

MACATAWA AREA COORDINATING COUNCIL

2050



LONG
RANGE
TRANSPORTATION
PLAN

GUIDING THE HOLLAND/ZEELAND AREA INTO THE FUTURE



ADOPTED FEBRUARY 26, 2024

DISCLAIMER:



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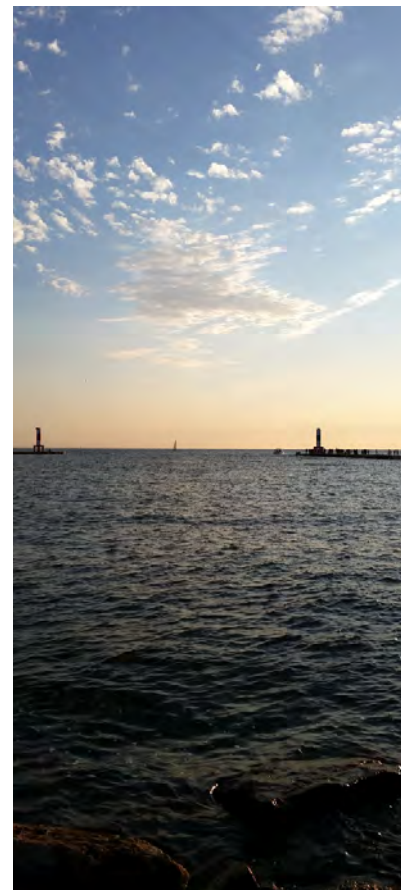
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EXECUTIVE SUMMARY

2050 LRTP

VISION OF THE 2050 LRTP

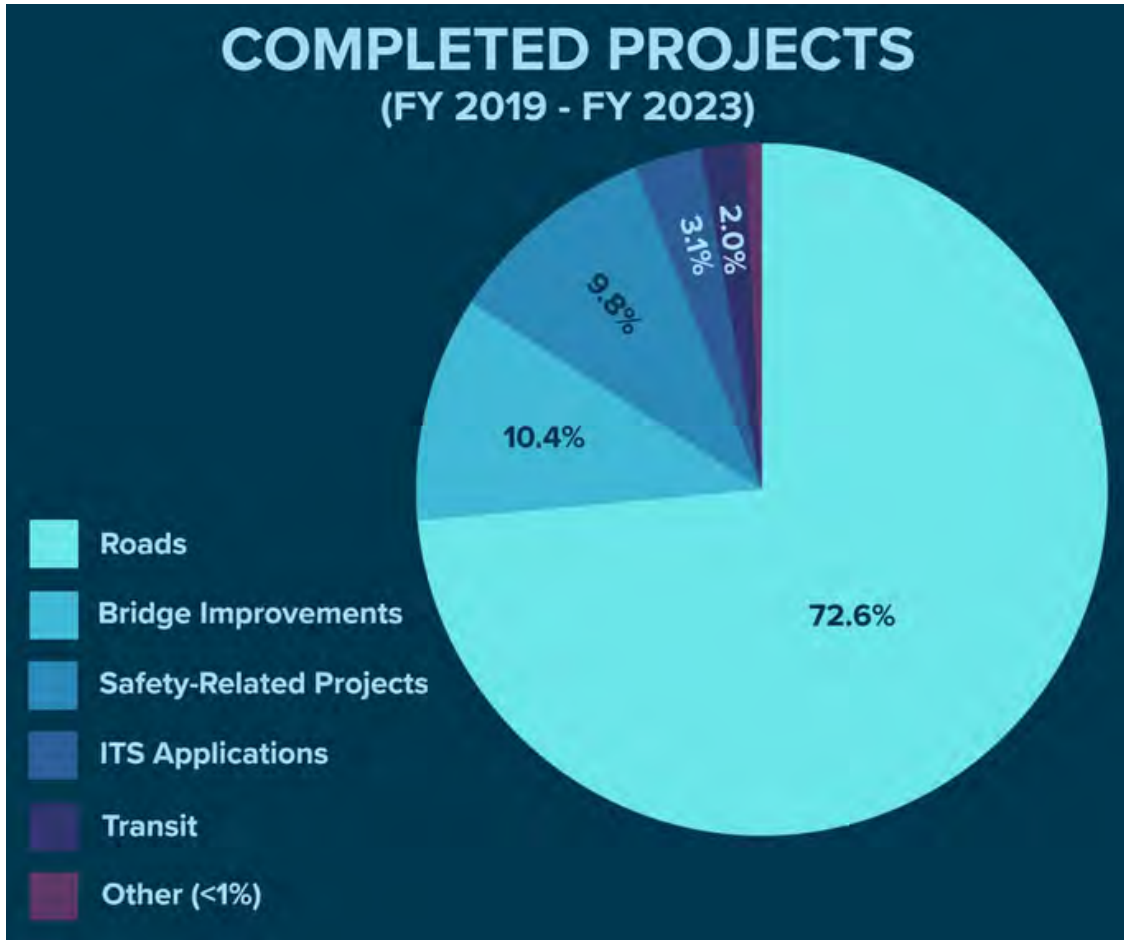
A transportation system that supports the region’s economy and environmental sustainability, and continues to offer safe and efficient travel opportunities for people who live within, work in, and visit the MACC Area.

As the metropolitan planning organization (MPO) for the greater Holland/Zeeland urbanized area, the Macatawa Area Coordinating Council (MACC) is responsible for the development of a multi-modal long-range transportation plan (LRTP). This plan attempts to ensure that proposed improvements to the transportation system enhance the movement of goods and people in a safe, efficient and economical manner. The plan must also be fiscally constrained, project-specific, meet the principles of environmental justice, and include the public throughout the planning process. This LRTP has a 25-year planning horizon and looks out to the year 2050. The 2050 LRTP establishes goals and objectives to develop a multimodal transportation network that provides efficient access to employment, retail, community services, and residential areas. A set of goals and objectives were identified in Chapter 3 to help guide the planning process. These goals and objectives are centered upon the following themes:

- Comprehensive Planning
- Economic and Financial Considerations
- Efficiency
- Mobility
- Land Use and Environmental Impacts
- Accessibility
- Safety and Security

Over the past five years, there have been over 60 transportation projects completed in the MACC Area. The total amount invested in these projects was around \$182 million and involved federal, state, and local funds. Chapter 4 and the following pie chart summarize the projects completed between 2019-2023 and their total investments. Projects included MDOT highway improvements (trunkline); resurfacing MACC Area roads; non-motorized pathways; transit projects; bridge repair; rail improvements; and other transportation projects such as collecting traffic counts, the Clean Air Action! program, and signal modernization.





PUBLIC INVOLVEMENT

As the planning for the 2050 Long Range Transportation Plan began in January of 2022, MACC staff looked at ways to improve public outreach and education. A database of local officials and transportation stakeholders was reviewed and updated. The consultation list of individuals, employers, and community organizations was expanded to invite a larger audience to participate in the transportation planning process.

Recognizing the importance of social media and online news sources, the MACC Public Participation Plan was updated (January 2023). While we continued to publish public notices and advertisements in the local newspapers, we also used social media sites such as Facebook, Twitter, and Instagram to reach new audiences. MACC staff then began a series of meetings to hear from freight shippers and providers of freight transportation services; local cities and townships; environmental organizations; cycling advocacy groups, and interested citizens. These meetings provided the opportunity to communicate regional planning goals and receive feedback on community priorities.

INVENTORY OF EXISTING TRANSPORTATION SYSTEM

The 2050 LRTP is multi-modal in its approach to the transportation system. The MACC area transportation system encompasses all modes of transportation with a general aviation airport, two Class A rail lines, a public transit system, an extensive non-motorized pathway network, and a commercial harbor serving business and recreational users. Chapter 5 provides a comprehensive look at roadways in the MACC Area, including recent pavement ratings of federal aid roadways. This chapter also covers the freight network, transit system, passenger rail service, and non-motorized facilities.

TRENDS AND PROJECTIONS

The MACC Area is one of the fastest-growing locations in Michigan. Over the next 30 years, the population within the cities of Holland and Zeeland, and also Laketown, Fillmore, Park, Holland, Zeeland, Port Sheldon, and Olive townships is expected to increase by 25.7%. Chapter 7 provides additional detail regarding the 2050 projections which were used during the planning process.

FINANCIAL RESOURCES ANALYSIS

The 2050 LRTP includes a financial analysis to ensure that planned commitments do not exceed available annual revenue for both highway and transit funding. The financial analysis looks at the following elements:

- Project Estimates
- Capital Investment Strategy
- Operational & Management Strategies
- Revenues: Public & Private reasonably expected from 2025-2050

Chapter 11 details various federal, state, and local projected revenues for the time frame covered by this LRTP.

Plan Evaluation of the 2050 LRTP must be evaluated to demonstrate that goals and objectives are met by the Plan and that requirements of the nation's transportation legislation, Infrastructure Investment and Jobs Act (IIJA) or Bipartisan Infrastructure Law (BIL), are being met. Chapter 12 details the steps of evaluating the LRTP and evaluates environmental mitigation, environmental justice, and air quality.

AIR QUALITY

The Clean Air Act of 1990 (as amended) and the National Ambient Air Quality Standards (NAAQS) establish air quality thresholds for the nation. The current standard for ground-level ozone is 70 parts per billion. The US Environmental Protection Agency (USEPA) determines the attainment of these standards for each county in the state. The MACC MPO is part of two conformity areas, Allegan County and the Grand Rapids conformity area consisting of Ottawa and Kent counties. Each conformity area has different requirements. For more information on this topic, please see Chapter 12.

CONSULTATION EFFORTS

The LRTP's capacity-enhancing projects were shared with federal, state and local entities responsible for economic growth and development, environmental protection, airport operations, freight movement, land use management, natural resources, conservation, and historic preservation. The goal of the effort is to eliminate or minimize conflicts with other agencies' plans that impact transportation. More details on this consultation process can be found in Chapter 14.

TRANSPORTATION PLANNING

The 2050 LRTP provides the basis for the MACC's ongoing transportation planning activities. It will be updated within the next four years and is also open to amendment as unforeseen situations arise. Projects contained in the 2050 LRTP will be reviewed for possible inclusion in the MACC's Transportation Improvement Program, a four-year program of transportation programs and projects within the MACC scheduled to receive federal funding.

Respectfully,



Jason Latham

Executive Director

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Chapter One unveils the MACC, established in the late 1980s for the Holland/Zeeland Area, overseeing a 212 square mile area with 15 members for comprehensive transportation planning.

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The 2050 LRTP outlines a comprehensive, multimodal network for efficient access. Aligned with federal guidance and local priorities, it emphasizes safety, economic impact, and sustainability. Collaboration with federal, state, and local partners ensures a robust, forward-looking plan.

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From 2019-2023, 183 transportation projects, totaling \$230M, enhanced the MACC Area. Rebuilding Michigan Program initiatives, like the I-196 and US-31 reconstructions, joined local road upgrades, rail improvements, safety enhancements, and transit advancements.

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Chapter 5 provides an intricate look at the MACC Area's transportation system, covering road classifications, pavement conditions, bridge ratings, traffic volumes, freight movements, and public transit details. This comprehensive analysis aids in understanding the existing infrastructure and travel options within the region.

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Chapter 6 identifies key corridors of concern, proposes improvements for each, and emphasizes the importance of monitoring traffic trends, safety, and future developments. It also addresses regional growth impacts, transit expansion, tourism effects, and strategies for safety-conscious planning and emergency preparedness.

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The MACC area's 2050 projections show a 25.7% population surge, diverse demographics across cities and townships, and evolving commute patterns, including increased remote work and varied commute times, which will impact transportation dynamics.

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The MACC's Travel Demand Model forecasts trips, modes, and routes based on household data, traffic zones, and road networks. It aids in planning road improvements, assessing congestion, and evaluating land use impacts.

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The MACC implements performance-based planning, aligning with federal rules focusing on safety, pavement/bridge conditions, system reliability, and transit goals. The framework guides the process, ensuring data-driven decisions for transportation improvement programs.

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Future Projects _____100

MACC's plan includes 48 road projects (\$37.8M), 43 transit initiatives (\$8.7M), and non-motorized improvements (\$892K fed, \$908K local). Future aims involve commuter services and enhancing the Macatawa River Greenway Trail for safer, greener connections.

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Chapter 11 of MACC's LRTP provides a comprehensive view of transportation funding. It details federal, state, and local funding sources, cooperative revenue estimations, and innovative finance strategies. It emphasizes financial constraint, ensuring expenses align with available revenue, demonstrating prudence in financial planning.

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The MACC's LRTP is a comprehensive plan, meeting goals through efficient, safe, and accessible transportation strategies, with no adverse impacts on minority or low-income communities.

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The MACC's LRTP involved the public through updates, an online survey, MAX Transit interactions, and a successful open house. Extensive advertising, including newsletters and local media, maximized outreach.

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The MACC started planning for the 2050 Long Range Transportation Plan in January 2022, focusing on better outreach. They updated their stakeholder database, used social media, and held meetings with various groups for feedback. Efforts were made to engage new participants, including publishing materials in Spanish.



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CHAPTER ONE

Introduction

WHAT IS THE MACC?

OUR MISSION:

“TO ENCOURAGE COOPERATION AMONG NEIGHBORING UNITS OF GOVERNMENT ON AREA-WIDE ISSUES.”



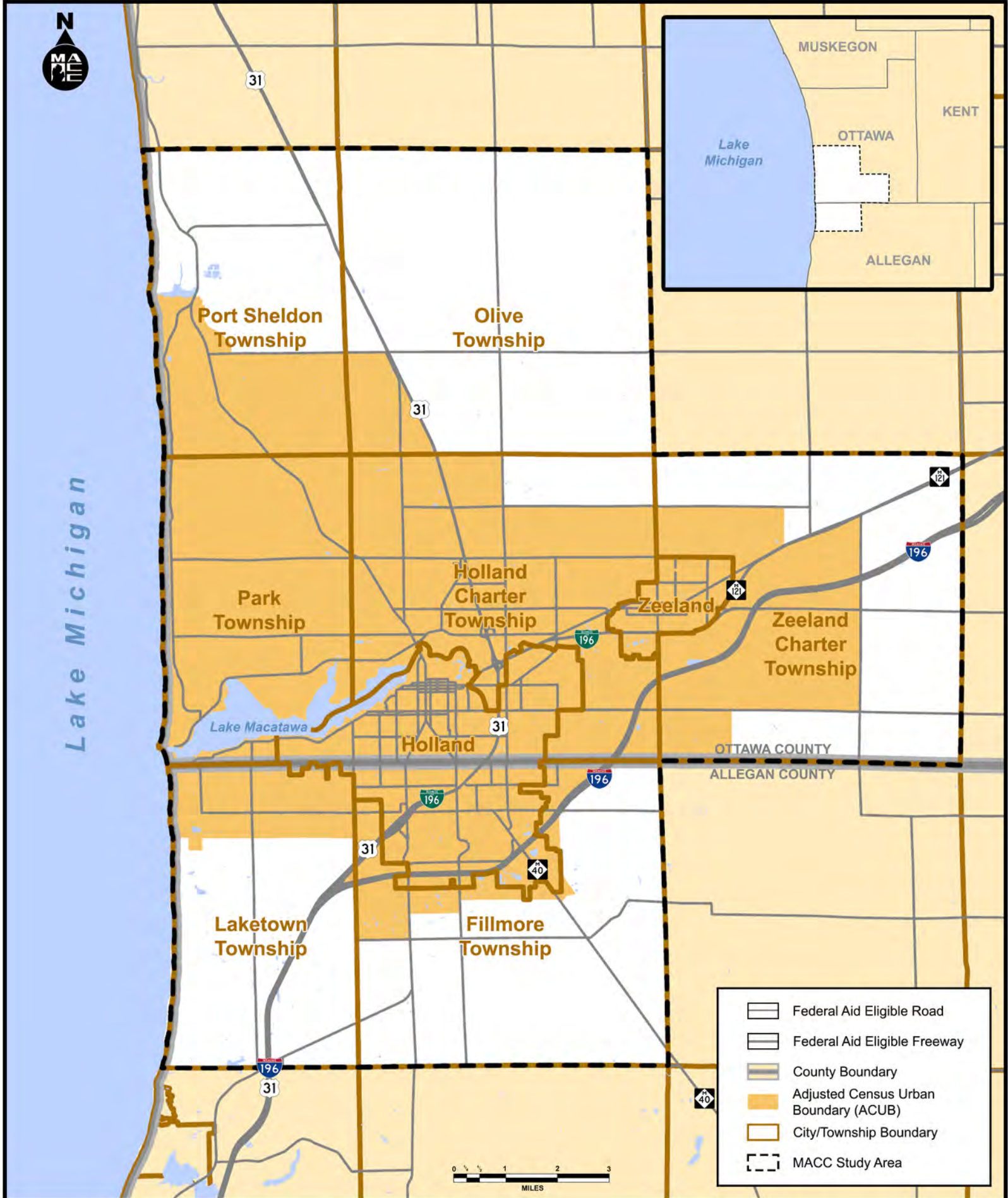
The Macatawa Area Coordinating Council (MACC) is a metropolitan planning organization (MPO). The MACC was formed out of recognition of the need for greater cooperation and partnership among local units of government in the Holland/Zeeland area in the late-1980s.

As a result of the 1990 Census, the Holland/Zeeland area was designated as an urbanized area. Federal law requires that metropolitan areas with an urbanized area population of greater than 50,000 establish an MPO.

MACC PLANNING AREA AND MEMBERSHIP

The current Metropolitan Planning Area (MPA) is 212 square miles and includes fifteen members:

The Allegan County Board of Commissioners, the Allegan County Road Commission, Fillmore Township, the City of Holland, Holland Charter Township, Laketown Township, the Macatawa Area Express Transportation Authority, the Michigan Department of Transportation, Olive Township, the Ottawa County Board of Commissioners, the Ottawa County Road Commission, Park Township, Port Sheldon Township, the City of Zeeland, and Zeeland Charter Township.



MACC Planning Area

Figure 1.1

WHAT DOES AN MPO DO?

An MPO ensures that the metropolitan planning area has a continuing, cooperative, and comprehensive transportation planning process. The MACC was officially designated as the MPO for the Holland/Zeeland area in 1993. The MACC's planning process covers the area within its metropolitan planning area.

Beyond transportation, the MACC also addresses significant area-wide issues including water and air quality, census coordination, brownfield sites, crime prevention, service delivery, and helping to coordinate emergency response operations.

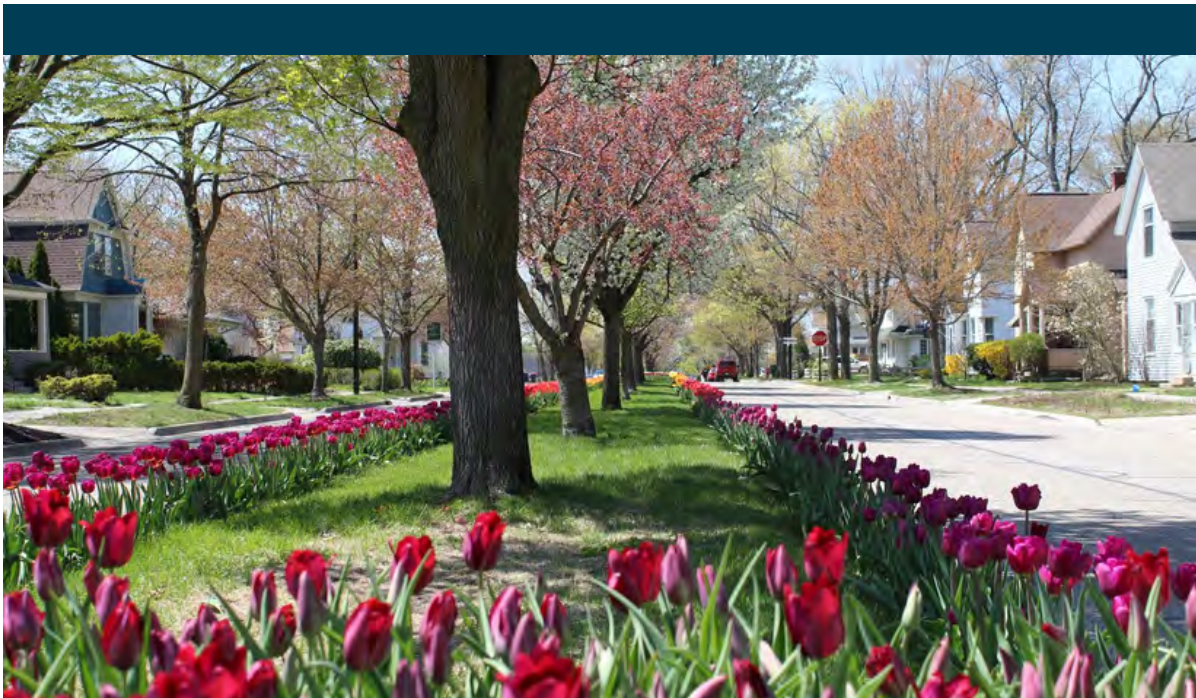
CORE FUNCTIONS OF THE MPO

- **ESTABLISH A REGIONAL FOCUS:** Form a fair and impartial setting for regional decision making
- **EVALUATE ALTERNATIVES:** Identify transportation alternatives, scaled to the size and nature of the region's transportation issues, and to the realistically available options
- **MAINTAIN A LONG-RANGE TRANSPORTATION PLAN (LRTP):** Develop and update a fiscally constrained plan for a planning horizon of at least 20 years that fosters mobility and access for people and goods, efficient system performance and preservation, and quality of life.
- **DEVELOP A TRANSPORTATION IMPROVEMENT PROGRAM (TIP):** Create a four-year program based on the LRTP containing projects and programs designed to serve the area's goals with financial, regulatory, and operation, and maintenance tools.
- **INVOLVE THE PUBLIC:** Include the general public and all the significantly affected sub-groups in the planning events throughout the year.

