castle Rd.	N. Livingston Rd. to Richardson Rd.	Bike route
BP-1314	N. Livingston Rd.	Madison City Limits to Ridgeland City Limits	Bike route
BP-1315	Parkway East	Gluckstadt City Limits to Galleria Pkwy.	Bike route
BP-1316	Reunion Pkwy Phase 2	Bozeman Rd. to Parkway East	Multi-use path
BP-1317	Robinson Springs Rd.	Pocahontas Rd. to Hwy. 463	Bike route
BP-1318	Stout Rd.	Catlett Rd. to Gluckstadt City Limits	Bike route
BP-1319	Stribling Rd. Ext.	Catlett Rd. to Gluckstadt City Limits	Multi-use path
BP-1320	Virlilia Rd.	Hwy. 22 to Livingston-Vernon Rd.	Bike route
BP-1321	W. County Line Rd.	Highland Colony Pkwy. to Hwy. 51	Multi-use path

Project ID	Roadway	Limits	Project Description
BP-1322	Yandell Rd.	Gluckstadt City Limits to Hwy. 43	Multi-use path
BP-1323	Arlington Cir.	Woodrun Dr. to Dead End	Bike route
BP-1324	Brashear Creek Connector	Arlington Cir. to Brashear Creek Run	Multi-use path
BP-1325	Brashear Creek Run	Old Canton Rd. to McClellan Dr.	Multi-use path
BP-1326	Entergy Line Route	Wheatley St. to Hwy. 51	Multi-use path
BP-1327	Harbor Dr.	Spillway Rd. to Rice Rd.	Multi-use path
BP-1328	Highland Colony Pkwy.	Southtowne Ave. to Ridgeland City Limits	Multi-use path
BP-1329	Highland Colony Pkwy.	Ridgeland City Limits to Old Agency Rd.	Multi-use path
BP-1330	Jessamine Dr.	E. Jackson St. to Woodrun Dr.	Multi-use path
BP-1331	Lake Harbor Dr. Conector	Existing Path to Existing Path	Multi-use path
BP-1332	Lansdowne Ln.	William Blvd. to Lincolnshire Blvd.	Bike lane
BP-1333	McClellan Dr.	Existing Path to Madison City Limits	Multi-use path
BP-1334	Northpark Dr.	Pear Orchard Rd. to Lake Harbor Dr.	Bike route
BP-1335	Northpark Mall Connections	Multiple to Multiple	Multi-use path
BP-1336	O B Curtiss Dr. Connector	Lincolnshire Blvd. to O B Curtiss Dr.	Multi-use path
BP-1337	Old Agency Rd.	Dinsmoor Entrance to Highland Colony Pkwy.	Multi-use path
BP-1338	Old Canton Rd. Connector	School Creek Run to William Blvd.	Multi-use path
BP-1339	Pear Orchard Rd.	Town Center Blvd. to Northpark Dr.	Multi-use path
BP-1340	Purple Creek Run	S. Wheatley St. to Lake Harbor Dr.	Multi-use path
BP-1341	Railroad Route	Lake Harbor Dr. Ext. to Colony Park Blvd.	Multi-use path
BP-1342	Rice Rd.	Trailhead to Craft Center Parking Lot	Multi-use path
BP-1343	Richardson Rd.	Steed Rd. to Old Agency Rd.	Bike route
BP-1344	Ridgewood Rd.	E. Centre St. to Hwy. 51	Bike lane
BP-1345	School Creek Run	Lake Harbour Dr. to Old Canton Rd.	Multi-use path
BP-1346	Spillway Rd.	Old Canton Rd. to Breakers Ln.	Multi-use path