WHAT IS THE LONG-RANGE TRANSPORTATION PLAN?

The federal government requires the MACC to complete a Long-Range Transportation Plan (LRTP) every four years to receive federal funds. To remain compliant, an LRTP must maintain at least a 20-year planning horizon. The plan must be multimodal and should include, at a minimum, highway and transit infrastructure improvements. The 2050 LRTP was prepared as a regional guide for continued investment in each of the modes of transportation that currently serve visitors, residents, and employers in the MACC Area: roadways, public transit, and private transportation (charter bus and taxi services), non-motorized (bicycle and pedestrian facilities), passenger rail service, and passenger air service. The 2050 LRTP also summarizes freight movement in West Michigan and recognizes the current and future needs of trucking, freight railroads, waterways, and air cargo. The plan includes an inventory of existing and proposed transportation facilities and identifies those serving national and regional transportation operations over the 26-year horizon of the plan.

The 2050 LRTP establishes goals and objectives to develop a multimodal transportation network that provides efficient access to employment, retail, community services, and residential areas while minimizing environmental impacts and preserving investments to the existing transportation system. The LRTP also includes a set of measures to evaluate whether goals are being met and will track progress over time.



THE LRTP PLANNING PROCESS

The 2050 LRTP focuses upon ten federal planning factors that are reflective of the transportation legislation – Infrastructure Investment and Jobs Act (IIJA), which builds off of the previous legislation called Fixing America’s Surface Transportation (FAST) Act. These planning factors were used to create goals and objectives for the 2050 Long Range Transportation Plan and create a performance-based approach to review proposed projects to both evaluate the plan and continue monitoring the performance of the transportation system.

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
2. Increase the safety of the transportation system for motorized and non-motorized users.
3. Increase the security of the transportation system for motorized and non-motorized users.
4. Increase the accessibility and mobility options available to people and for freight
5. Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.
7. Promote efficient system management and operation.
8. Emphasize the preservation of the existing transportation system.
9. Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.
10. Enhance travel and tourism.

PUBLIC AND STAKEHOLDER INVOLVEMENT

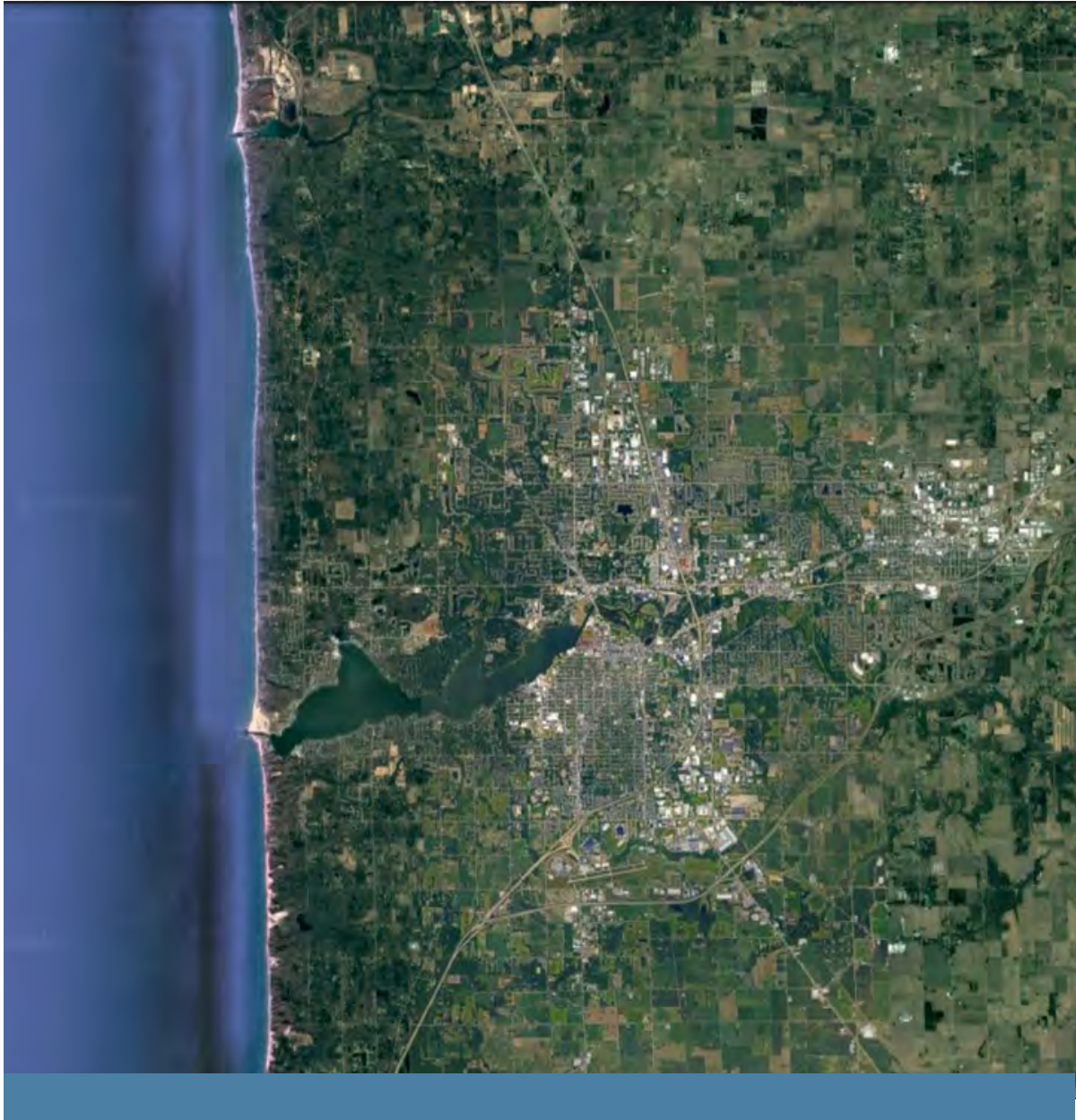
Planning for the 2050 Long Range Transportation Plan began in January of 2023, and MACC staff looked at ways to improve public outreach and education. A database of local officials and transportation stakeholders was reviewed and updated. We also expanded the consultation list of individuals, employers, and community organizations to invite a larger audience to participate in the transportation planning process.

Recognizing the importance of social media and online news sources, the MACC Public Participation Plan (PPP) was updated in January of 2023. We used social media sites, such as Facebook, to reach new audiences. An online transportation survey was developed to encourage people to share their views. The MACC-sponsored Green Commute Week program also helped to educate people about the planning process and encouraged them to offer public input.



MACC staff then began a series of meetings to hear from freight shippers and providers of freight transportation services, environmental organizations, cycling advocacy groups, and interested citizens. These meetings provided the opportunity to communicate regional planning goals and receive feedback on community priorities.

In addition to these efforts to increase public and stakeholder involvement, we emphasized reaching individuals and groups who were unaware of the MACC or who did not recognize how they could be involved in the planning process. Public input surveys and notices were published in Spanish and were also distributed throughout the community. More information on public involvement can be found in Chapter 13.



CHAPTER TWO

Regional Overview

THE MACC REGION

Based on the 2020 United States Census, 127,925 people live within the 212 square-mile MACC planning area. This represents a population increase of 7.5% since 2010 and an increase of 50.3% since 1990. Settled by Dutch immigrants in the 1840s, the area today is home to people of many ethnic backgrounds, with 28.8% of area residents identified as minorities.

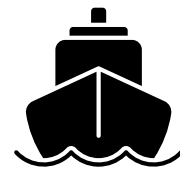
The economic base is also diverse with automotive, office furniture, food processing, warehousing, pharmaceuticals, car battery manufacturing, and agricultural sectors having a significant presence. Its location adjacent to 18.3 miles of Lake Michigan frontage and access to many area parks makes it a popular summer tourist destination which adds greatly to the local economy.

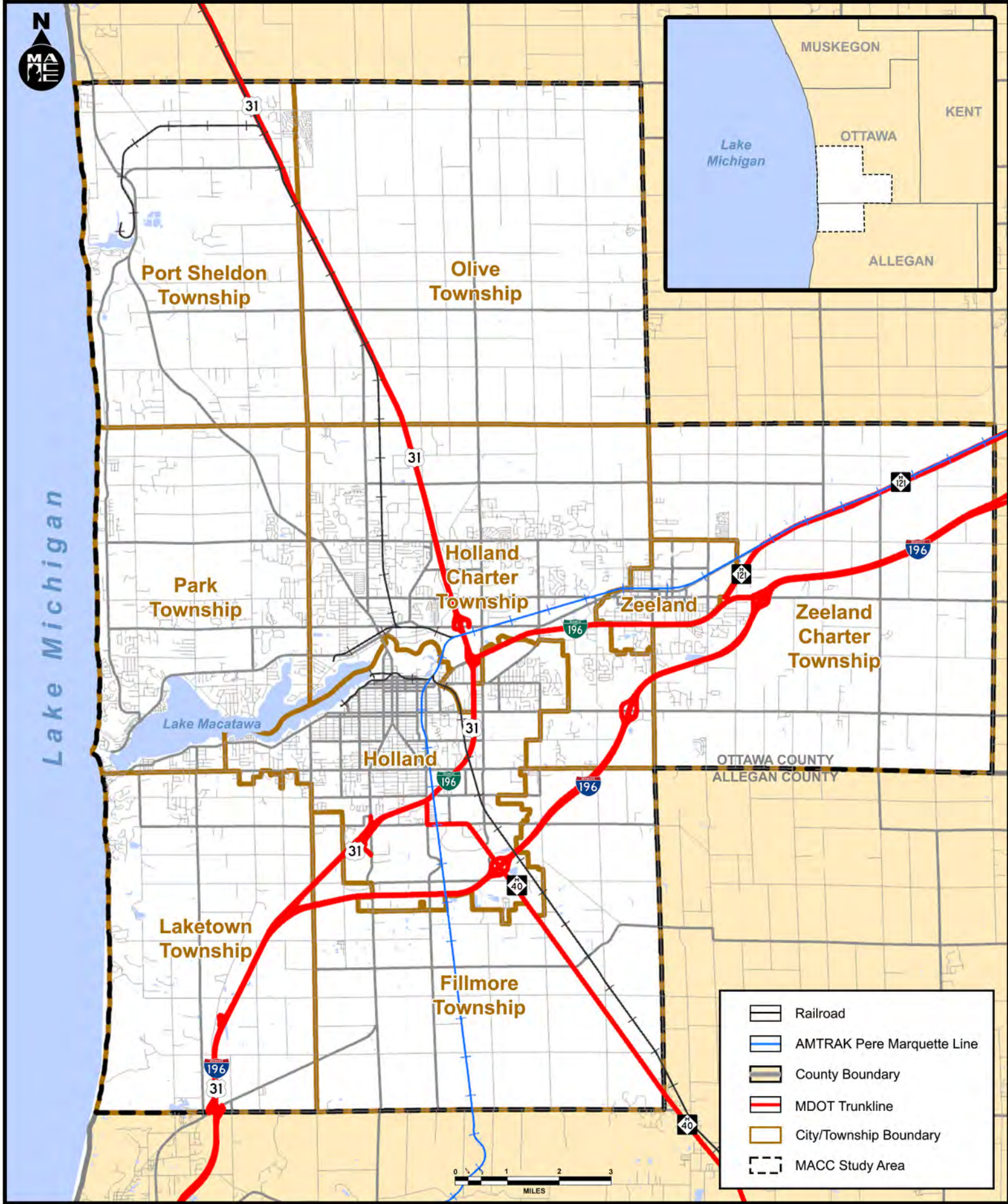
TRANSPORTATION HISTORY

The early settlers dug a channel suitable for commercial purposes from the Holland Harbor to Lake Michigan that allowed for the transport of timber and other materials to the Chicago area. By 1871, two railroad companies had extended lines to Holland that greatly expanded intra- and interstate travel. US-31 would later serve that purpose as automobile travel became more popular. The completion of Interstate 196 in the 1970s connected the MACC area to the national roadway network. Passenger rail service, provided by Amtrak's Pere Marquette, was initiated in 1984 and a publicly-owned general aviation airport was established by the City of Holland in 1996. An extensive non-motorized network, beyond traditional city sidewalks, began in the late 1970s which has helped the region become more multimodal along with the establishment of the Macatawa Area Express transit system in 2000.

CURRENT TRANSPORTATION IN THE REGION

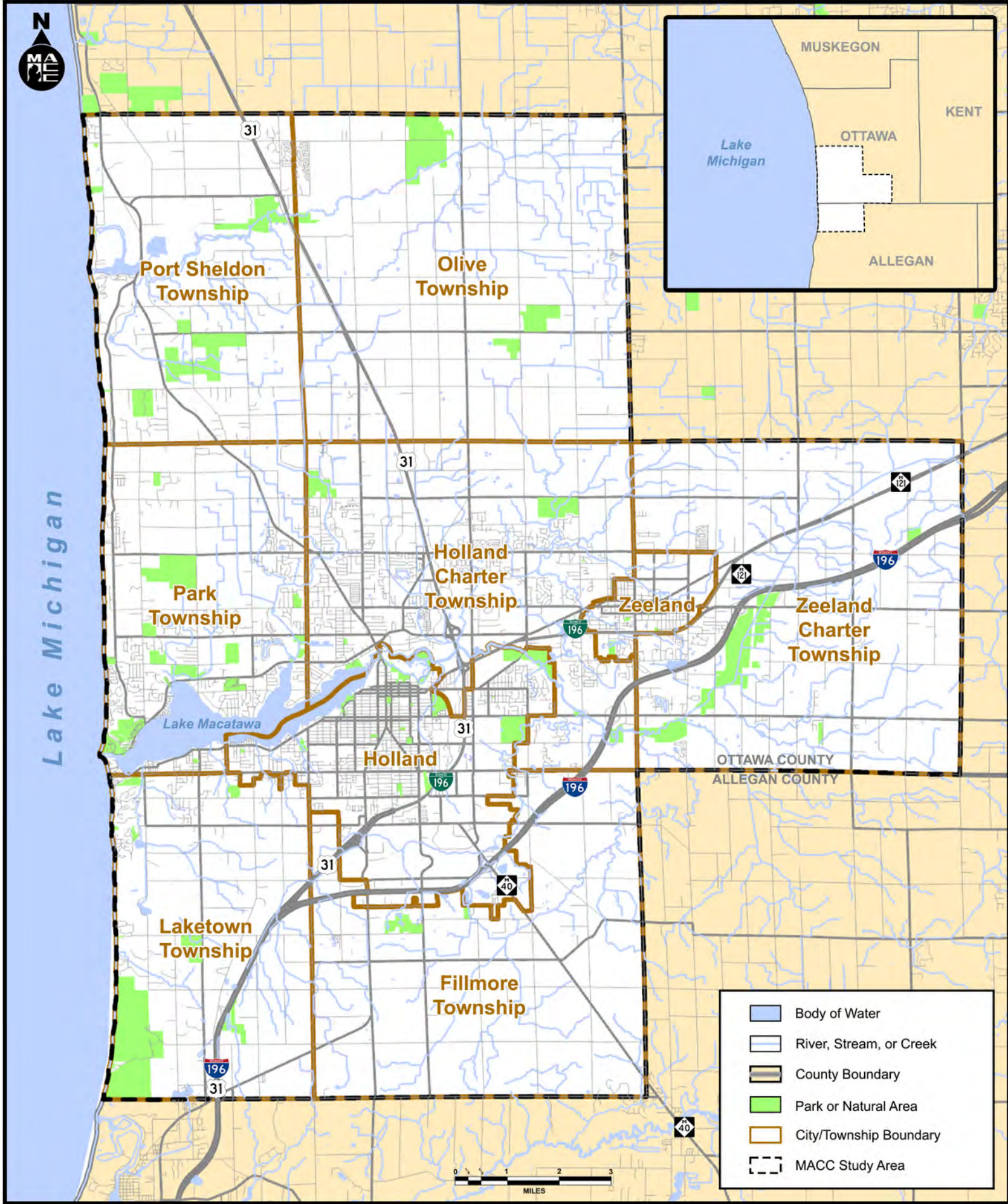
The MACC area transportation system encompasses all modes of transportation with a general aviation airport, two Class A rail lines, a public transit system (11 fixed routes and demand response service), an extensive non-motorized pathway network and a commercial harbor serving business and recreational users. Figure 2.1 illustrates the roadway network in the MACC, which includes segments of an interstate (I-196), a US route (US-31), and numerous state trunklines (M-121, M-40, and BL-196). The Pere Marquette passenger rail line, as well as freight railroad lines, are also shown.



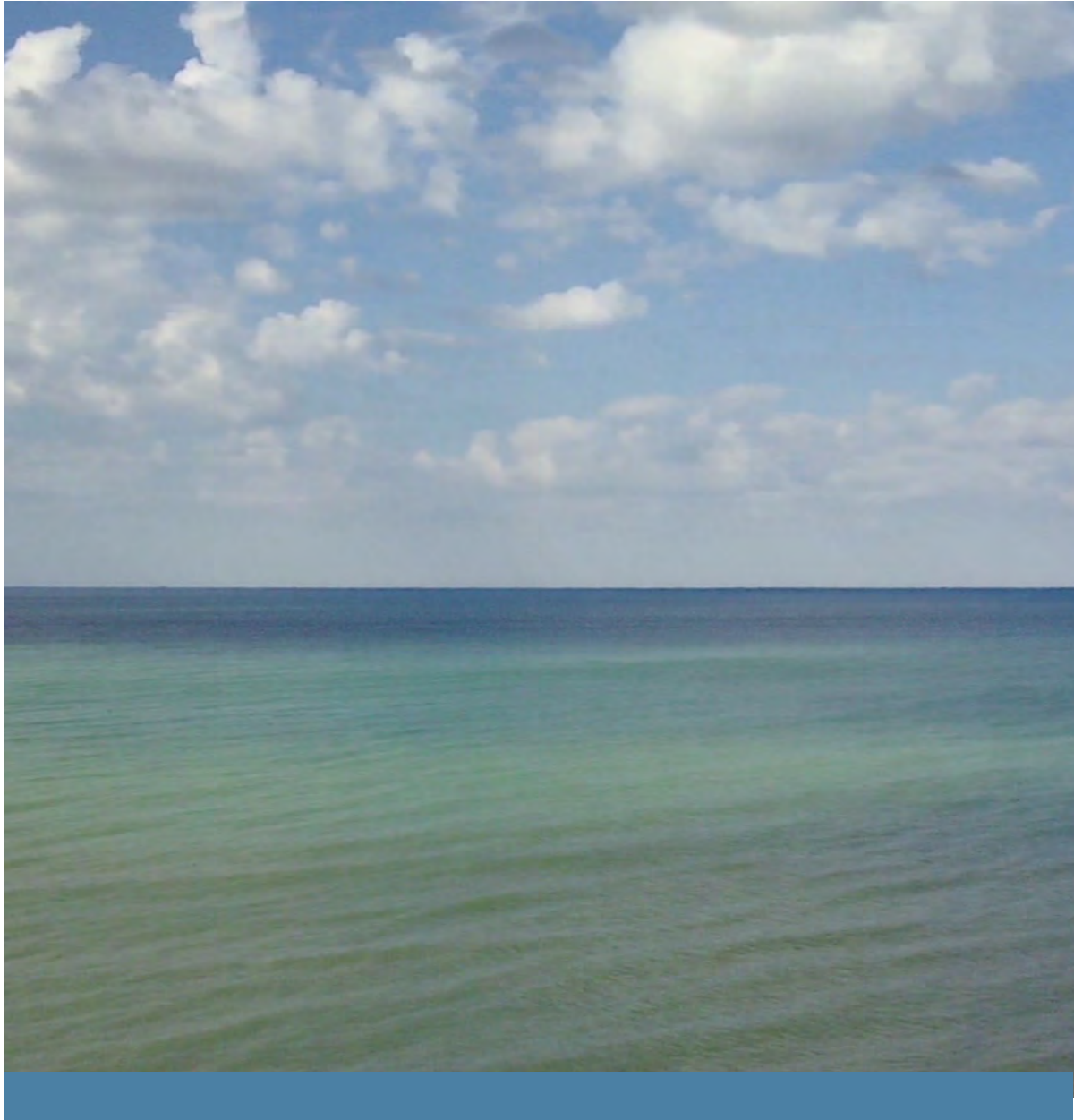


MACC Road and Rail Network

Figure 2.1



MACC Parks/Natural Areas and Water Features
Figure 2.2



CHAPTER THREE

Vision

THE VISION AND DIRECTION FOR THE REGION

The 2050 LRTP establishes goals and objectives to develop a multimodal transportation network that provides efficient access to employment, retail, community services, and residential areas. The plan development process evaluates future projects and offers the MACC the opportunity to apply performance measures that can be used to track progress over time.

2050 VISION

A transportation system that supports the region's economy and environmental sustainability, and continues to offer safe and efficient travel opportunities for people who live within, work in, and visit the MACC Area.

FEDERAL GUIDANCE

Direction for the 2050 LRTP comes directly from the legislation signed on November 15, 2021, the Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (BIL). The legislation is a “historic opportunity to rebuild America’s roads, bridges and rails; expand access to clean drinking water; ensure that every American has access to high-speed internet; to tackle the climate crisis and advance environmental justice, while investing in communities – both urban and rural – that have too often been left behind.” The IIJA Act builds off of the previous plan, Fixing America’s Surface Transportation Act (FAST Act), which focused on safety, kept intact the established structure of the various highway-related programs, continued efforts to streamline project delivery and, for the first time, provided a dedicated source of federal dollars for freight projects.” The IIJA Act continues the established national performance measures for federal highway programs which include:

- 1.) Safety** - To achieve a significant reduction in traffic fatalities and serious injuries on all public roads
- 2.) Infrastructure Condition** - To maintain the highway infrastructure asset system in a state of good repair
- 3.) Congestion Reduction** - To achieve a significant reduction in congestion on the National Highway System
- 4.) System Reliability** - To improve the efficiency of the surface transportation system.

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

6.) Environmental Sustainability - To enhance the performance of the transportation system while protecting and enhancing the natural environment.

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

FEDERAL AND STATE PARTNERS

The Michigan Department of Transportation (MDOT) has incorporated statewide performance goals, measures, and targets. MDOT and the Michigan Division of the Federal Highway Administration (FHWA) have also offered guidance on the performance-based planning process to the Metropolitan Planning Organizations (MPO's) in Michigan. The MACC has adhered to the federal requirements of Metropolitan Transportation Planning [23 USC 134] and the U.S. Code of Federal Regulations [23 CFR Part 450.324] in the development of this long-range transportation planning document, the MACC 2050 LRTP.



LOCAL PLANNING PRIORITIES

The MACC's 2050 LRTP provides direction for future investments in the regional transportation system which will be collectively implemented by members of the MACC and other partners in the community. This regional planning document also incorporates a variety of local planning priorities that are working in a concerted effort to strengthen sustainable practices through design and operations. Recognizing the three pillars of sustainability – environment, society, and economy, the 2050 LRTP includes goals and objectives for the regional transportation system that will help the MACC to protect the natural environment, ensure basic mobility to all persons and goods, and strengthen the region's economy.

GOALS AND OBJECTIVES:

COMPREHENSIVE PLANNING - Transportation planning and the system it designs shall be continuing, comprehensive, and cooperative with other planning efforts.

- The MACC LRTP shall be coordinated with and complement MACC members' master/land use and other plans.
- The MACC LRTP shall be coordinated with the current State Long Range Transportation Plan (Michigan Mobility 2045) as well as other Michigan Department of Transportation plans.
- The MACC LRTP will consider the ten planning factors contained in the IJJA Act.

ECONOMIC AND FINANCIAL CONSIDERATIONS - Planning efforts must recognize funding availability when designing the system, ensure the best allocation of those resources, and promote the development of a system that is an economic asset to the region.

- The transportation system will encourage employment retention and support attracting new employment to the MACC area.
- Transportation improvements will be cost-effective and maximize long-term benefits.
- Transportation system investments from federal and state sources will be actively pursued.
- Transportation system investments from the private sector and private/public partnerships will be encouraged.

EFFICIENCY - The transportation system shall be configured and utilized in the most efficient manner possible.

- Transportation projects that reduce distance and time spent traveling will be encouraged.
- The existing transportation infrastructure system shall be preserved and maintained.
- The transportation system shall encourage multiple uses of the transportation right-of-way by different modes.
- Expansion of the transportation system, to accommodate the MACC area's growth, will be evaluated and regionally coordinated.

MOBILITY - The transportation system will ensure basic mobility to all persons and goods and allow them to arrive at their destination in a timely and reliable manner.

- Special consideration will be given to the development of transportation services that provide opportunities for persons who currently have limited mobility.

- Transit and non-motorized alternatives will be encouraged with street and highway improvements.
- The transportation system will provide continuous service and needed capacity across large portions of the region.
- Reliability targets and measures will be considered when evaluating travel time on the system throughout the region, consistent with the IJJA federal transportation performance measures.

LAND USE AND ENVIRONMENTAL IMPACTS - The transportation system shall maximize positive impacts and minimize disruption of existing and anticipated land uses in the MACC area, as well as maintain and improve the quality of the environment.

- The transportation system shall work to minimize interference with existing neighborhoods and minimize negative effects on commercial and industrial facilities.
- The impacts of the transportation system shall not be disproportionately adverse on minority or low-income populations
- The impacts of the transportation system on open spaces and prime agricultural lands shall be minimized.
- A transportation system that reduces air pollutant emissions is encouraged.
- The impacts of the transportation system on water quality, including stormwater quality, shall be minimized.

ACCESSIBILITY - The transportation system will be available to all persons.

- The transportation system will be designed to provide access to employment, education, medical/essential services, shopping, and recreational opportunities.
- The transportation system will provide appropriate access to and from major land uses, including those outside of the MACC.

SAFETY AND SECURITY - The MACC will support improvements to enhance the safety and security of all users of the transportation system.

- The transportation system will work towards minimizing traffic crashes and the severity of casualties from crashes.
- The transportation system will work towards minimizing rail/auto/transit conflicts.
- The transportation system will work towards minimizing motorized/non-motorized conflicts.
- The MACC, recognizing the fact that prudent driver behavior and compliance with traffic safety laws are necessary components of a safe transportation system, encourages the promotion of driver safety and other safety education programs.
- The MACC encourages the development of appropriate emergency relief and disaster preparedness strategies for motorized and non-motorized users

PLANS REVIEWED

STATE

A variety of planning documents were reviewed while preparing the MACC Long Range Transportation Plan. Below is a list of state plans which were used to understand goals and objectives, the condition of the transportation system, as well as transportation investments planned by the Michigan Department of Transportation.

- 2045 State Long Range Transportation Plan: Michigan Mobility (2021)
- MDOT Grand Region Regional Nonmotorized Plan (2017)
- State 2023-2026 Transportation Improvement Program (2022)
- 2023-2026 State of Michigan Strategic Highway Safety Plan (2023)
- Congestion and Reliability Report: Chapter 3 – Grand Region (2019)
- Community and Economic Benefits of Bicycling in Michigan – Holland Case Study (2014)
- Best Design Practices for Walking and Bicycling in Michigan (2014)

NATIONAL AND REGIONAL

The MACC is in a unique position to promote transportation infrastructure which both addresses future transportation needs and mitigates negative impacts on the natural environment. Having annual programs that focus on the Macatawa Watershed Project and the regional transportation system as an MPO, MACC staff regularly educate local units of government on both of these topics.

- Macatawa Watershed Management Plan (2012)
- EPA's Enhancing Sustainable Communities With Green Infrastructure (2014)
- NACTO's Urban Street Stormwater Guide (2017)
- NACTO's Urban Street Design Guide (2013)
- NACTO's Urban Bikeway Design Guide (2014)

COUNTY

A variety of planning documents and resources were reviewed to provide background on development plans and policies within Ottawa and Allegan counties. Below is a list of materials that were particularly relevant for the development of the MACC 2050 Long Range Transportation Plan:

- Allegan County Road Commission Transportation Asset Management Plan (2023)
- Ottawa County Road Commission Strategic Improvement Plan 2021-2025 (2020)
- Ottawa County Department of Strategic Impact Annual Report (2022)

- West Michigan Transit Linkages Study Report (2012)
- Allegan County Transportation Strategic Plan (2012)

LOCAL

In addition to the local master plans, zoning ordinances, and site design guidelines, community plans for parks and recreation were also reviewed, including:

- City of Holland Comprehensive Parks and Recreation Master Plan Update (2019)
- Holland Charter Township Comprehensive Land Use Master Plan (2020)
- Holland Township Parks & Recreation Plan (2021)
- City of Holland Master Plan (2017) and Refresh (2023)
- City of Holland Non-Motorized Plan (2022)
- City of Zeeland Master Plan (2020)
- Laketown Township Master Plan (2020)
- Olive Township Master Plan (2009)
- Port Sheldon Master Plan (2017)
- Park Township Master Plan (2017)
- Zeeland Township Master Plan (2019)

CORRIDOR STUDIES

Periodically, the MACC, in coordination with area agencies and consulting firms, develops studies to further enhance safety along its travel corridors.

The Business Loop I-196 Non-Motorized Crossing Study kicked off in October of 2022. This study looked at 10 streets that intersect BL I-196 between 88th Avenue and US-31. The goal was to find the two best spots along the corridor to construct a grade-separated crossing, as well as advocate for enhancing existing crossings.

The M-40 Operational/Safety Analysis was prepared for the MACC and partnering organizations in November of 2011. This corridor study has continued to be a resource as communities along the corridor work with MDOT to improve safety and minimize conflicts between automobiles and turning trucks along the corridor.





HOUSEHOLD FINANCIAL STUDIES

The United Way has created the ALICE report. ALICE stands for Asset Limited, Income Constrained, and Employed and represents those who are working within a given community but still struggle financially. The 2023 report examines poverty rates throughout the State of Michigan, including Allegan and Ottawa counties. Another project housed under United Way is Ottawa Housing Next (OHN). OHN's 2021 study evaluated various elements such as housing stock, housing cost, income supports, and public policy related to housing.



UTILITY PLANS

Within the MACC Area, the Holland Board of Public Works launched P21, Power for the 21st Century, which both informed the community about future energy strategies, and sought community input. The Holland BPW decided to construct a combined-cycle natural gas power plant, which started producing power in 2017. The Holland BPW also has power purchase agreements for wind-energy and landfill gas power plants. Holland BPW employees are regular participants of the MACC's Green Commute Week program and have fulfilled pledges to walk, bike, carpool, and use public transportation to travel to work.



ENERGY/CLIMATE PLANS

The Zeeland Board of Public Works has developed an Energy Optimization (EO) plan to achieve targets for energy savings. The City of Holland has also developed a Community Energy Efficiency and Conservation Strategy, prepared by Garforth International, and in collaboration with the Holland Board of Public Works (HBPW). The Community Energy Plan (CEP) has identified a variety of goals and strategies including the reduction of greenhouse gas emissions per capita from the baseline level of 24 metric tons in 2010, to 10 metric tons by 2050. According to the CEP, under guidance from the Sustainability Committee, the City of Holland, HBPW, and the public, the Project Work Team (PWT) was challenged to create a world-class energy plan for the City of Holland that goes far beyond incremental efficiency improvements. Implementation of the plan will achieve breakthrough levels of economic and environmental performance with high levels of reliability and quality. The HBPW received a federal grant to install electric vehicle charging stations throughout the City of Holland, and the City of Zeeland, demonstrating the community's commitment to supporting sustainable transportation.

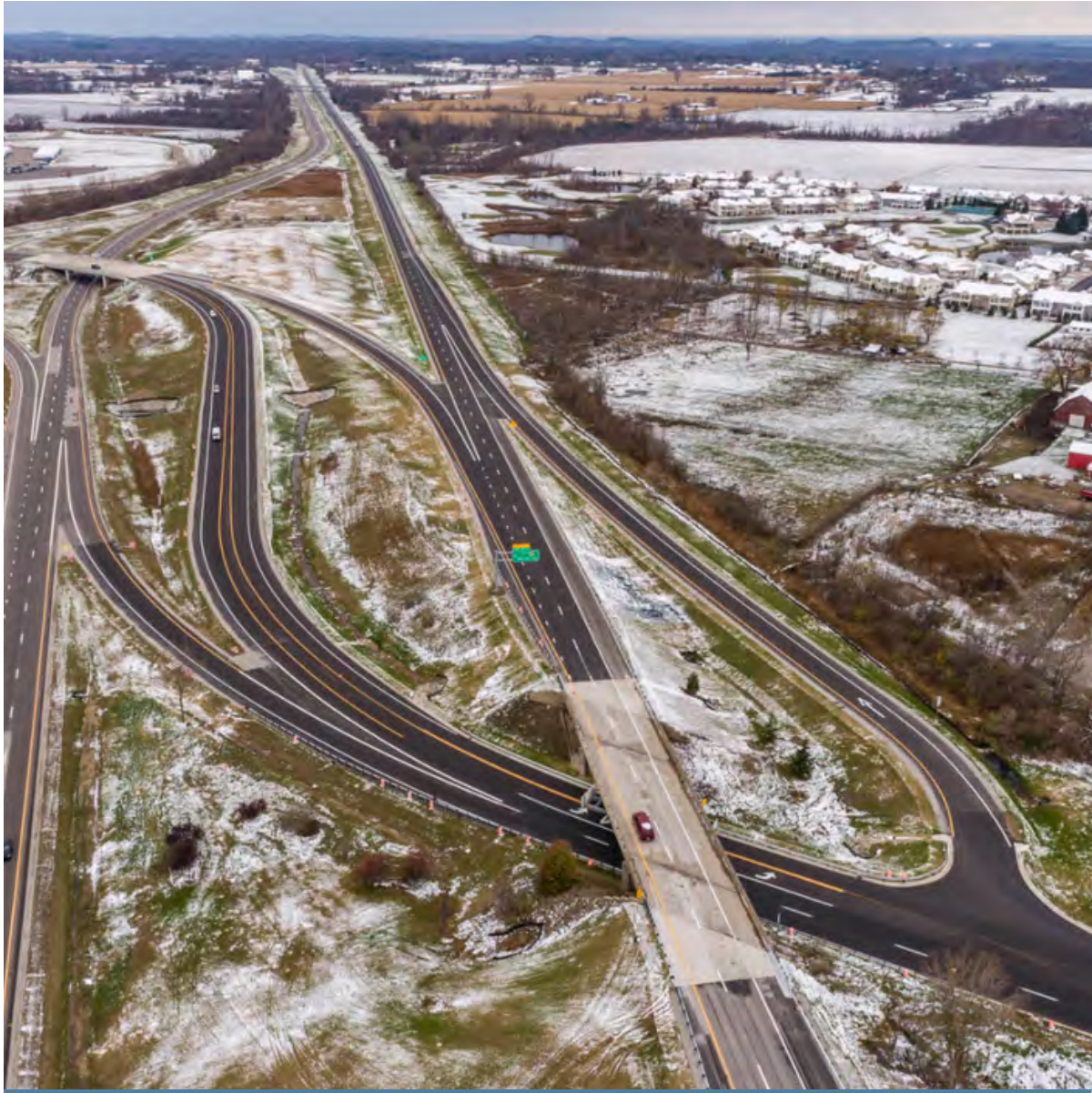


Image courtesy of MDOT Photo and Video Services

CHAPTER FOUR

Accomplishments

PROJECTS COMPLETED SINCE LAST PLAN

From 2019 to 2023, there have been 183 transportation projects completed in the MACC Area. The total amount obligated for these projects was approximately \$230 million and involved federal, state, and local funds. The table below illustrates the number of projects completed during each of the five years and the amount of money allocated. Projects included MDOT highway improvements (trunkline); resurfacing of local agency roads; non-motorized pathways; transit projects; bridge repair; rail improvements; safety; and other transportation projects such as collecting traffic counts, the Clean Air Action! program, and signal modernization.

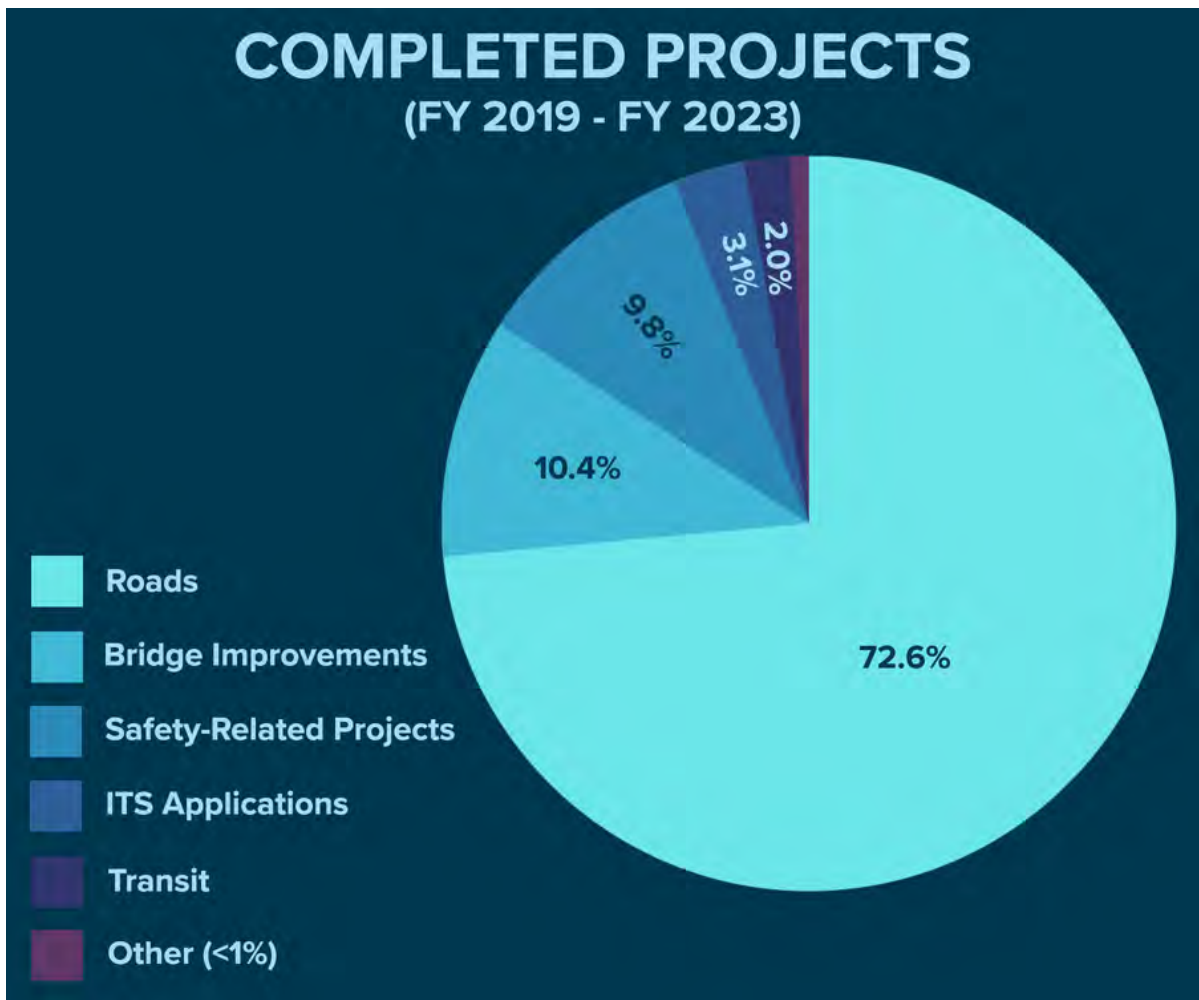
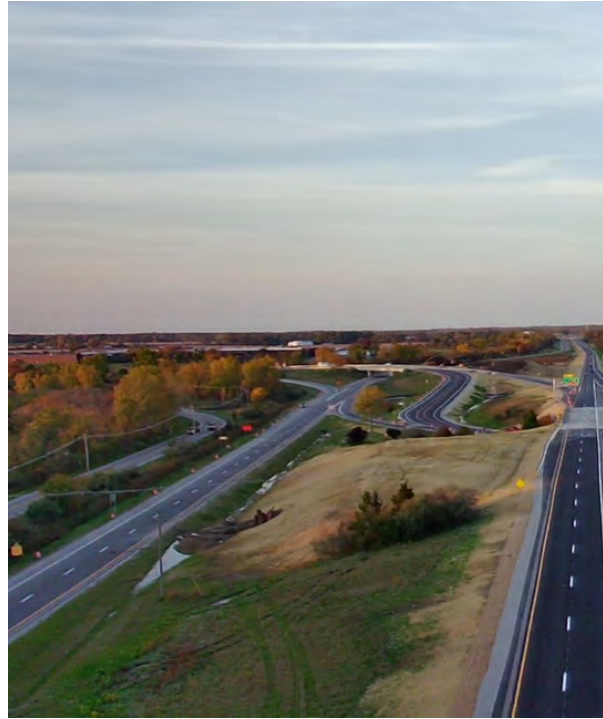
FISCAL YEAR	NUMBER OF PROJECTS	TOTAL OBLIGATED AMOUNT
FY 2019	30	\$15,123,062
FY 2020	34	\$12,296,357
FY 2021	37	\$60,645,789
FY 2022	35	\$127,003,584
FY 2023	47	\$15,635,843
TOTAL	183	\$230,434,635

Close examination of the types of projects completed and the breakdown of the total transportation investments can be seen in the chart below. The proportion of investment is primarily roads (72.6%); bridge improvements (10.4%); safety-related projects (9.8%); Intelligent Transportation System (ITS) applications (3.1%); transit (2.0%); non-motorized improvements (0.80%); railroads (0.009%); and for planning, research, and design (0.002%).