Project ID	Roadway	Limits	Project Description
BP-1347	Steed Rd.	Red Eagle Cir. to the Existing Path	Multi-use path
BP-1348	Steed Rd. Ext.	Sunnybrook Rd. to N. Wheatley St.	Multi-use path
BP-1349	Sunnybrook Rd.	Steed Rd. to Proposed Colony Park Blvd.	Multi-use path
BP-1350	W. Ridgeland Ave.	Sunnybrook Rd. to N. Wheatley St.	Multi-use path
BP-1351	William Blvd.	Hawthorn Green Dr. to Lansdowne Ln.	Bike lane
BP-1352	Woodrun Dr.	Jessamine Dr. to Arlington Cir.	Bike route
BP-1353	Burnham Rd.	Old Brandon Rd. to Brandon City Limits	Multi-use path
BP-1354	Busick Pond Rd.	Hwy. 18 to Overby St.	Multi-use path
BP-1355	Busick Wells Rd.	E. Jasper St. to Hastings Ave.	Multi-use path
BP-1356	Crossgates Dr.	Crossgates Blvd. to Woodgate Dr.	Bike lane
BP-1357	Crossgates Greenway	Eastgate Dr. to Luckney Rd.	Multi-use path
BP-1358	Crossgates to Luckney Connector	Hwy. 80/Eastgate Dr. to Luckney Rd.	Multi-use path
BP-1359	Dining St.	Overby St. to S. College St.	Multi-use path
BP-1360	Downtown Connector	Jasper St. to Dining St.	Multi-use path
BP-1361	East Brandon Bypass	Hwy. 18 to Hwy. 80	Multi-use path
BP-1362	East Mark Dr./Old US 80/College St.	Marquette Rd. to Tamberline St.	Multi-use path
BP-1363	Eastgate Dr.	Hwy. 80 to Thorngate Dr.	Bike lane
BP-1364	Gas Easement	Shiloh Rd. to East Brandon Bypass	Multi-use path
BP-1365	Gas Easement - Southeast Brandon	Hwy. 18 to Louis Wilson Dr.	Multi-use path
BP-1366	Gateway Dr.	Hwy. 80 to Woodgate Dr.	Bike lane
BP-1367	Grants Ferry Pkwy.	Cornerstone Dr. to Hwy. 80	Multi-use path
BP-1368	Hwy. 468	W. Jasper St. to Brandon City Limits	Multi-use path
BP-1369	Hwy. 80	South Trickhambridge Rd. to East Brandon Bypass	Multi-use path
BP-1370	Hwy. 80	Woodgate Dr. to Crossgates Blvd.	Multi-use path

Project ID	Roadway	Limits	Project Description
BP-1371	Jasper St.	Overby St. to Pleasant St.	Bike lane
BP-1372	Jasper St./ Shiloh Rd. Connector	Pleasant St. to Shiloh Rd.	Multi-use path
BP-1373	Kennedy Farm Pkwy.	Louis Wilson Dr. to Shiloh Rd.	Multi-use path
BP-1374	Lakeland Dr.	Old Hwy. 471 to North St.	Multi-use path
BP-1375	Louis Wilson Dr.	E. Jasper St. to Hwy., 18	Multi-use path
BP-1376	Luckney Rd.	Hwy. 471 to Brandon City Limits	Bike lane
BP-1377	Marquette Rd.	Existing Path to Hwy. 80	Bike lane
BP-1378	Mary Ann Dr.	Louis Wilson Dr. to Dining St.	Bike lane
BP-1379	N. Brandon Transmission Line	Grant's Ferry Pkwy to City Limit	Multi-use path
BP-1380	N. Brandon Transmission Line	Hwy. 471 to City Limit	Multi-use path
BP-1381	North St.	Tamberline St. to East Value Ext.	Multi-use path
BP-1382	Old 471 to Downtown	Hwy. 471 to Lakeland Dr.	Multi-use path
BP-1383	Overby St.	School Connector to Busick Pond Rd.	Multi-use path
BP-1384	Paige McDill Rd.	Hwy 80 to Trickhambridge Rd.	Multi-use path
BP-1385	Proposed Road Connector Path	Hwy. 18 to Brandon City Limits	Multi-use path
BP-1386	Rankin Trails Connector/ Maxey Dr./Municipal Dr.	Marquette Rd. to Brandon Park	Multi-use path
BP-1387	Shiloh Park North	Kennedy Farm Pkwy. to Shiloh Park	Multi-use path
BP-1388	Shiloh Park South	Kennedy Farm Pkwy. to Shiloh Park	Multi-use path
BP-1389	Shiloh Rd.	Shiloh Park to Gas Easement - East Brandon	Bike route
BP-1390	Stonebridge Blvd.	Hwy. 18 to Stonebridge Elementary School	Multi-use path
BP-1391	Stonebridge Elementary School Rd.	Stonebridge Blvd. to Stonebridge Elementary School	Multi-use path
BP-1392	Stonegate Dr.	Hwy. 80 to Crossgates Dr.	Bike lane
BP-1393	Tamberline St.	College St. to North St.	Multi-use path
BP-1394	Thorngate Dr.	Eastgate Dr. to Woodgate Dr.	Bike lane