Several projects around the MACC area were made possible through the Rebuilding Michigan (Bond) Program, which was first implemented in FY 2020. The program, approved by the State Transportation Commission in January 2020, allows MDOT to sell a total of \$3.5 billion in bonds to finance new and modified road construction projects across the state between FY 2020 and 2024 and allows other projects to be accelerated with the remaining traditional funding. This financing aims to advance road and bridge fixes that result in longer road and bridge life and improve the overall infrastructure condition to achieve the trunkline pavement performance goal of 90 percent in “good or fair” condition, statewide.

Some of these major bonded projects, including estimated construction costs and year of obligation, include:

- FY 2021: WB I-196 reconstruction from 130th Avenue to US-31 (approximately \$27.15 million)
- FY 2022: I-196 reconstruction between Business Loop I-196 / Byron Road in Zeeland and 32nd Avenue in Hudsonville (approximately \$70.83 million)
- FY 2022: US-31 reconstruction between I-196 and Central Avenue (approximately \$25.28 million)



State Trunkline
Interstate 196
48th Ave. to Byron Rd.



Spanning two construction seasons (2022 and 2023) major reconstruction took place on Interstate 196 between Zeeland and Hudsonville. This project included road reconstruction, bridge replacement, culvert replacement, and ramp rehabilitation. This corridor serves as a vital link between the greater Holland/Zeeland area to Interstate 96 in Grand Rapids, and Interstate 94 in Benton Harbor.

In 2023, 64th Avenue between Byron Road and Chicago Drive (M-121) was resurfaced with the help of federal dollars that were allocated to the greater Holland/Zeeland area. In addition to resurfacing, three-foot paved shoulders were also added to increase safety along the roadway and extend the life of the pavement.



Local Agency Road
64th Ave.
Byron Rd. to Chicago Dr.

Non-Motorized
Quincy Street
96th Ave. to 88th Ave.



In 2023, Zeeland Charter Township, with the help of federal dollars allocated to the greater Holland/Zeeland area, installed a new non-motorized path along the south side of Quincy Street between 88th Avenue and 96th Avenue. This new path provides a vital link to existing non-motorized paths.

Rail

64th Avenue
at CSX Railroad



Some of the funding for rail-related projects in the greater Holland/Zeeland area went to things like the installation of flashing light signals, new roadway gates, upgraded warning signals, and pavement markings.

In 2023, the Ottawa County Road Commission, in coordination with Holland Charter Township, the City of Holland, and the MACC, reconstructed the intersection of 8th Street and Chicago Drive, which involved removing the slip lane from eastbound Chicago Drive to eastbound 8th Street, and changing all turning movements to one intersection. This project also reduced the road from four lanes to three lanes with paved shoulders, and added new sidewalks.



Safety

8th Street
US-31 to Chicago Drive

Transit

New
MAX Transit Van



Annual funding for transit is spent in a variety of ways in order to improve many different aspects of service. Some examples include: bus shelters, the electronics and computer systems on board the busses, equipment to service the busses, and the purchase of the vehicles themselves.



CHAPTER FIVE

Existing Transportation System

INVENTORY OF EXISTING TRANSPORTATION SYSTEM

Chapter 5 offers details about the existing transportation system in the MACC Area. The MACC area transportation system encompasses all modes of transportation with:



Over 335 Miles of Federal-Aid Roads



A General Aviation Airport



A Commercial Harbor



A Public Transportation System



An Extensive Non-Motorized Network



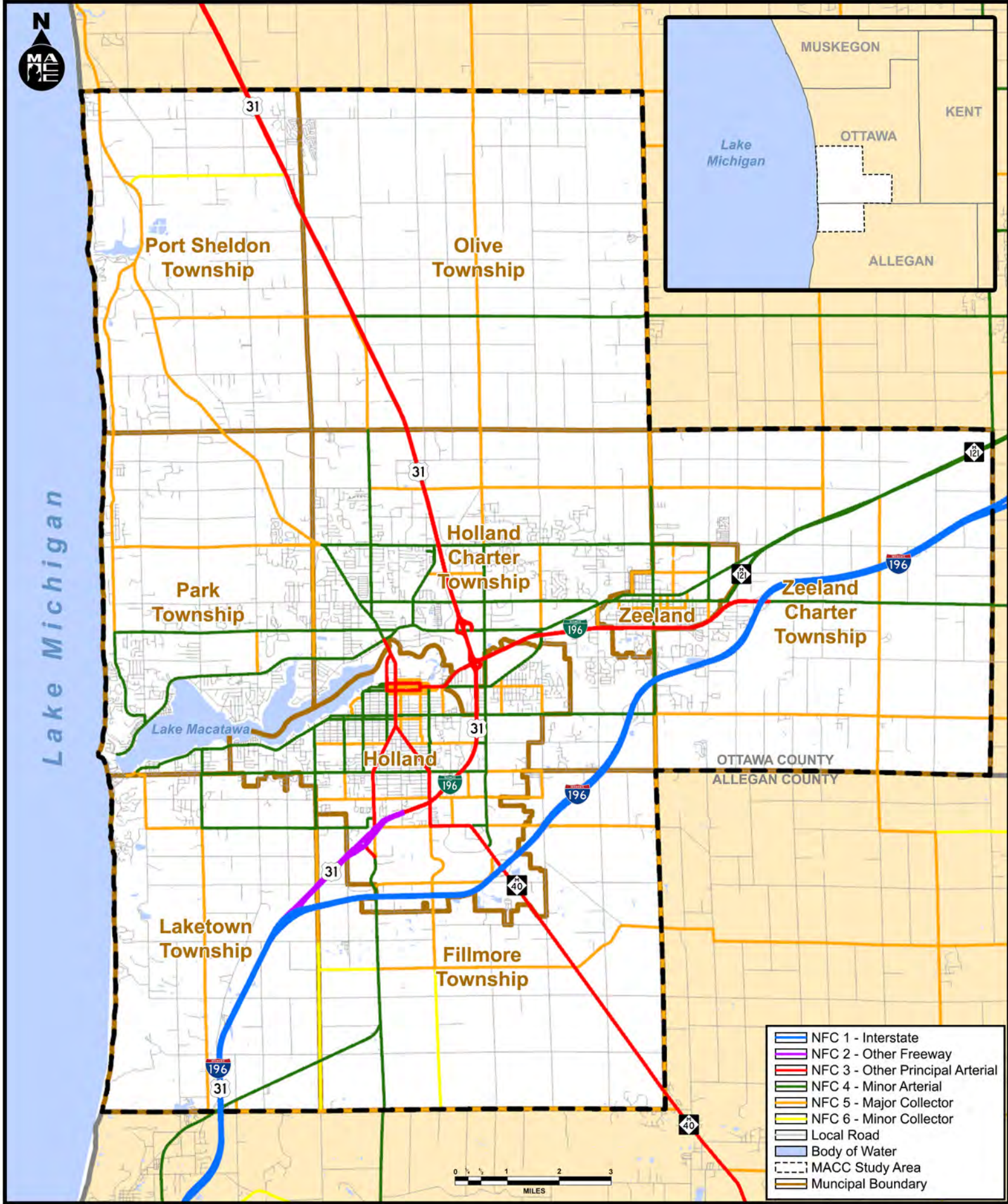
Two Class A Rail Lines

EXISTING MAJOR ROADWAYS

The Macatawa Area Coordinating Council primarily works with roads that are on the National Functional Classification (NFC) system, a federal grouping system for public roads, and are classified as the following:

- Rural and Urban Interstate Highways
- Rural and Urban Other Freeways
- Rural and Urban Other Principal Arterials
- Rural and Urban Minor Arterials
- Rural and Urban Major Collectors
- Rural and Urban Minor Collectors

Roads that are classified as local or not classified do not typically receive funding from the MACC. The existing major roadways in the MACC planning area are shown on the following page.



National Functional Classification (NFC)

Figure 5.1

PAVEMENT CONDITIONS

Road pavement ratings are another source of information used to determine the condition of the roadway, prioritize projects, and evaluate when a road is resurfaced or reconstructed. Pavement Surface Evaluation and Rating (PASER) is a visual survey of the condition of the surface of the road. It rates the condition of various types of pavement distress on a scale of 1-10. This system is used by most Michigan road agencies.

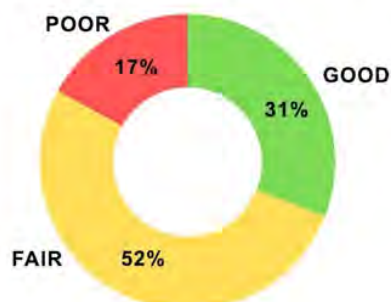
The MACC, in partnership with MDOT, the cities of Holland and Zeeland, and the Allegan and Ottawa County Road Commissions, annually rate our area's federal aid-eligible roads. We are responsible to report the condition of 50% of our roads every year. The MACC goes above and beyond and rates our entire system each year. Submitted ratings help identify and prioritize future road projects.

The MACC takes the ratings of 1-10 and divides them up into three categories. Roads with a rating of 8-10 are considered to be in good condition, 5-7 in fair condition, and 1-4 in poor condition. Both Allegan and Ottawa counties were rated in 2023.

Statewide, in 2022, 25% of roads are in good condition, 42% of roads are in fair condition, and 33% of roads are in poor condition. Additional PASER information such as ratings by township or city and data from previous years can be found on the MACC website. The most recent ratings for the MACC portion of each county are displayed below along with Figure 5.4

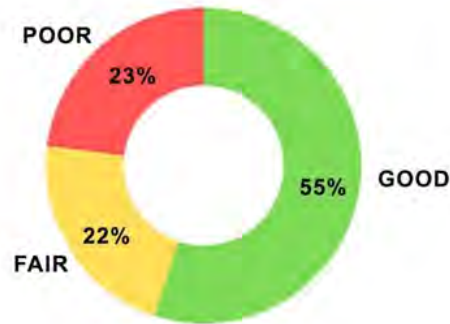
OTTAWA COUNTY PASER RATINGS (2023)

RATING	1	2	3	4	5	6	7	8	9	10
MILES	0.03	0.6	9.27	31.45	32.66	53.65	41.82	49.92	13.99	13.56



ALLEGAN COUNTY PASER RATINGS (2023)

RATING	1	2	3	4	5	6	7	8	9	10
MILES	0	0.03	7.11	15.50	10.03	4.23	8.25	13.74	36.71	5.08

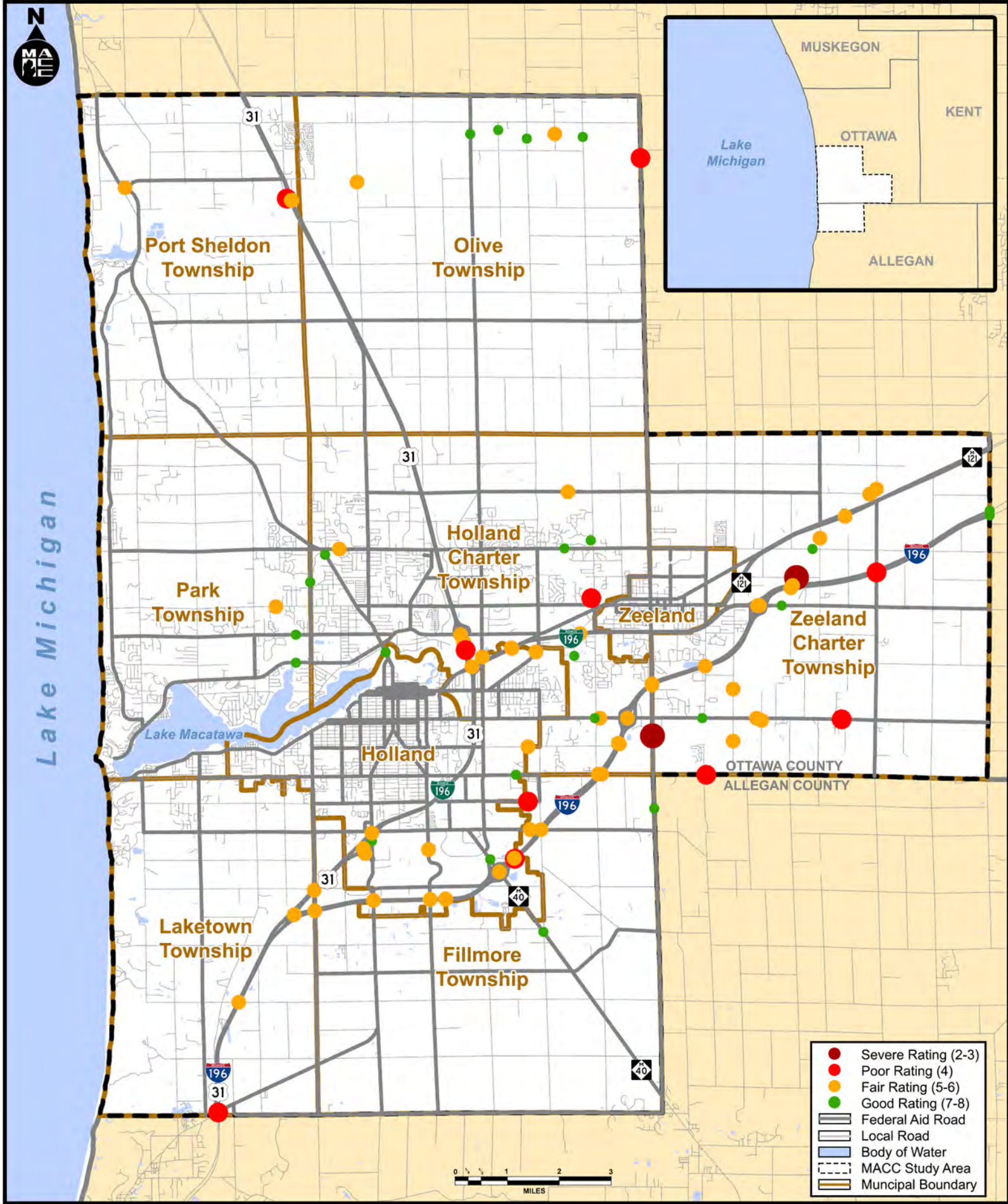


BRIDGE CONDITIONS

As with the PASER ratings for road pavements, a similar scale is used to determine the condition of the bridge system, prioritize projects, and evaluate when a bridge is to be improved or reconstructed. Bridge conditions are based on bi-annual inspections of state, county, city, and village-owned bridges. Ratings for MACC area bridges were reviewed using the Michigan Transportation Asset Management Council's interactive dashboard. In the MACC area, there are 94 bridges listed on the TAMC website. As of 2022, in the MACC area, 27% of bridges are in good condition, 61% of bridges are in fair condition, 11% of bridges are in poor condition, and 2% of bridges are in severe condition. Statewide, 34% of bridges are in good condition, 54% of bridges are in fair condition, 8% of bridges are in poor condition, and 4% of bridges are in severe condition.



Image courtesy of MDOT Photo and Video Services

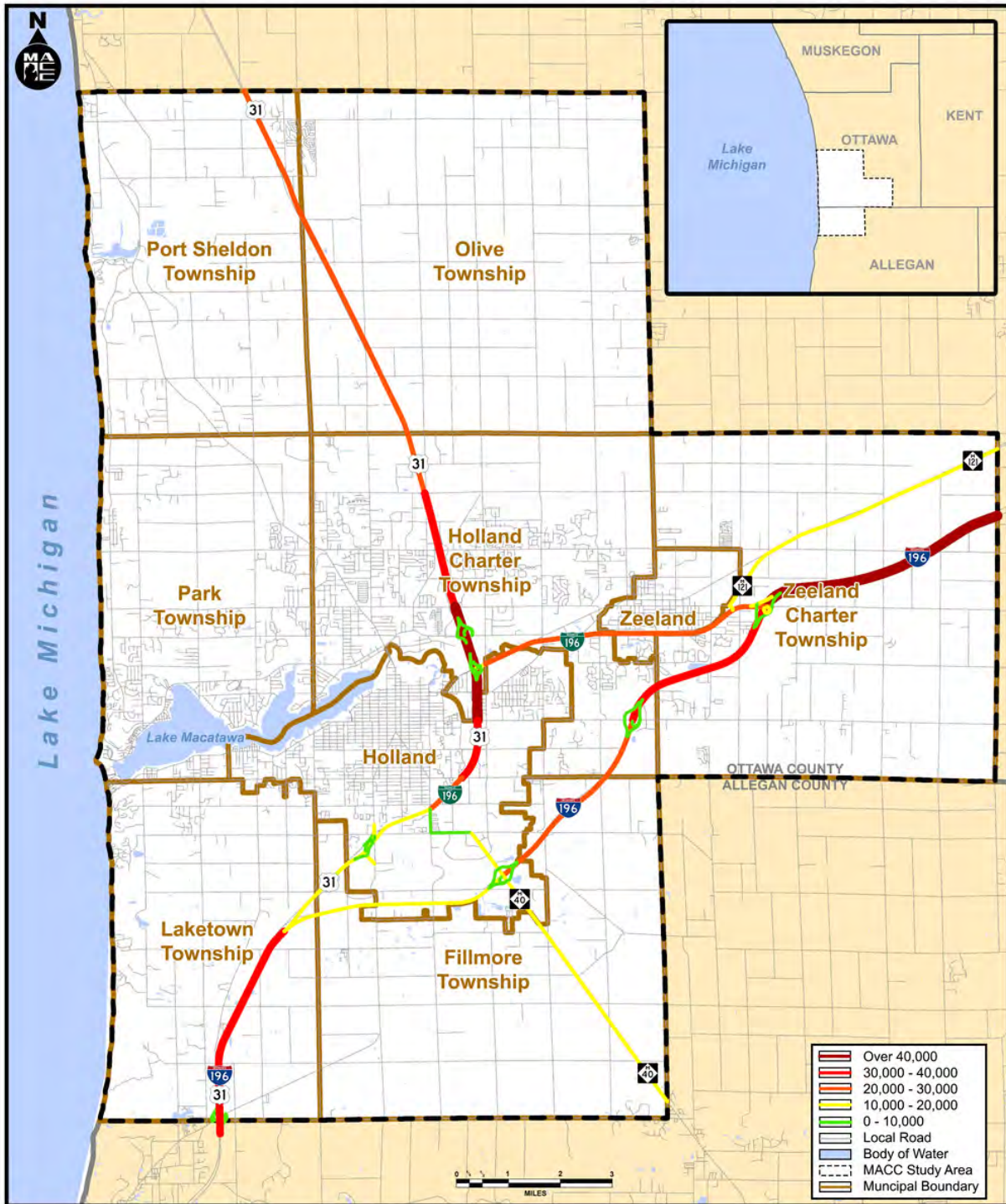


TAMC Bridge Ratings (2022)

Figure 5.5

TRAVEL CORRIDORS

Current conditions of the highway network are defined by first identifying travel corridors and the average annual daily traffic volumes. Annual Average Daily Traffic (AADT) is the estimated mean daily traffic volume. For continuous sites, it was calculated by summing the Annual Average Days of the Week and dividing by seven. The map below identifies the commercial and vehicular AADT on MDOT-owned expressways and roads in the MACC area using MDOT's 2022 traffic volumes data.



Michigan State Trunkline AADT

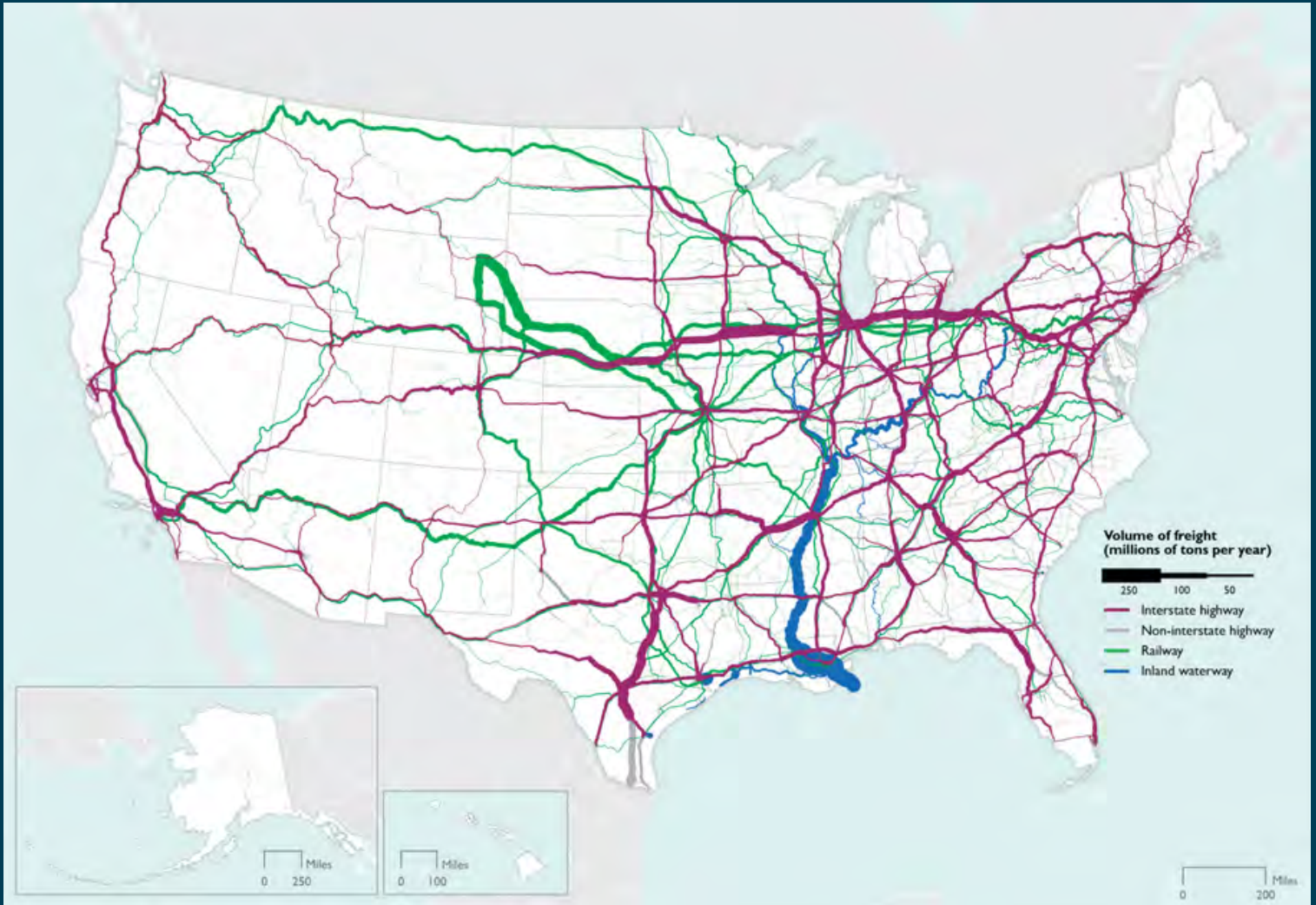
Figure 5.6

NATIONAL FREIGHT MOVEMENT

National surface transportation legislation, Moving Ahead for Progress in the 21st Century Act (MAP-21), requires the designation of a national freight network, reporting of freight transportation conditions and performance measures, as well as a national strategic plan for freight movement. The requirements established under MAP-21 have continued under the Infrastructure Investment and Jobs Act (IIJA) signed into law in November of 2021. Below are maps of the United States national highway freight network as well as annual freight volumes (tonnage of freight moved by various modes of transportation: highway, rail, and through waterways). These maps were created by the U.S. Department of Transportation.

At the national level, the Freight Analysis Framework (FAF) identifies domestic and international freight. This FAF data focuses on the primary freight network and critical rural freight corridors. The following maps demonstrate how freight is moved by truck on highway segments throughout the United States. While the FAF data does not include pavement condition, routing information, or local freight routes, the data does illustrate how major freight flows to, from, and within Michigan.

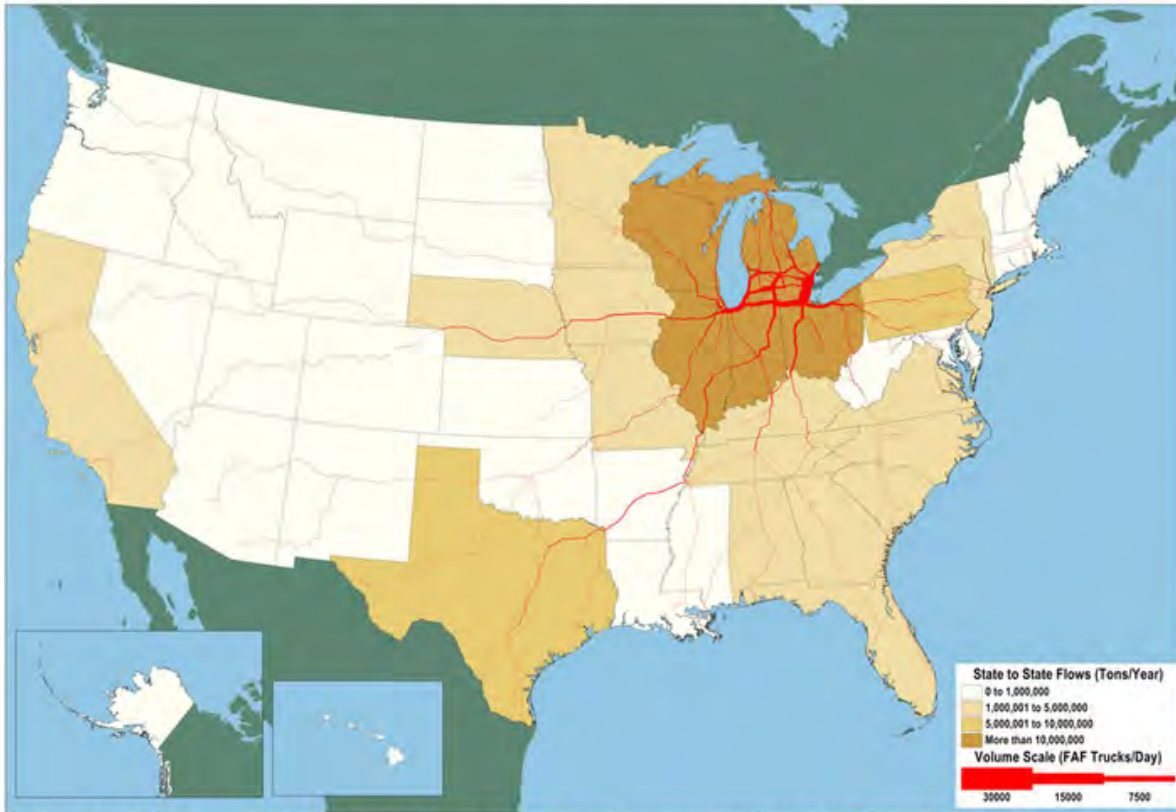




MICHIGAN FREIGHT MOVEMENT

In Michigan, freight is moved primarily by trucking and rail. The Michigan Department of Transportation’s current Michigan Mobility 2045 plan published in 2021 offers statistics on each transportation mode used to transport freight. The document noted that trucking accounted for 74 percent of tonnage moved, while rail handled 21 percent, air handled 4 percent, and water carried less than 1 percent. Data gathered from the Freight Analysis Framework indicates that the value of all freight movements throughout Michigan in 2022 was worth nearly \$1.4 trillion, with trucks handling 73 percent of the goods moved by value, multiple modes and mail handling 14 percent, rail handling 8 percent, pipelines handling 3 percent, airborne handling 1 percent, and waterborne modes handling less than 1 percent.

Major Flows by Truck To, From, and Within Michigan: 2012



Note: Major flows include domestic and international freight moving by truck on highway segments with more than twenty five FAF trucks per day and between places typically more than fifty miles apart.

Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, version 4.3, 2017.

Major Flows by Truck To, From, and Within Michigan: 2045

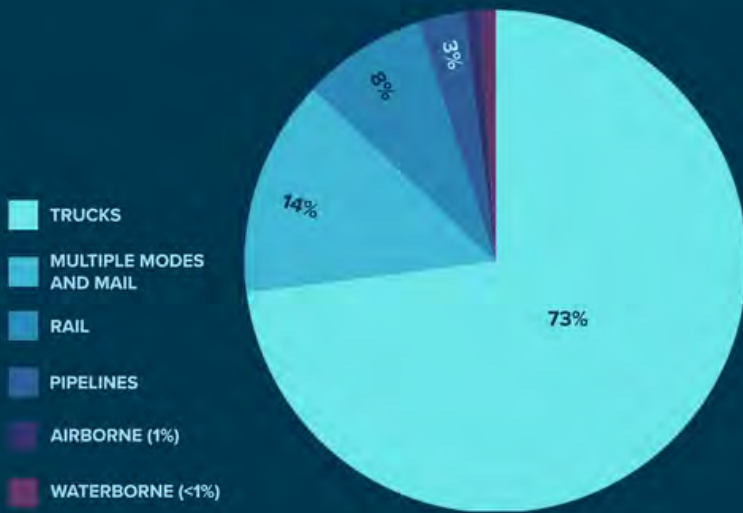


Note: Major flows include domestic and international freight moving by truck on highway segments with more than twenty five FAF trucks per day and between places typically more than fifty miles apart.

Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, Freight Analysis Framework, version 4.3, 2017.

VALUE OF ALL FREIGHT MOVEMENTS (2022)

STATE OF MICHIGAN - TOTAL \$1.4 TRILLION

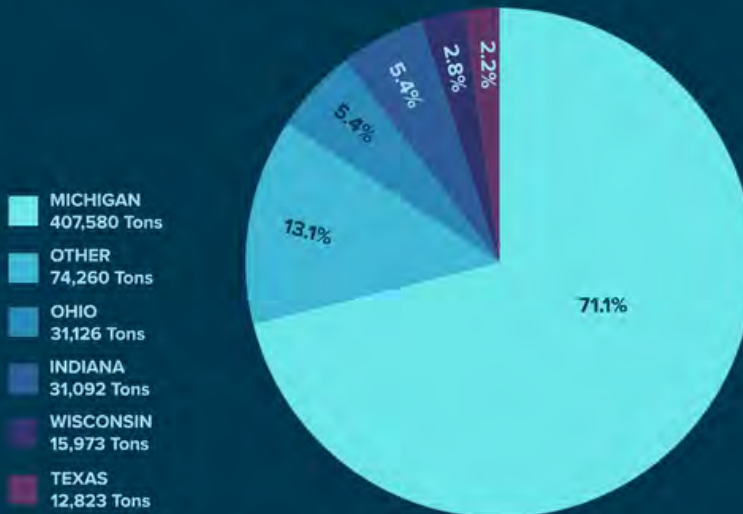


Source: Michigan Mobility 2045 Plan (www.michigan.gov/mdot/programs/planning/slrp)



TOP 5 TRADING PARTNERS BY ORIGIN STATE

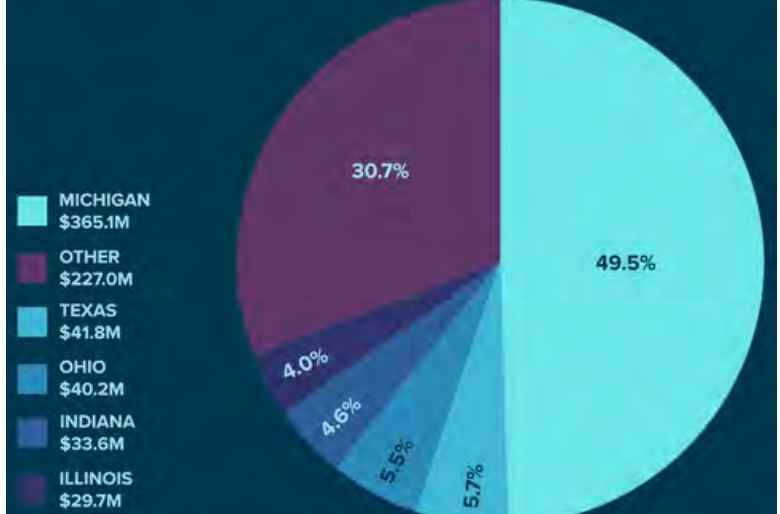
(OUTBOUND, INBOUND, AND WITHIN MICHIGAN BY TONNAGE (2023))
2023 TOTAL: 572,854 TONS



Source: Freight Analysis Framework Summary Statistics (www.faf.ornl.gov)

TOP 5 TRADING PARTNERS BY ORIGIN STATE

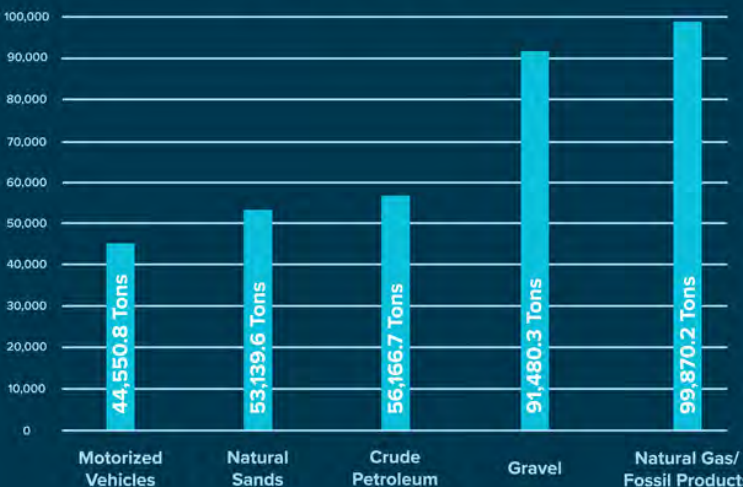
(OUTBOUND, INBOUND, AND WITHIN MICHIGAN BY VALUE (2023))
2023 TOTAL: \$737.4M



Source: Freight Analysis Framework Summary Statistics (www.faf.ornl.gov)

TOP 5 COMMODITIES MOVED BY FREIGHT

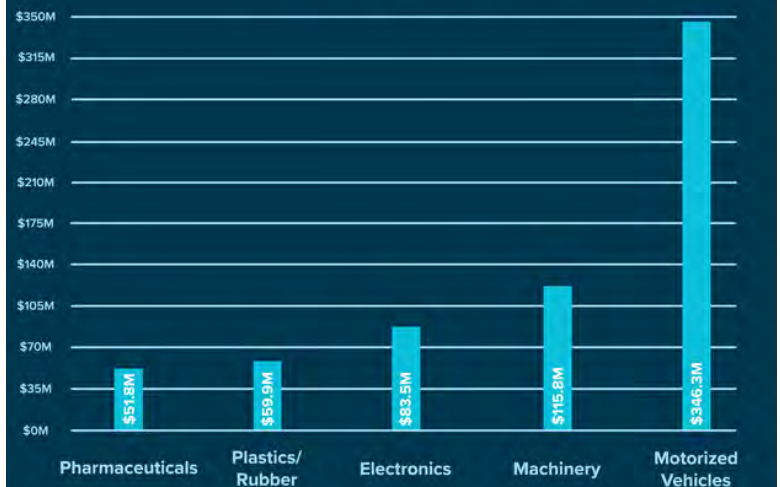
(OUTBOUND, INBOUND, AND WITHIN MICHIGAN BY TONNAGE (2023))
2023 TOTAL: 828,328.7 TONS



Source: Freight Analysis Framework Summary Statistics (www.faf.ornl.gov)

TOP 5 COMMODITIES MOVED BY FREIGHT

(OUTBOUND, INBOUND, AND WITHIN MICHIGAN BY VALUE (2023))
2023 TOTAL: \$1.185 BILLION



Source: Freight Analysis Framework Summary Statistics (www.faf.ornl.gov)

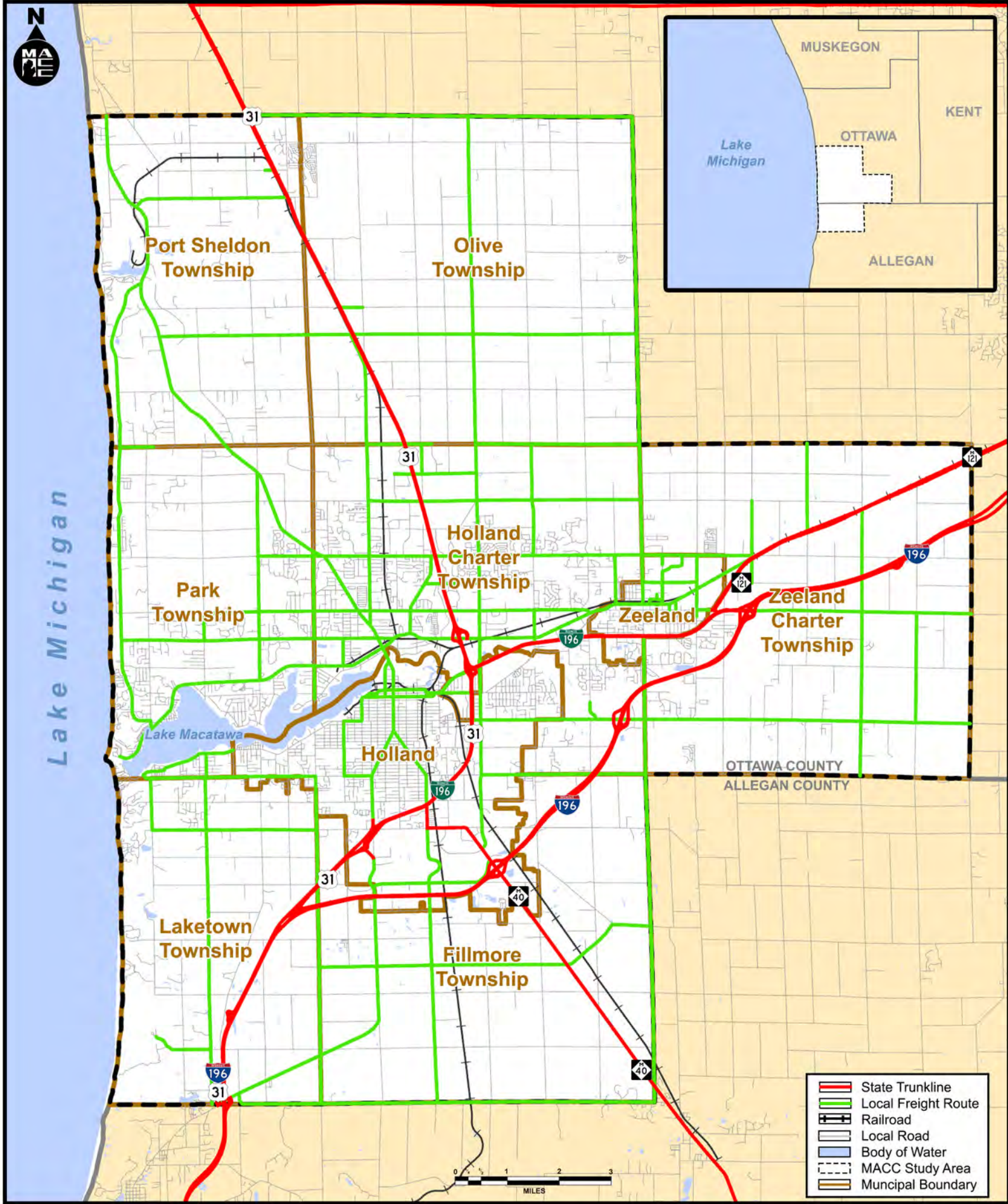
LOCAL FREIGHT MOVEMENT

Within the cities of Holland and Zeeland, truck freight routes have been designated to provide access to local manufacturing facilities and distribute goods to larger employers and institutions. The efficient movement of freight is important for the local economy and directly impacts the manufacturing industry, retail businesses, and larger employers such as Gentex, MillerKnoll, Perrigo, Haworth, Magna, Yanfeng, LG Chem, and JR Automation.

Both local and national truck freight routes are displayed on the map on the following page. Additionally, the MACC area is home to Holland Harbor, a deep draft commercial harbor located on the east shore of Lake Macatawa containing over 6.5 miles of maintained channel. Based on the September 2022 *Holland Harbor, MI Fact Sheet* produced by the U.S. Army Corps of Engineers, in 2020, 376,000 tons of material were shipped and received. \$43.4 million in business revenue is generated annually. Commodities received at the harbor include limestone, scrap metals, sand, stone, and gravel.