Project ID	Roadway	Limits	Project Description
BP-1395	Trickhambridge Rd.	Hwy. 80 to City Limit	Multi-use path
BP-1396	Utility Easement	Hwy. 18 to Railroad	Multi-use path
BP-1397	Value Rd. Connector	Hwy. 80 to Proposed Grants Ferry Rd.	Bike lane
BP-1398	Woodgate Dr.	Gateway Dr. to Summit Ridge Dr.	Bike lane
BP-1399	Butler Creek Connector	Lexington Dr. to Williams Rd.	Multi-use path
BP-1400	Dogwood Hill Dr. Connector	Dogwood Hill Dr. to Hemphill Park Connector	Multi-use path
BP-1401	Hemphill Park Connector	S. Church St. to White Rd.	Multi-use path
BP-1402	Hwy. 469	Lexington Dr. to Williams Rd.	Multi-use path
BP-1403	Main St. - Florence	Shadow Creek Dr. to Hwy. 469	Multi-use path
BP-1404	N. Church St.	Middle Ridge Dr. to Main St. - Florence	Multi-use path
BP-1405	S. Church St.	Eagle Post Rd. to Hemphill Park	Multi-use path
BP-1406	White Rd.	Stonebrook Dr. to Hwy. 469	Multi-use path
BP-1407	Williams Rd.	Hwy. 469 to Eagle Post Rd.	Multi-use path
BP-1408	Community Bank Way	Watertone Dr. to East Metro Pkwy.	Multi-use path
BP-1409	Cooper Rd.	Hwy. 25 to Hog Creek	Multi-use path
BP-1410	E. Pineview Dr. Connector	Hugh Ward Pkwy. to Grants Ferry Rd.	Multi-use path
BP-1411	Flowood Dr.	Old Fannin Rd. to Winner's Circle	Multi-use path
BP-1412	Grants Ferry Rd.	Manship Rd. to Hwy. 25	Multi-use path
BP-1413	Hog Creek Path	Cooper Rd. to Melody Ln.	Multi-use path
BP-1414	Hugh Ward Pkwy. - East Side	Manship Rd. to Pineview Dr.	Multi-use path
BP-1415	Hugh Ward Pkwy. - West Side	Manship Rd. to Hwy. 25	Multi-use path
BP-1416	Hwy. 25	Vine Dr. to Lakeland Heights Blvd.	Multi-use path
BP-1417	Hwy. 25	Wirtz Rd. to Cooper Rd.	Multi-use path
BP-1418	Hwy. 25	Wirtz Rd. to Hugh Ward Pkwy.	Multi-use path
BP-1419	Lakeland Commons Connector	Flowood Dr. to Lakeland Dr.	Bike lane

Project ID	Roadway	Limits	Project Description
BP-1420	Lakeland Dr.	Old Fannin Rd. to Liberty Rd.	Multi-use path
BP-1421	Lakeland Heights Blvd.	Hwy. 25 to Wirtz Rd.	Multi-use path
BP-1422	Liberty Rd.	Existing Liberty Rd. Path to Lakeland Dr.	Multi-use path
BP-1423	Luckney Rd.	Cooper Rd. to Leslie Dr.	Multi-use path
BP-1424	Manship Rd.	Audobon Ridge Pl. to Grants Ferry Rd.	Multi-use path
BP-1425	Manship Rd.	Wirtz Rd. to Hwy. 25	Multi-use path
BP-1426	Marshall Rd.	Hwy. 471 to Palace Crossing	Multi-use path
BP-1427	Melody Ln.	Hog Creek Path to Watertone Dr.	Multi-use path
BP-1428	Old Fannin Rd.	Flowood Dr. to Lakeland Dr.	Multi-use path
BP-1429	Old Fannin Rd.	N. of Winner's Circle to Existing Bike lanes	Multi-use path
BP-1430	Proposed Path	Liberty Rd. to To be determined	Multi-use path
BP-1431	Vine Dr.	Hwy. 471 to Hwy. 25	Multi-use path
BP-1432	Watertone Dr.	Melody Ln. to Community Bank Way	Multi-use path
BP-1433	Wirtz Rd.	Hwy. 25 to Flowood City Limits	Multi-use path
BP-1434	Wirtz Rd.	Manship Rd. to Hwy. 25	Multi-use path
BP-1435	Center City Dr.	Pearl City Park to Center City Park	Multi-use path
BP-1436	Country Place Pkwy.	Pirates Cove Rd. to Airport Rd.	Multi-use path
BP-1437	Hwy. 80	Airport Rd. to Mary Ann Dr.	Lane/Shoulder
BP-1438	Mary Ann Dr.	Hwy. 80 to Old Brandon Rd.	Bike lane
BP-1439	Old Brandon Rd.	Mary Ann Dr. to Pemberton Dr.	Bike lane
BP-1440	Old Brandon Rd.	Pemberton Dr. to Pearson Rd.	Multi-use path
BP-1441	Old Country Club Rd.	Robert Michael Dr. to S. Bierdeman Rd.	Bike lane
BP-1442	Pearl City Park Connector 1	Mary Ann Dr. to Center City Dr.	Multi-use path
BP-1443	Pearl City Park Connector 2	Center City Dr. to Pearl Upper Elementary	Multi-use path
BP-1444	Pearl City Park Connector 3	Center City Dr. to Pirates Cove Rd.	Multi-use path