The MACC area is served by six railroads, which connect the area to major national markets and ports. CSX owns and operates a Class I mainline railroad which connects the greater Holland and Zeeland area to Grand Rapids, Lansing, and Detroit to the east, and Benton Harbor and Chicago to the southwest. There is also a CSX branch line that starts just to the northeast of Windmill Island and continues north, paralleling US-31 through Grand Haven and Muskegon, eventually terminating in Fremont at the Gerber Products Company. There is a spur that branches off this line that starts near Taylor Street and US-31 and goes west to service Consumers Energy's J.H. Campbell coal-fired generating plant. This spur primarily handles the shipment of coal. There are three rail spurs that connect to the CSX mainline railroad in the area. The first spur starts near the Padnos Transportation Center and moves west to service Padnos' recycling operations and KraftHeinz's sauces, pickles, and condiments operation, where it terminates. The second spur, the Hamilton Northwestern Railroad, starts near the Holland Energy Park and terminates in Hamilton at Hamilton Feed. This line primarily carries animal feed. The third spur starts near the intersection of Douglas Avenue and Lakewood Boulevard and continues west to its termination near the intersection of Douglas Avenue and Aniline Avenue. Previously the spur has served the Michigan Natural Storage warehouse.





- State Trunkline
- Local Freight Route
- Railroad
- Local Road
- Body of Water
- MACC Study Area
- Municipal Boundary

MACC Area Freight Routes

Figure 5.11

PUBLIC TRANSPORTATION

There are several transit operators in the MACC area. Many of these operators have only a few vehicles and transport a select group of persons. Such operators include local cab companies, nursing/retirement homes, senior citizen centers, and social service agencies. These providers generally provide trips to scheduled events, school, or employment.

PUBLIC TRANSIT

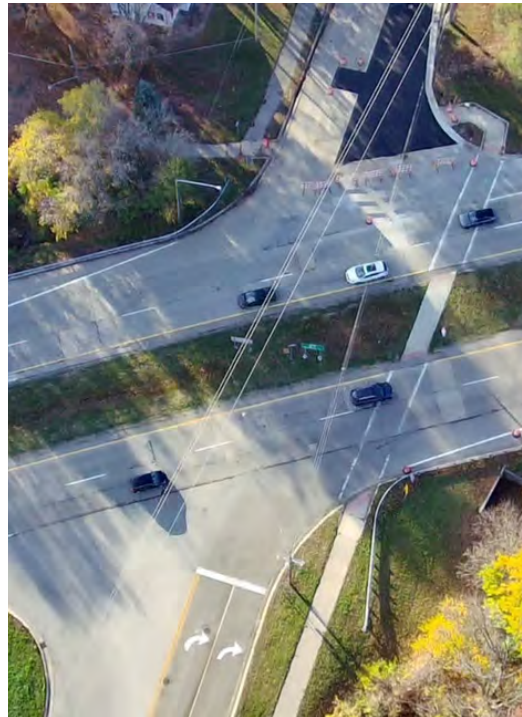
The Macatawa Area Express (MAX) provides public transit in the MACC area. MAX serves the cities of Holland and Zeeland, as well as Holland Charter Township, Zeeland Charter Township, and Park Township. Beginning as the City of Holland’s "Dial-A-Ride" program in the 1970s, MAX began offering three fixed routes in 2000. The City of Holland and Holland Charter Township formed a transit authority in 2006. The voters in those local jurisdictions approved a millage, proposed by the transit authority, to support the MAX in November 2006. On July 1, 2007, the transit authority assumed ownership and control of MAX and daily operations (providing drivers, dispatching, and telephone operators) are managed in-house by MAX staff (as of 2010). As Table 2 indicates, MAX now provides both a demand response (curb to curb) and fixed-route service (currently operating with eight regular routes). It must be noted, that due to the lingering effects of the COVID-19 pandemic, MAX is currently operating on a reduced and restricted basis. They are providing essential trips only during peak hours until they are fully staffed.

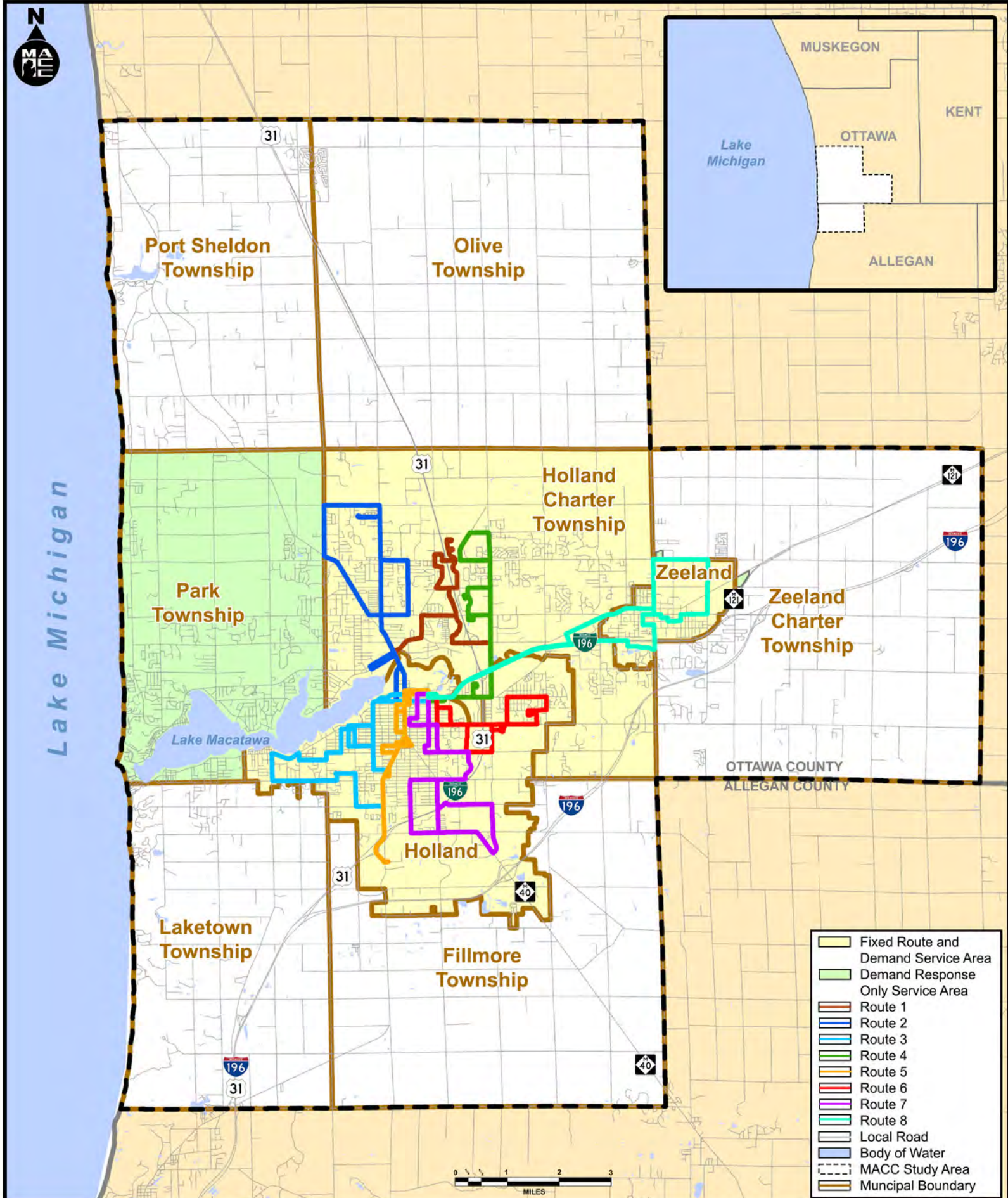
Service Type	MAX Information
Demand Response (Reserve-A-Max)	Only ADA cardholders, people 65 years or older, and those whose origins and/or destinations that are farther than ½ mile from a bus stop are eligible to reserve rides. Reservations must be made by 4:00 p.m. the day prior to travel.
Fixed Route (Catch-A-Max)	Eight regular routes serve the Holland City core area, southern Holland Charter Township, and the City of Zeeland. Fixed route buses depart from the Padnos Transportation Center at the top of the hour every hour.
Service Area	47.5 square miles serving the cities of Holland and Zeeland, as well as Holland Charter Township. As of 2019, Reserve-A-Max also serves Park Township.

Service Type	MAX Information	
Ridership (2022)	228,226 Trips	
Hours of Operation	<p style="text-align: center;"><u>Demand Response</u></p> <p style="text-align: center;">Monday – Friday: 6:00 a.m. – midnight (7:00 p.m. in Park Township) Saturday: 10:00 a.m. – midnight (7:00 p.m. in Park Township)</p> <p style="text-align: center;"><u>Fixed Route</u></p> <p style="text-align: center;">Monday – Friday: 6:00 a.m. – 7:00 p.m.</p>	
Fleet	34 Vehicles in the fleet (22 Cutaway Buses, 8 Gillig Buses, 3 Transit Vans, and 1 Trolley)	
Fares	<p style="text-align: center;"><u>Fixed Route Fares</u></p> <p>\$1.15 – Adults (Ages 18-64) \$0.50 – Youth (Ages 5-17) \$0.50 – ADA Cardholders \$0.50 – Seniors (Ages 65+) \$0.50 – Medicare Cardholders</p>	<p style="text-align: center;"><u>Demand Response Fares</u></p> <p>\$5.50 – Adults (Ages 18-64) \$5.50 – Medicare Cardholders \$2.30 – Youth (Ages 5-17) \$2.30 – ADA Cardholders \$2.30 – Seniors (Ages 65+)</p>

INTERCITY BUS SERVICE

Indian Trails, working with Greyhound Express, provides passenger bus service to the MACC area stopping at the Louis Padnos Transportation Center. At the current time, three buses stop daily at the Center providing service to Grand Rapids, South Haven, Benton Harbor, and Kalamazoo, with morning, afternoon and evening departures. In addition to Indian Trails, the Interurban Transit Authority connects Saugatuck and Douglas with Holland and MAX Transit each Tuesday for “Two Way Tuesdays.” Allegan County Transportation also provides up to four daily paratransit buses with door-to-door service from the City of Allegan area to the City of Holland.





MAX Transit System Map (2023)

Figure 5.12

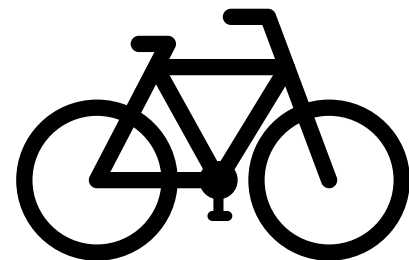
PASSENGER RAIL SERVICE

The MACC area is served by AMTRAK’s Pere Marquette line that runs between Chicago and Grand Rapids with a stop in the City of Holland at the Louis Padnos Transportation Center. At the current time, one round-trip is made each day. The Holland Station, located at the Louis Padnos Transportation Center, is currently the third busiest along the corridor. The train connects Chicago and Grand Rapids, with stops in Saint Joseph, Bangor, and Holland. For additional information about the Pere Marquette rail stations, visit Amtrak.com/Michigan. This intermodal terminal serves Amtrak passengers riding the Pere Marquette rail line between Grand Rapids and Chicago, and also serves public transportation riders of the Macatawa Area Express Transportation Authority (MAX) system. The station also serves Indian Trails bus passengers.

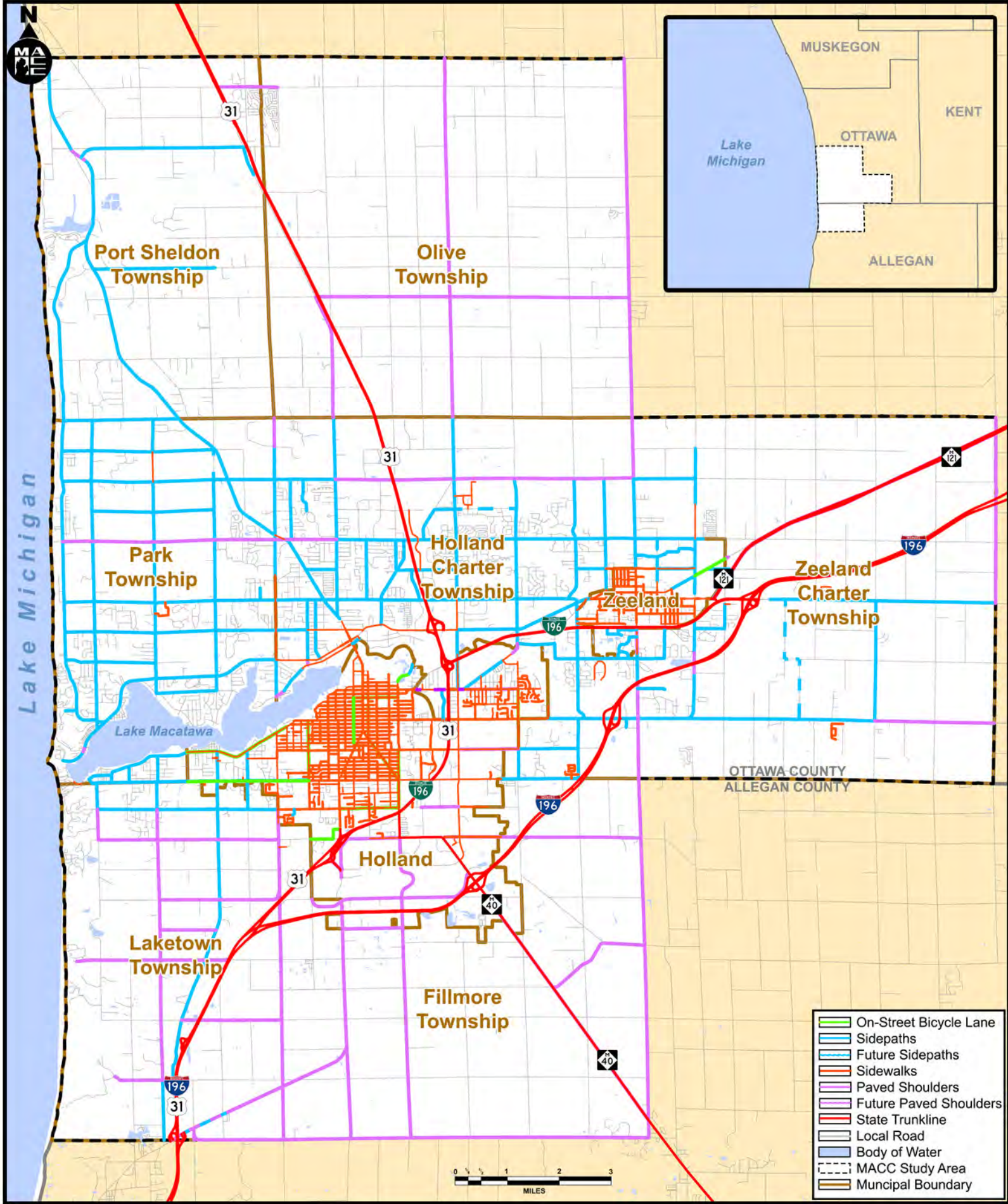


In the spring of 1995, AMTRAK announced that, due to budget cuts, service on the Pere Marquette would be cut to four days per week. In response to this situation, a number of local governments, public transit agencies, chambers of commerce, metropolitan planning organizations, the Michigan Department of Transportation (MDOT), Amtrak, interested citizens, and civic groups formed a West Michigan passenger train collaborative called Westrain. Daily train service was restored in the fall of 1995. With financial assistance from MDOT as well as Westrain members, the Westrain Collaborative promotes the Pere Marquette and seeks to enhance the service while addressing service deficiencies. The MACC is an active participant in Westrain.

NON-MOTORIZED FACILITIES



What travel options exist for someone who would like to use bicycle and pedestrian facilities in the region? Located along the shores of Lake Michigan, the Holland/Zeeland area has an extensive network of bicycle lanes, paved shoulders, sidepaths, sidewalks, and shared-use paths. This non-motorized network is used by those who live and work within the region, as well as visitors. The network accommodates a variety of needs, including fitness and recreation, commuting to work or school, and long-distance travel.



Non-Motorized Network (2023)

Figure 5.13

NON-MOTORIZED NETWORK MILEAGE (JUNE 2023)

MUNICIPALITY	BICYCLE LANES	SIDEPATHS	PAVED SHOULDERS	SIDEWALKS	*GRAVEL ROADS	** NO FACILITIES
Fillmore Township	0	1.51	29.94	0.33	2.82	53.38
City of Holland	14.2	6.25	14.72	123.33	0	35.27
Holland Township	0	63.65	9.91	16.46	1.11	103.80
Laketown Township	0	11.84	25.57	0	0.73	37.79
Olive Township	0	0	18.23	0	47.03	56.46
Park Township	0	65.14	4.94	1.54	0	72.18
Port Sheldon Twp.	0	17.72	1.33	0	0.65	57.67
City of Zeeland	0.58	8.89	0.64	23.69	0.31	4.17
Zeeland Township	0	21.82	21.11	2.08	22.92	69.90
TOTALS	14.78	196.82	126.39	167.43	75.57	490.62

*Mileage of Gravel Roads **Mileage of Roads Without Any Non-Motorized Facilities

BICYCLE LANES

The MACC area has almost 15 miles of dedicated bike lanes that are either signed or striped. The most recent bicycle lanes added to the system are on both sides of Pine Avenue between 10th Street and 22nd Street. 96 percent of bicycle lane mileage is located within the City of Holland. A bicycle lane is defined by the American Association of State Highway and Transportation Officials (AASHTO) as “a portion of a roadway which has been designated by pavement markings and, if used, signs, for the preferential or exclusive use of bicyclists.”

PAVED SHOULDERS

The MACC area has 126 miles of paved shoulders that are four feet or wider. Paved shoulders are defined by AASHTO as “the portion of the roadway contiguous with the traveled way, for accommodation of stopped vehicles, emergency use and lateral support of sub-base, base and surface courses, often used by cyclists where paved.”

SIDEWALKS

The MACC area has 167 miles of sidewalks. Most of the sidewalk mileage is in the cities of Holland and Zeeland. AASHTO defines a sidewalk as “that portion of a street or highway right-of-way, beyond the curb or edge of roadway pavement, which is intended for use by pedestrians.”

SHARED USE PATHS

The MACC area has 197 miles of shared use paths (sidepaths). AASHTO defines shared use paths as “a bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. Shared use paths may also be used by pedestrians, skaters, wheelchair users, joggers and other non-motorized users.”

AIR SERVICES

There are two airports in the MACC area. A general description and some basic operating characteristics for each of them are noted below.

WEST MICHIGAN REGIONAL AIRPORT

West Michigan Regional Airport (formerly Tulip City Airport) is a general aviation airport owned and managed by the West Michigan Airport Authority. Formed in 2008, the WMAA is made up of representatives from three local municipalities: the City of Holland, Park Township, and the City of Zeeland. Residents of these municipalities voted to approve the support of the airport and the creation of an authority. The airport has a paved runway of 6,002 feet in length and supports nearly 40,000 takeoffs and landings annually. There are an average of 96 aircraft operations per day. Of those 96 operations:

- 47% were transient general aviation
- 47% were local general aviation
- 6% were air taxi
- 1% were military

The Airport supports \$165 Million of economic impact and the Airport Authority is actively pursuing new business development on field. The Authority plans to create a new Aviation Business Development Park in 2024 with the construction of a new taxi lane. The Airport Authority is actively supporting the attraction of advanced air mobility solutions throughout the region and is working to provide multi- and intermodal transportation solutions to and from the airport.

The Airport Authority is partnering with the Ottawa Area Intermediate School District, the Careerline Tech Center, and other local schools to provide work-based and STEM-focused learning opportunities on-field, in addition to supporting the expansion of aviation-related curriculum regionally.

OTTAWA EXECUTIVE AIRPORT

The Ottawa Executive Airport is a private general aviation airport in eastern Zeeland Township. The airport was opened in 1990, and services private, small-engine aircraft, and has a paved runway of approximately 3,800 feet. In addition, Avion Aero is based at the airport and provides flight training. In 2023 there was an average of 80 aircraft operations per day. Of those 80 operations:

- 60% were local general aviation
- 40% were transient general aviation





CHAPTER SIX

Regional Issues

REGIONAL ISSUES

Many issues facing the MACC area have a direct or indirect impact on the transportation system. This section looks at the main travel corridors, safety statistics, local trends that will likely affect transportation in the future, and even how transportation matters for regional emergency preparedness.

CORRIDORS OF CONCERN

Listed below are various roadway corridors that are of special concern and need to be carefully monitored, as they are heavily traveled roads. It is the intention to identify concerns and suggest appropriate actions for consideration. The following list is not prioritized.



16TH STREET / ADAMS STREET RIVER AVENUE TO 80TH AVENUE

Improvements to this roadway east of US-31 to Country Club Road have been made in the past five years to increase pedestrian safety by enhancing mid-block crossings which help to connect business centers with high-density residential areas. Construction took place in 2020 to improve pavement quality and lay the groundwork for a future snowmelt system between River Avenue and Central Avenue. This segment is a non-motorized priority corridor linking the Zeeland and Holland areas that have received significant federal aid for non-motorized facilities.