Project ID	Roadway	Limits	Project Description
BP-1445	Pearson Rd.	Old Brandon Rd. to Hwy. 80	Multi-use path
BP-1446	Pemberton Dr.	Old Brandon Rd. to Robert Michael Dr.	Bike lane
BP-1447	Pirates Cove Rd.	Hwy. 80 to Pearl High School	Bike lane
BP-1448	Robert Michael Dr.	Pemberton Dr. to Old Country Club Rd.	Bike lane
BP-1449	S. Bierdeman Rd.	Old Country Club Rd. to Old Brandon Rd.	Bike lane
BP-1450	West Rankin Pkwy.	Hwy. 80 to Hwy. 468	Lane/Shoulder
BP-1451	Brooks St.	Lake Rd. to Grimes St.	Bike route
BP-1452	Grimes St.	Hwy. 43 to Warren Ave.	Bike route
BP-1453	Lake Rd.	Yogi Bear Park to Brooks St.	Bike route
BP-1454	Park Connector	Grimes St. to City Park	Bike route
BP-1455	Fannin Landing Cir.	Hwy. 471 to Arbor Landing	Bike lane
BP-1456	Grants Ferry Rd.	Spillway Rd. to Manship Rd.	Bike lane
BP-1457	Hwy. 471	Northshore Pkwy. to Fannin Landing Cir.	Bike lane
BP-1458	Brandon Ave.	Industrial Dr. to Old Hwy. 49	Multi-use path
BP-1459	Cleary Rd.	Industrial Dr. to Old Hwy. 49	Bike route
BP-1460	Harper St.	Old Hwy. 49 to Richland Community Center	Multi-use path
BP-1461	Industrial Dr.	Scarborough St. to Cleary Rd.	Bike route
BP-1462	Lake Connector Path	Harper St. to Roland Dr.	Multi-use path
BP-1463	Lowe Cir./Richland Cir.	Southwind Dr. to Parkview Dr.	Multi-use path
BP-1464	Monterey Rd.	City Limits to North of Hwy. 49	Multi-use path
BP-1465	Old Hwy. 49	North of Allendale Dr. to Scarborough St.	Bike route
BP-1466	Old Hwy. 49	Cleary Rd. to Richland City Limits	Bike lane
BP-1467	Old Hwy. 49	Brandon Ave. to North of Cleary Rd.	Multi-use path
BP-1468	Parkview Dr.	Richland Cir. to Dead End	Bike lane
BP-1469	Railroad Path	Harper St. to Scarborough St.	Multi-use path