WAVERLY ROAD / 120TH AVENUE M-40 TO FILLMORE STREET

This major north-south connector has received capacity enhancements in the past to several sections along the corridor. Special attention should be given to peak morning and evening congestion at some of the four-way stops north of Riley Street. If population centers continue to expand as predicted, peak-hour congestion will likely increase in severity. This will only be exacerbated by the completion of the LG Battery Plant; it's expected to add 1,200 jobs. Improvements to capacity and/or flow should be made as needed. Consideration of this corridor as a relief route to US-31 will continue.

BLUE STAR HIGHWAY I-196 TO WEST MICHIGAN REGIONAL AIRPORT

Close monitoring of this corridor will be necessary including traffic volumes on 58th Street south of Blue Star Highway.

OTTAWA BEACH ROAD / DOUGLAS AVENUE HOLLAND STATE PARK TO LAKEWOOD BOULEVARD

The continued development of Park Township and the access this corridor provides to Holland State Park, as well as other recreational opportunities, contribute to the regional significance of this corridor. Capacity, speed, and pedestrian safety improvements should be considered as necessary. Currently, there are several proposals for upgrading the corridor, but none of them have been widely accepted or implemented.

WASHINGTON AVENUE (ZEELAND) MAIN STREET TO CHICAGO DRIVE

The proposed redevelopment of land uses adjacent to this corridor and the potential for increased traffic volumes necessitate close monitoring of this corridor. In 2019, a roundabout was added where Washington Avenue and Main Avenue meet. This addition improves safety, traffic flows, and local aesthetics.

96TH AVENUE / STATE STREET OTTOGAN STREET TO FILLMORE STREET

The ongoing development along this corridor and increasing traffic volumes heighten the need for monitoring of this north/south facility through the eastern portion of the MACC area.

M-121 (CHICAGO DRIVE) I-196 BL TO 48TH AVENUE

Continued development of eastern Ottawa County will require close monitoring of this corridor. During the two years of I-196 reconstruction, this corridor served as a detour and has surprisingly handled the increased traffic volume quite effectively. Signal modernizations and future land-use developments may drive the needs for additional operational enhancements.

I-196 THROUGH THE ENTIRE MACC AREA

Close coordination with MDOT officials to ensure the preservation and efficient operation of this segment of interstate is necessary. Future improvements may include the addition of Intelligent Transportation System (ITS) devices, such as roadway surface condition monitoring, Dynamic Message Signs (DMS), and other technology to support mobility needs on this freeway.

RIVER AVENUE

MICHIGAN/STATE STREET TO 136TH AVENUE

This corridor provides one of four crossings of the Macatawa River in the MACC area. With the anticipated growth in the northern portion of the MACC area, demands on this corridor will continue to increase. As this is a major corridor for multiple modes of traffic (automobiles, cycling, walking, and transit service), safety improvements, in particular, should be closely examined and considered as necessary.

PINE AVENUE

9TH STREET TO SOUTH RIVER AVENUE

As with the River Avenue corridor above, anticipated growth in the northern portion of the MACC area could result in increased vehicular and pedestrian volumes in this corridor. Traffic flow patterns and volumes should be closely monitored and improvements to facilities should be considered as necessary. There have been discussions in regards to making Pine Avenue into a 2-way street to keep commercial trucks from using 9th Street to reach Chicago Drive.

I-196 BUSINESS LOOP (BL)

I-196 TO US-31

This is an extremely busy corridor, as it is essentially the “gateway” to the Holland/Zeeland area. It has an Average Annual Daily Traffic (AADT) of roughly 25,000. Speed and pedestrian safety are also major concerns. The MACC, MDOT, local communities, and other partners are currently looking at options to enhance existing crosswalks and create pedestrian bridges to improve north-south connections between residential areas on the south side of the Business Loop to resources and services on the north side, in the city of Zeeland.

M-40

136TH AVENUE TO US-31

Capacity and operational improvements north and south of the interchange with I-196 and the segment north of 48th Street have been made as well as a realignment of 64th Street to intersect with Cabill Drive. Other improvements, such as designated turning movement areas, have been made along M-40 in response to the construction of the Tulip City Truck Stop. There also has been an improvement project partnership between MDOT and the Hamilton School District. Access management should continue to be considered as additional developments occur on M-40.

EAST - WEST CORRIDORS

- New Holland Street: Lakeshore Avenue to 48th Avenue
- Quincy Street: Lakeshore Avenue to 64th Avenue
- Riley Street: Lakeshore Avenue to Chicago Drive
- James Street: Lakeshore Avenue to 104th Avenue
- Lakewood Boulevard: Lakeshore Avenue to 112th Avenue
- Byron Road: I-196 to 48th Avenue
- Port Sheldon Street: Butternut Drive to 96th Avenue

These six corridors are vital east/west routes serving the growing population in the northern and eastern MACC area. Capacity improvements are being planned for various segments of some of these corridors and continued monitoring is necessary.

NORTH - SOUTH CORRIDORS

- Butternut Dr: 136th Ave. to Lakeshore Dr.
- 136th Ave: Butternut Dr. to Port Sheldon Street
- 120th Ave.
- US-31 (North of Quincy Street)
- M-40 (Hamilton to US-31)
- 96th Ave.

These corridors are vital north/south routes serving the growing population in the northern MACC area. Significant improvements have been made to the southern segments of these corridors and continued monitoring is necessary. Future north-south transportation needs, including alternatives like a limited access connection from M-45 to I-196, may need to be considered and evaluated to ensure that the greater Holland area is connected with the newer developments in the Grand Haven area and in central Ottawa County to the north. In addition, as the southern Holland area continues to grow with new industries and businesses, it is important to ensure access management and operational improvement strategies continue to be strategically incorporated and updated to allow for safe and efficient mobility.



TRENDS AFFECTING REGIONAL TRANSPORTATION

INCREASED FUNDING FOR TRANSPORTATION

As the financial analysis chapter indicates, significant financial resources are necessary to maintain the existing system and make improvements as necessary. The MACC will review and endorse if deemed necessary, efforts that seek to increase funding for transportation (whether through an increase in the gas tax or through other efforts to generate future state/local revenues). Consideration will also be given to monitoring the impact of electric vehicles on the regional roadway network and identifying potential fees based on miles driven.

TRANSPORTATION IMPACTS OF VARIOUS GROWTH SEGMENTS

Managing growth in the MACC area is an issue receiving considerable attention. The results of growth, and the configuration of that growth, have various impacts on the transportation system. As part of ongoing growth management, the MACC can study the impacts of various configurations of growth on the area's transportation system. This is achievable using the MACC's geographic information system (GIS) and computer traffic model, as well as utilizing a software planning analysis tool.



M-231 / US-31

The Michigan Department of Transportation (MDOT), in partnership with Ottawa County, local agencies, the Macatawa Area Coordinating Council (MACC), and the West Michigan Metropolitan Transportation Planning Program (WestPlan / Muskegon MPO), completed a Draft Environmental Impact Statement (EIS) in 1998 to assess regional north-south alternatives for US-31 in Ottawa County. As required in the National Environmental Policy Act (NEPA) process, the Draft EIS included an analysis of several conceptual new routes and improvements to the existing transportation system within Ottawa County, including county-owned and state-owned (trunkline) roadways.

MDOT, with participation from the above-mentioned partners and the MACC, completed the Final EIS in 2010. The initial draft Final EIS identified an option to construct a new freeway connection between I-196 and I-96 as the Preferred Alternative. The Final EIS assessed the impacts of the proposed Preferred Alternative (F/J-1 from the Draft EIS alternatives) and evaluated statewide funding available for this project. This analysis and local priorities resulted in a scaled-down version of alternative F/J-1. The scaled-down version of alternative F/J-1, as included in the approved Final EIS, included the following:

- Constructing a new route between M-45 (Lake Michigan Drive) and I-96, designated as M-231. Further review of US-31 mobility options in Grand Haven resulted in M-231 being completed and opened to traffic in October 2015
- A new crossing over the Grand River to facilitate emergency response and travel in Ottawa County
- Acquisition and protection of property adjacent to the new M-231 corridor to be preserved as limited-access right-of-way for potential future improvements
- Reconstruction and widening of US-31 from approximately Lakewood Boulevard to the north of Quincy Street in the MACC area

More recent improvements include a traffic signal that has been installed at the M-231 and Lincoln Street intersection to facilitate safe operational movements. A non-motorized facility (multi-use lane) was constructed with the project, and Spoonville trail segments connecting to M-231 have been completed locally by Ottawa County and the townships affected. The US-31 improvements in the MACC area were completed and open to traffic in the mid-to-late fall of 2016.

Additional north-south transportation needs between Holland and Grand Haven, and in western and central Ottawa County, are currently unfunded and would require a new study, and proposed improvements would be required to go through a new NEPA process, once funding is identified.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

The MACC seeks to be an active participant in the revisions to MDOT’s Regional ITS Architecture and Deployment Plan. It is recognized that ITS can provide important benefits to the transportation system and that the MACC will consider ITS solutions to potential problems.

PASSENGER / FREIGHT RAIL ISSUES

This plan recommends the continued promotion of passenger rail (Amtrak) service in the MACC area through participation in the Westrain Collaborative. It also recognizes the vital need to analyze passenger rail service options for West and Southwest Michigan. The MACC has supported the study of a “Coast-to-Coast” passenger rail line that would provide passenger rail access from Holland to the Detroit area and in 2019, signed a resolution to support a feasibility and engineering study to evaluate a possible southern connection of the Pere Marquette line in New Buffalo. However, there have been no updates due to the COVID-19 pandemic. Additional services may include a connection to Muskegon.

TRANSIT EXPANSION

Due to future growth predictions, the MACC, in conjunction with MAX Transit needs to continue monitoring development patterns in the MACC area and periodically assess the feasibility of providing public transit services in areas currently not served. One suggestion is the West Michigan Express. This bus rapid transit project aims to create a commuter route between Grand Rapids and Holland. Additionally, MAX Transit was granted funding to complete a route study for its service area as well as researching services to neighboring communities (not currently served). The study will include working with a consultant, Transpo Group, on the following:

- Analyzing options for improving current routes and stops
- Identifying gaps in the service area
- Launching micro-transit operations
- Gathering input from the public and community organizations
- Creating an electrification plan to reduce vehicle emissions
- Coordinating workforce development to equip transit staff with the skills and training needed for future growth.



TRANSPORTATION DEMAND MANAGEMENT (TDM)

TDM strategies such as car/vanpools, carpool lots, encouraging non-motorized transportation, flexible work schedules, compressed workweeks, and telecommuting are all designed to help reduce the number of vehicle trips. The MACC endorses and encourages the implementation of these various TDM strategies. It is recommended that the MACC continue working toward the implementation of these strategies with local employers, the Holland and Zeeland Chambers of Commerce, and other interested organizations.

MAX will also partner with the MACC to gather demographic information (EJ populations, households without an automobile, elderly populations, future growth and employment areas, etc.) which can then be plotted and utilized through Geographic Information System (GIS).

This data will provide Transpo Group and MAX staff with the necessary information to make decisions to restore and strengthen existing services and to provide for future growth and development to create a robust regional transportation network throughout West Michigan. The study will take approximately one year to complete.



TRANSIT SENSITIVE LAND USE DESIGN

Planning for land development which is sensitive to the operational and economic requirements of public transit must be done at the system-wide level as well as the district and site-specific level. There are certain land uses and access criteria that enhance and promote the use of transit. These criteria include the density of land use, concentrated locations, mix of uses, and location of streets. There is still a substantial amount of vacant land in the MACC area. This plan urges local units of government to consider these criteria noted above as development proposals are reviewed.

TOURISM

Tourism in the Holland/Zeeland area continues to increase and at times it can be noticeable on our transportation network. Tulip Time, which is our area’s largest event, brought in an estimated 248,000 unique visitors in 2023. The addition of 248,000 individuals does create stress on our roadways, and we are currently exploring potential solutions to alleviate the traffic. Our ideas include the possibility of closing a portion of 8th Street during Tulip Time or implementing a "people-mover" transportation alternative. Starting in 2014, downtown Holland also began seeing cruise ships. In 2016, the cruise ship began docking in Muskegon and they have since continued receiving ships. However, Holland is still included in shore excursions and passengers are brought to Holland via motorcoach. We are forecasting the cruise industry will return to Holland if/when the Waterfront Holland initiative is completed. In the spring and summer, many tourists take advantage of our area’s extensive pathway system (over 150 miles) and rent bicycles from many local bike shops. Tourism doesn’t stop in the winter. The snowmelt system is currently five miles of heated streets and sidewalks from snow and ice. The system was featured on the Weather Channel in 2016 and Runner’s World in 2019. As tourism increases, the MACC area will need to evaluate more ways to manage added traffic volumes and continually improve the user experience. From April 1, 2022, to March 31, 2023, downtown Holland saw almost 800,000 unique visitors.



GROWTH MANAGEMENT

The Infrastructure Investment and Jobs Act (IIJA) emphasizes that this plan be congruent with planned growth. Concerning future growth in the region, MACC staff will review the issue of managed growth and assess potential impacts on the projects and other issues identified in the LRTP to the extent that is legally authorized.

STORMWATER

The MACC housed the Macatawa Watershed Project until 2021 when, through a cooperative agreement, it moved to the Outdoor Discovery Center (ODC) Network and merged with Project Clarity, the initiative to restore the Macatawa Watershed. Project Clarity is continuing the legacy started by the Macatawa Watershed Project to work with community partners to protect and improve water quality in Lake Macatawa and her tributaries. One of the primary contributors to water pollution is urban stormwater runoff, much of which comes from our extensive road networks. The Macatawa Watershed Management Plan recommends many best practices to mitigate the negative impacts of urban stormwater runoff, including low-impact development and green stormwater infrastructure practices. MACC's Non-Motorized Plan also recommends these practices to help mitigate the negative environmental impacts of transportation infrastructure.

Low impact development (LID) is a design and management approach that uses a set of practices to reduce runoff by managing stormwater as close to its source as possible. MACC communities can implement various types of LID strategies to reduce negative environmental impacts caused by development. All MACC communities have adopted site development rules that benefit the Macatawa Watershed by reducing impervious surfaces, reserving natural land for conservation, and encouraging on-site stormwater treatment.

Green stormwater infrastructure (GSI) is a form of LID that incorporates both the natural environment and engineered systems to store, infiltrate, or evapotranspiration stormwater and reduce flows to the storm sewer system or surface waters. GSI also improves water quality, conserves ecosystem values and functions, and provides a wide array of benefits to people and wildlife. Transportation applications of GSI include permeable pavements, green alleys and streets, and other LID techniques along roadway corridors. From 2019-2021, the City of Holland installed ten right-of-way rain gardens that infiltrate runoff from city streets and also installed several GSI practices at City Hall and Kollen Park in 2022. The ODC Network is working with the City of Holland and other MACC member communities to implement more GSI in the watershed.

To facilitate increased adoption of GSI practices in the Macatawa Watershed, the MACC completed a GSI suitability-mapping project in 2019. The final maps indicate which parcels of land are most suitable for GSI based on several factors, including soil characteristics, slope, and building footprints. Suitability maps are available for all cities and townships in Ottawa and Allegan County.

The ODC Network, via a cooperative agreement with the MACC, provides stormwater management assistance to several MACC communities that own and operate the stormwater system in the Macatawa Watershed.

STORMWATER CONTINUED

[Note: the Michigan Department of Environment, Great Lakes, and Energy (EGLE) issue a Municipal Separate Storm Sewer System (MS4) Storm Water General permit to regulated entities including the City of Holland, City of Zeeland, Allegan County Road Commission, Ottawa County Road Commission, Allegan County, and Ottawa County]. The MACC developed a Macatawa Watershed Stormwater Guidebook, modeled after the Rogue River Watershed: A Stormwater Guidebook, in 2015 to encourage and guide townships in evaluating codes and ordinances to identify ways to improve stormwater management and encourage the use of green infrastructure.

As part of the MS4 permit program, permittees are required to maintain good housekeeping and pollution prevention (PPGH) practices at all owned facilities and during operation and maintenance activities. The MACC developed handbooks that the ODC now maintains, for the MS4 permittees to help them comply with the PPGH requirements. One critical component of the handbook is the best management practices that permittees must follow when performing routine operation and maintenance activities. These activities include road, parking lot, and sidewalk maintenance; bridge maintenance; unpaved road maintenance; and others. The primary best management practices include working during dry weather, preventing erosion, mixing or loading materials away from storm drains, preventing materials from entering storm drains, and thoroughly cleaning up the site when the job is finished.

The MACC started a volunteer road-stream crossing inventory program in 2016 supported by a grant from the Michigan Clean Water Corps. The goal is to take an inventory of all of the road-stream crossing locations throughout the watershed to quantify sediment pollutant loads, identify barriers to fish passage, and prioritize remediation or replacement of problematic crossings. The program has the potential to identify problematic crossing locations early and therefore possibly prevent structure failure during large storm events. As of August 2023, staff and volunteers have been able to inventory 257 crossings, or about 41% of the total in the watershed.

AUTONOMOUS VEHICLES

The MACC recognizes that the gradual adoption of autonomous vehicles in the future has the potential to impact our region's transportation system in a major way. The MACC encourages road agencies to consider updating/replacing outdated signalization equipment when making other roadway improvements so that the systems will be compatible with autonomous technology. The MACC will continue to evaluate the trends of this technology so that our region can be prepared for this potential shift in transportation.

SAFETY

The MACC’s state and federal partners continue to stress the need for safety-conscious planning and increased integration of safety into the transportation planning process. More work in this area is needed to better understand data collected by local partners, data gaps that may exist, and how to amend the project selection process to focus more on safety benefits/concerns and be more supportive of local education programs focused on safety. Looking at the issue of motorized and non-motorized uses of public rights-of-way should be considered. The following data looks at safety trends from 2012-2022.

FY 2023 - 2026 MICHIGAN HIGHWAY SAFETY PLAN

The Michigan Highway Safety Plan is an exceptional document that aims to achieve road safety through the Safe System Approach. Its mission is to reduce human errors and injury impact, driving Michigan towards zero deaths on the road. The vision is to eliminate fatal and serious crashes by 2050. The plan's goals are ambitious: zero fatalities (from 1,131 in 2021) and zero serious injuries (from 5,979 in 2021) by 2050. With eleven emphasis areas grouped into four categories, the plan provides a comprehensive framework for achieving these objectives.



HIGH-RISK BEHAVIORS



OCCUPANT PROTECTION

5-year rolling averages from 2017 to 2021 indicate unrestrained occupant fatalities increased by 8% and serious injuries increased by 13%. 341 people in crashes were ejected from the vehicle while not wearing a seat belt. Seat belts were not worn in 44% of statewide fatalities with known restraint usage information.

DISTRACTED DRIVING

5-year rolling averages from 2017 to 2021 indicate distracted driving fatalities and serious injuries have increased by 49% and 72% respectively. 1 in 3 distracted driving crashes occurred at an intersection. Over 1 in 4 distracted driving crashes are related to electronic usage. In 2023, several bills were signed into law that make it illegal to drive while holding or using a cell phone or other identified mobile electronic devices.

IMPAIRED DRIVING

5-year rolling averages from 2017 to 2021 indicate impaired driving fatalities increased by 17% and serious injuries increased by 18%. Alcohol-involved crashes account for 1 in 3 fatalities. Drug-involved crashes account for 1 in 4 fatalities.

AT-RISK USERS



COMMERCIAL MOTOR VEHICLE SAFETY (CMV)

5-year rolling averages from 2017 to 2021 indicate CMV fatalities decreased by 1% and serious injuries increased by 14%. 9 in 10 CMV-related fatalities are occupants of other vehicles. The number of commercial driver's licenses decreased by 17% from 2017 to 2021.

DRIVERS AGED 20 & YOUNGER

5-year rolling averages from 2017 to 2021 indicate young driver fatalities and serious injuries have decreased by 5% and 4% respectively. Drivers age 20 and younger comprise 7% of all licensed drivers in Michigan but are involved in 13% of all fatal crashes and 19% of all serious injury crashes. Traffic crashes are the leading cause of death for people aged 15-20.

MOTORCYCLE SAFETY

5-year rolling averages from 2017 to 2021 indicate motorcycle fatalities and serious injuries have increased by 8% and 23% respectively. serious injuries increased by 26% in one year when Michigan removed the helmet law. Nearly 1 in 4 motorcyclists don't wear a helmet.

PEDESTRIAN & BICYCLE SAFETY

5-year rolling averages from 2017 to 2021 indicate pedestrian and bicycle fatalities increased by 1% and serious injuries increased by 2%. 1 in 10 pedestrian-involved crashes results in a fatality and another 8 in 10 results in injuries. 8 in 10 bicyclist-involved crashes result in injury.

SENIOR MOBILITY & SAFETY

5-year rolling averages from 2017 to 2021 indicate fatalities and serious injuries involving older drivers have increased by 7% and 10% respectively. The number of older licensed drivers has increased by 35% in the last 10 years. Older drivers (aged 65 & over) comprise 1 in 4 licensed drivers in Michigan and represent 1 in 10 drivers in all crashes.