Project ID	Roadway	Limits	Project Description
BP-1470	Richland High School Connector	Richland Eastside Park to Monterey Rd.	Multi-use path
BP-1471	Richland Westside Park Connector	Richland Westside Park to Plainview Cir.	Multi-use path
BP-1472	Scarborough St.	Old Hwy. 49 to Industrial Dr.	Bike route
BP-1473	Scarborough St.	Industrial Dr. to Richland High School	Multi-use path
BP-1474	Sloan Dr.	Old Hwy. 49 to Richland City Limits	Multi-use path
BP-1475	Southwind Dr.	Harper St. to Lowe Cir.	Bike route
BP-1476	Spell Dr.	Old Hwy. 49 to Elementary School	Multi-use path
BP-1477	Town Square Dr.	Old Hwy. 49 to Scarborough St.	Multi-use path
BP-1478	Westside Dr.	Brandon Ave. to Richland Westside Park	Multi-use path
BP-1479	Hwy. 18	Raymond City Limits to Lynch St.	Shoulder/Route
BP-1480	Hwy. 22	Pocahontas Rd. to 1st St.	Bike route
BP-1481	Hwy. 22	SW 4th St. to Flora City Limits West	Bike route
BP-1482	Hwy. 471	Hwy. 80 to Hwy. 25	Lane/Shoulder
BP-1483	Hwy. 18	I-20 to Louis Wilson Dr.	Lane/Shoulder
BP-1484	Hwy. 43	Shiloh Rd. to Lake Rd.	Bike route
BP-1485	Hwy. 469	Eagle Post Rd. to Hemphill City Park	Bike lane
BP-1486	Hwy. 471	Spillway Rd. to Hwy. 80	Lane/Shoulder
BP-1487	Natchez Trace Pkwy.	Livingston Rd. to Osburn Stand	Multi-use path
BP-1488	Natchez Trace Pkwy.	Osburn Stand to Arrow Dr.	Multi-use path
BP-1489	Natchez Trace Pkwy.	Arrow Dr. to Clinton Wayside	Multi-use path

7.0 Public Transit

This section provides an overview of recommendations to meet the different challenges related to transit within the planning area as identified in *Technical Report #2: State of Current Systems*.

7.1 Transit System Overview and Recommendations

As identified in the peer review analysis, located in *Technical Report #2: State of Current Systems*, JTRAN faces multiple challenges relating to the service area, transit usage, and overall system efficiency. Key takeaways identified from the analysis include:

- JTRAN covers a large service area with a low population density, making it harder to provide cost-effective service
- Fewer boardings and lower fare revenue increase reliance on subsidies
- Transit service is more cost-efficient by mile, but less efficient by boarding and hour

To address these, recommendations were created that aim to increase ridership, operational efficiency, revenue, and stakeholder collaboration. Additional considerations come from the costs associated with transportation in the region and aim to increase the regional affordability through a focus on increasing public transit availability and use.

Improving Ridership

Ridership levels were identified as being lower than those from peer transit providers. While low ridership is itself a concern, it can also exacerbate other issues such as reducing operating efficiency, lessening revenues from fewer tickets sold, and reducing the utilization of transit assets and infrastructure. This can lead to the transit system being more expensive to operate and maintain coupled with a decrease in revenues. As low ridership can effect other transit needs, these recommendations can be considered alongside other improvement categories.

Recommendations to Improve Ridership Levels

- Partner with businesses to provide employee passes
- Connect buses to rideshares or bike services
- Make stops and buses more accessible
- Add shelters, lights, and seating at bus stops

Optimizing Operating Efficiency

Similar to increasing ridership, optimizing operations can be addressed alongside other recommendations as improving one metric will impact other identified needs.

Recommendations to Increasing Operational Efficiency

- On-demand service with smaller vehicles in low-traffic areas
- Use software to reduce delays
- Focus buses on busy routes
- Train drivers on fuel-efficient driving
- Track ridership, costs, and revenue to measure program success

Increasing Revenue

Strategies to increase revenues can be implemented alongside those to reduce costs to further address financial needs or budget requirements. These recommendations aim to increase revenues through a set of strategies that go beyond increasing ridership, and, consequently, the volume of traditional transit passes sold.

Recommendations to Increase Revenue

- Offer premium or express routes at higher fares
- Allow ads on buses and stops
- Use mobile payments and fare cards
- Add ticket validators and random checks

Stakeholder Collaboration

Meaningful stakeholder collaboration informs how recommendations are implemented and prioritized. Because of this, stakeholders should be identified and coordinated with regarding implementation efforts that apply to them. Public feedback should also be regularly solicited and reviewed to identify additional needs, monitor the results of strategy implementation, and find new services or routes that may better serve the public.

Ridership and Stakeholder Feedback

- Use surveys to find areas for improvement
- Test new routes or services before full launch

Additional Considerations

In addition to addressing the needs of the transit system itself, it is important to also consider the transportation needs of residents within the region. The housing and transportation affordability analysis, located in *Technical Report #2: State of Current*

Systems, found that affordability in the region is negatively impacted by a high reliance on personal vehicles for transportation. As such, it is recommended for the MPO to employ strategies to decrease this dependence.

The primary means to reduce personal vehicle dependence is through increasing the safety and accessibility of public transit networks. This would address regional affordability by offering a reliable mode of transportation to a greater service area and additional riders.

As users of public transit often also use bicyclist or pedestrian infrastructure, all road users should be kept in mind when planning transit projects. Additionally, public transit, pedestrian, and bicyclist considerations can be integrated into larger projects, allowing for some cost reduction and consolidation in the different transportation project phases.

Land use also plays a role in affordability and transit use, as supporting compact, multimodal neighborhoods can help increase the efficiency of future public transit services and reduce the overall cost of transportation on residents. These initiatives, when combined, provide a multi-faceted strategy to address the affordability of transportation on households within the MPO region.

7.2 Transit Service Gaps

While there is some service availability provided by other agencies in the MPO planning area, JTRAN does not provide fixed route transit service outside the City of Jackson's municipal boundary.

Due to this, expansion of service to the surrounding areas should be a priority to improve transit service options and availability to other potential users of the system. Additionally, the creation of a Regional Transit Authority, the use of microtransit, and public-private partnerships, such as with transportation network companies, can help to provide additional connectivity to JTRAN and eliminate gaps in service.

8.0 Multimodal Needs

This chapter focuses on the existing supply of emerging modes, while discussing their future application or transportation modes that will complement them. The ability of emerging modes to support the region's transportation networks is dependent on its ability to integrate with them, including, but not limited to:

- fare payments and tolls
- pickup/drop-off locations at transit stops
- reliability
- ease of scheduling

Technical Report #2: State of Current Systems and *Technical Report #4: Needs Assessment* outline various conditions, characteristics, and needs of the region's multimodal transportation system, including the roadway network, bicycle and pedestrian facilities, freight networks, and public transportation networks. The subsections below borrow and build upon sections from the Technical Reports.

8.1 Prominent Emerging Modes

Transportation Network Companies

Transportation network companies, such as Uber and Lyft, are increasingly partnering with the public sector to test new ways to provide public, or subsidized, transportation. Although pilot programs are still evolving, many focus on providing trips in low-demand areas or times of day or for people with disabilities, which can be used to supplement, or connect to, transit services where existing service is unavailable. These companies generally operate with a fare structure comprised of base fares combined with per-minute and per-mile fees. Additional services within the region include Greyhound, FLIXBUS, and Amtrak.

Micromobility

Micromobility is a mode of transportation that includes lightweight vehicles, such as bicycles and scooters, that are available on-demand through self-service rental programs, and that use time or distance as a basis for their fare structure. Within the region, there is one micromobility option offered, a bikeshare program, in Ridgeland.

8.2 Impact of Emerging Modes on Infrastructure

Roadway Facilities

The planning area consists of a large roadway network with moderate connectivity between the different towns and cities within the region. As this infrastructure has limited room within the urban core and limited funds to expand, it is greatly impacted by changes in the number of vehicles on the roadways.

The use of the emerging modes, particularly transportation network companies, has the ability to decrease the number of vehicles on the roadways, decrease congestion, maintain air quality, and improve travel reliability for roadway users. This, however, will require the coordination of pick ups, drop offs, and movement of vehicles on the roadway network between locations.

Additionallly, promoting the consideration of pick-up and drop-off locations during site development or redevelopment can reduce future safety hazards if rideshare vehicles are expected to back up onto the roadway near major destinations.

Bicycle and Pedestrian Facilities

The region boasts a connected network of bicycle and pedestrian facilities, with coverage and connectivity between the different towns and cities within the planning area. In addition to the existing network, there are several proposed facilities that would expand it. These facilities provide broad coverage and connectivity for bicyclists and pedestrians within the urban core, towns, and cities, however, they begin to decrease in the suburbs and are sparse in the rural areas.

As this infrastructure expands, micromobility options can be used to provide faster and more accessibile transportation options. It also has the potential to provide additional transit system access, as the convenience and speed of micromobility options may encourage residents to further reduce their dependence on personal vehicles and opt for traveling via a mix of bike or scooter and bus instead.

Public Transportation

Fixed-route public transportation in the region is provided by JTRAN and has been discussed in *Technical Report #2: State of Current Systems*. However, there is limited availability of transit service outside of the urban core and it often requires planned-out trip schedules through specialized providers. Part of the MTP includes a transit plan and recommendations for how the transit infrastructure can serve the region.

Growth of the transit system will also need to consider:

- How microtransit can integrate rural and urban trips together
- How transportation network companies can partner with existing service or complement it
- The impact of micromobility helping to provide non-motorized users greater opportunity to access the transit system