ENGINEERING INFRASTRUCTURE



TRAFFIC SAFETY ENGINEERING

5-year rolling averages from 2017 to 2021 indicate intersection-related fatalities increased by 17% while serious injuries increased by 11%. 5-year rolling averages from 2017 to 2021 indicate lane departure fatalities remained unchanged while serious injuries increased by 3%.

SYSTEM ADMINISTRATION



TRAFFIC INCIDENT MANAGEMENT

Traffic crashes account for nearly 25% of all traffic delays. one minute of crash-related freeway lane closure results in 4 minutes of delay after the event. Nationally, over 75 emergency responders are struck and killed each year at crash scenes.

TRAFFIC RECORDS & INFORMATION SYSTEMS

95% of all crash records are entered in the TCRS database within 30 days of the crash. 96% of reports are entered with no errors in critical data elements. As of January 2020, Michigan is receiving nearly 100% of crash data electronically.

VEHICLE CRASHES IN THE MACC AREA BY COUNTY (2012 - 2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	TOTALS
* ALLEGAN COUNTY	504	530	584	516	583	544	562	381	326	448	4,978
** OTTAWA COUNTY	3,007	3,307	3,519	3,465	3,919	3,578	3,604	3,311	2,402	2,841	32,953
*** MACC AREA	3,511	3,837	4,103	3,981	4,502	4,122	4,166	3,692	2,728	3,289	37,931

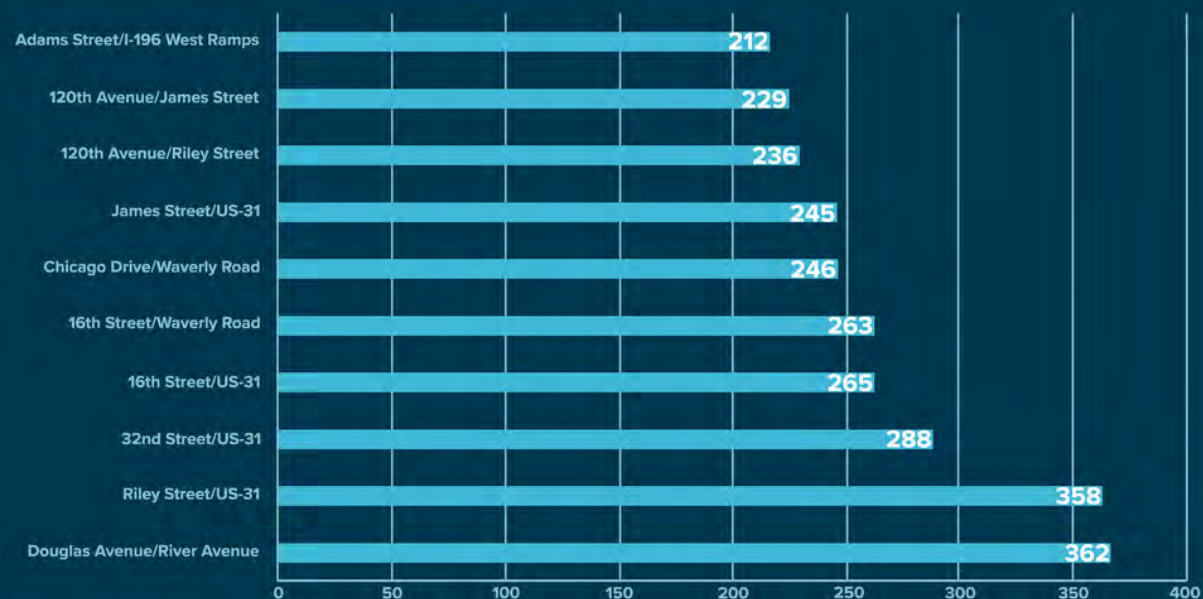
* City of Holland, Laketown Township, and Fillmore Township Portion

** City of Holland, Holland Township, Olive Township, Park Township, Port Sheldon Township, City of Zeeland, and Zeeland Township Portion

*** Entire MACC Region (Cities of Holland and Zeeland, and the Townships of Holland, Fillmore, Laketown, Olive, Park, Port Sheldon, and Zeeland)

Source: Roadsoft Crash Data, Exported June 2023

10 HIGHEST CRASH INTERSECTIONS (2012 - 2021) MACC REGION



Source: Roadsoft Crash Data, Exported June 2023

SECURITY AND EMERGENCY PREPAREDNESS

One of the goals of the MACC 2050 Long Range Transportation Plan (LRTP) is to develop a transportation system that is safe and secure for all of its users. The IIJA requires that the transportation planning process must consider and implement projects, strategies, and services that address increased security of the transportation system for motorized and non-motorized users.

Preparing for natural disasters and man-made events with potential impacts on the transportation system begins at the local level. Minor traffic incidents, load spills, vehicle fires, minor train/bus accidents, and collisions that may involve injuries (but no fatalities) are examples of events that are addressed by first responders and local officials. At the regional level, additional coordination is needed to manage the more complex events listed below:

- Train derailment
- Major bus/rail transit accidents
- Major truck accidents
- Multi-vehicle crashes
- Hazmat spills
- Injuries and fatalities

EMERGENCY MANAGEMENT INCLUDES FOUR PRIMARY PHASES:

Mitigation – activities to prevent or reduce the effects of an emergency or disaster

Preparedness – developing written response plans and identifying responsibilities for emergency actions, staff training, and installing warning systems/equipment

Response – actions taken to warn others of an event, evacuate the public, or provide temporary shelter, medical treatment, search and rescue, or law enforcement

Recovery – efforts focused on restoring infrastructure, economic activity, and rebuilding community facilities

The National Emergency Planning and Community Right-To-Know Act was approved by the United States Congress in 1986. The act was also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) and established a Michigan Emergency Planning and Community Right-to-Know Commission as well as individual Local Emergency Planning Committees (LEPC). Emergency planning is one of the four activities required by SARA. The other three activities are emergency release notification; hazardous chemical inventory reporting; and toxic chemical release inventory. The LEPCs work with industry and agricultural businesses to develop community plans for off-site response plans and to prevent chemical accidents. Countywide response plans are updated annually and include emergency response plans for municipalities, industry, and school districts, as well as strategies for natural disasters such as severe weather, snowstorms, tornadoes, and flooding. County response plans address routes for first responders, material transport, as well as individuals in need of evacuation. Training and exercises are offered by the emergency management departments in Ottawa and Allegan counties.

The LEPC in Ottawa County is led by the Emergency Management Department of the Sheriff's Office, which offers assistance to approximately 180 sites requiring emergency response plans. Each response plan includes a route for first responders which is dependent on weather and wind direction. In Ottawa County, exercises addressing chemical spills are held regularly.

Similarly, in Allegan County a planning specialist participates in the Allegan County LEPC, reports to the Emergency Management Coordinator, and updates facility emergency response plans for approximately 141 sites containing hazardous and extremely hazardous materials and 35 additional farm sites within Allegan County. Transportation corridors have been identified as possible evacuation routes for each of these facilities. The 2015 – 2017 LEPC Strategic Plan aims to raise public awareness concerning hazardous chemicals, prepare and maintain chemical emergency response plans, and conduct a progressive emergency exercise program.



As required by SARA Title III, the following groups are to be represented as LEPC Members:

- Elected State and Local Officials
- Law Enforcement
- Local Emergency Management Official
- Fire-Fighting
- First Aid and Health
- Local Environmental Group(s)
- Hospitals
- Transportation Personnel
- Broadcast and Print Media
- Community Groups
- Owners/Operators of Facilities
- Organized Labor
- Education
- Agriculture

The Federal Emergency Management Agency (FEMA) has developed a variety of emergency preparedness tools through the Ready Campaign. A digital engagement toolkit was released for National Preparedness Month, in September 2014, and while nearly a decade has passed since its release, the resource still offers valuable guidelines to prepare for specific needs before a disaster, build an emergency kit, and practice for an emergency with first responders (police, fire, EMS, nurses, and public utilities). Another tool to assess dangers and develop recommendations for evacuation procedures is to use of computer technology for disaster simulation. Various vendors offer software packages to automate the disaster recovery planning process. This software simulates a potentially hazardous situation and identifies options based on environmental conditions, traffic patterns, transportation mode, time of day, human behavior, possible scene layout, and evacuation routes. Regional planners must also consider special needs populations such as children, the elderly, people with disabilities, and households without a car. The Disability Network/Lakeshore also offers materials on emergency preparedness planning and public resources that can help with accessible transportation and evacuation planning.

Security and emergency preparedness at the regional level calls for coordination throughout the planning process to address the needs of first responders and identify roles and responsibilities concerning: preventive measures, detective measures, and corrective measures. A recommended resource that will be helpful for regional planning and coordination is *Considering Security and Emergency Management in the Planning of Transportation Projects: A Guide for Planners of New Transportation Projects (FHWA-HEP-12-040)*.

The MACC 2050 Long Range Transportation Plan may also serve as a resource to identify planned construction projects that would impact the re-routing of traffic during an emergency. MACC staff may work with the Michigan Department of Transportation and local road agencies to provide lists of road construction projects or closures. At the time of an event or emergency, knowledge about local and primary roads can help route first responders onto appropriate detours.



CHAPTER SEVEN

Regional Trends

2020 POPULATION / HOUSEHOLDS / EMPLOYMENT

MDOT and MACC Staff worked together to update Transportation Analysis Zones (TAZ's) and produce a list of 2020 population, and 2019 household and employment data for each jurisdiction in the MACC Area. The socioeconomic data is a major input into the regional travel demand model, used to calculate trip productions and attractions. The table below represents population numbers from the 2020 U.S. Census, and average household and employment numbers from the 2019 American Community Survey (ACS). These figures were reviewed at the regional level and were approved by the MACC Technical Advisory Committee in May of 2022. These figures were then used as base year inputs in the regional travel demand model, which can help identify possible deficiencies in the regional transportation system.

BASE YEAR SOCIOECONOMIC DATA (2019 ACS and 2020 U.S. Census)

	2020 Population	2019 Households	2019 Employment
Fillmore Township	2,778	1,043	1,028
Holland	34,378	12,535	34,790
Holland Charter Township	38,276	14,100	27,188
Laketown Township	5,928	2,265	385
Olive Township	5,007	1,725	2,256
Park Township	18,625	7,023	2,652
Port Sheldon Township	5,206	1,897	818
Zeeland	5,719	2,550	14,177
Zeeland Charter Township	12,008	3,881	3,450
MACC Totals	127,925	47,010	86,744

Source: 2020 U.S Census and 2015-2019 American Community Survey (ACS) 5-Year Estimates

The 2050 Long Range Transportation Plan used 2015 base socioeconomic data. Since the development of the last plan:



2050 POPULATION / HOUSEHOLDS / EMPLOYMENT

For the base year of the model, household, population, and employment data from the 2020 U.S. Census, the 2019 American Community Survey, and the Nielson employment databases were presented to the MPO and Technical Advisory and Policy Committees. Committee members were asked to provide detailed information about where new development may occur in the future and where new employment and population centers may shift.

The MACC area is one of the fastest-growing areas in Michigan. By 2050, the population within the cities of Holland and Zeeland, and also Laketown, Fillmore, Park, Holland, Zeeland, Port Sheldon, and Olive townships is expected to increase by 25.7%; households are expected to increase by 24.5%; and employment is expected to increase by 21%. The estimated population increase is 1.3% lower than it was in the last plan. The estimated household decrease is 2.5% lower and the estimated employment increase is 3% lower than the last plan.



MACC REGION GROWTH (1990 - 2020) AND PROJECTED GROWTH TO 2050

MUNICIPALITY	1990	2000	2010	2020	NUMBER CHANGE	PERCENT CHANGE	2050
Fillmore Township	2,710	2,756	2,681	2,778	68	2.50%	3,936
Holland	30,745	35,048	33,051	34,378	3,633	11.80%	39,619
Holland Township	17,523	28,911	35,636	38,276	20,753	118.40%	55,467
Laketown Township	4,888	5,561	5,505	5,928	1,040	21.30%	6,899
Olive Township	2,866	4,691	4,735	5,007	2,141	74.70%	7,190
Park Township	13,541	17,579	17,802	18,625	5,084	37.50%	21,640
Port Sheldon Township	2,929	4,503	4,240	5,206	2,277	77.70%	5,620
Zeeland	5,417	5,805	5,504	5,719	302	5.50%	6,124
Zeeland Township	4,472	7,613	9,971	12,008	7,536	168.50%	14,499
TOTALS	82,381	109,711	116,444	127,925	42,834	50.30%	160,814

Source: U.S. Census and the Michigan Department of Transportation



Image courtesy of MDOT Photo and Video Services

2020 U.S. CENSUS RACE AND ETHNICITY

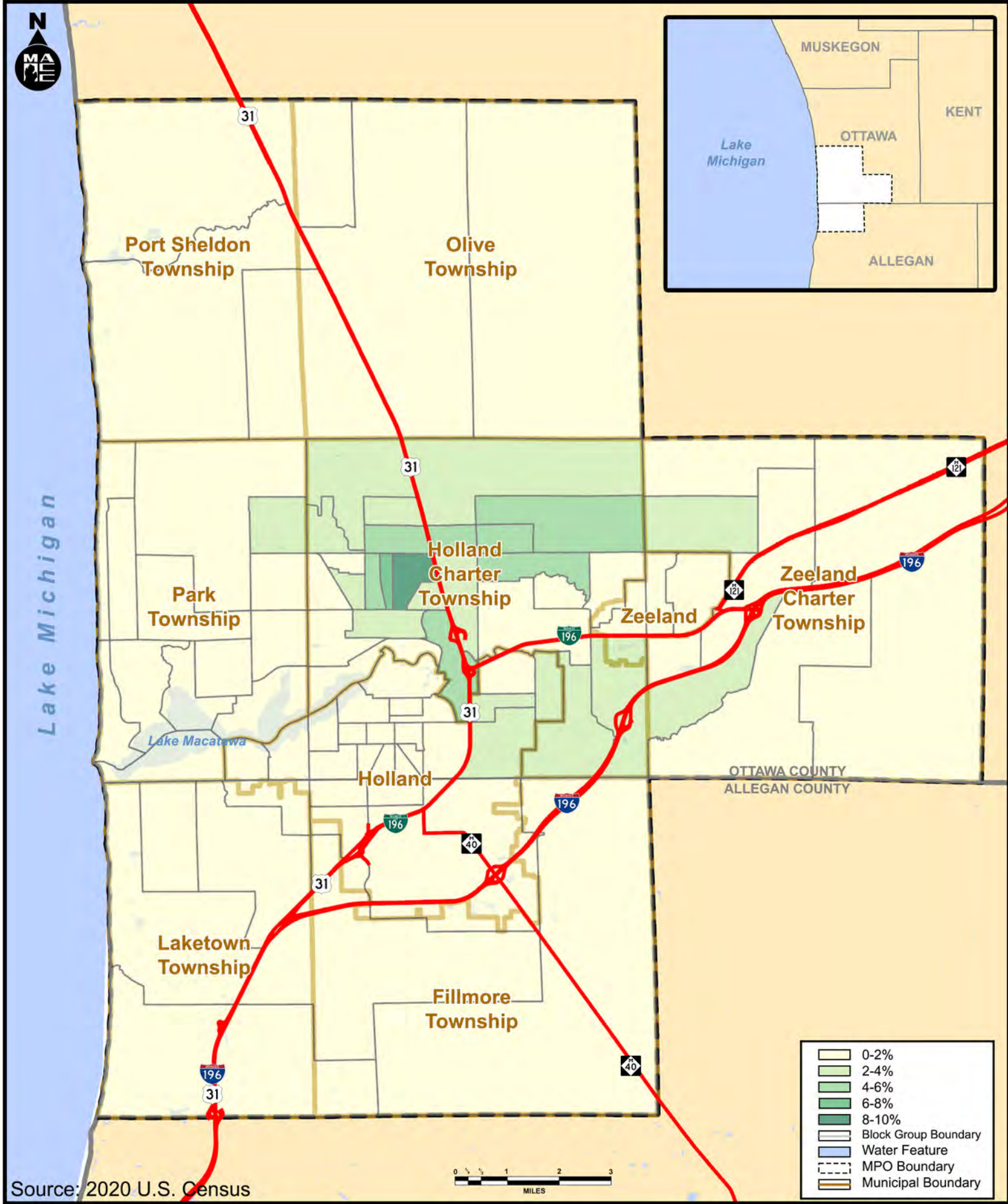
The following table offers a comprehensive overview of population changes and demographic composition in the two cities and seven townships within the MACC Planning Area. This table will help illustrate population shifts and the cultural diversity within the MACC area.

MACC REGION RACE AND ETHNICITY BY MUNICIPALITY (2020 U.S. CENSUS)

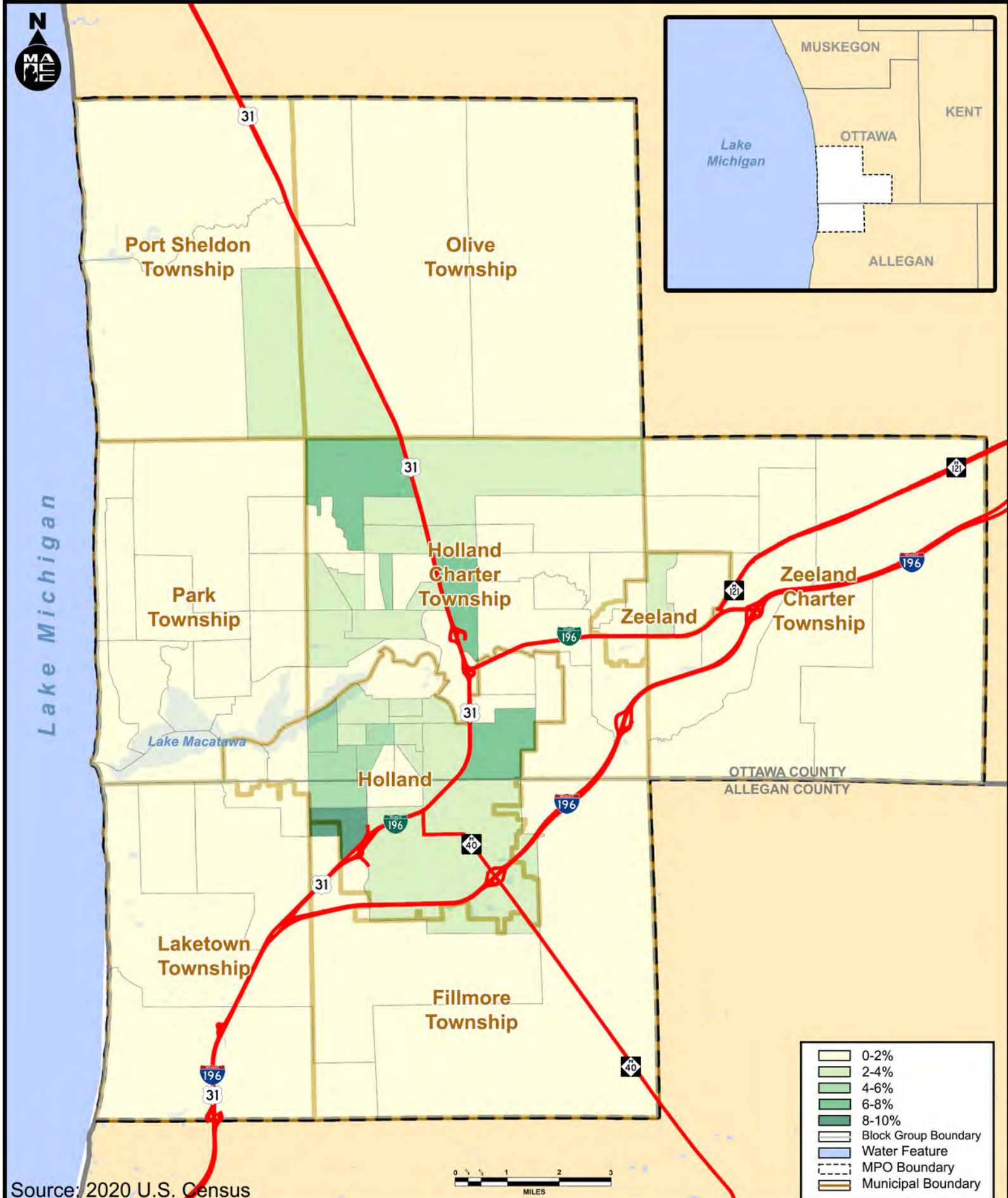
MUNICIPALITY	2020 POPULATION	CHANGE FROM 2010	PERCENT WHITE	PERCENT HISPANIC	PERCENT ASIAN	PERCENT BLACK	PERCENT OTHER
Fillmore Township	2,778	+3.60%	86.80%	7.40%	1.40%	1.10%	3.30%
Holland	34,378	+4.00%	65.90%	23.40%	2.70%	3.70%	4.30%
Holland Township	38,276	+7.40%	57.30%	26.40%	9.30%	2.70%	4.30%
Laketown Township	5,928	+7.70%	88.90%	6.50%	0%	0%	4.30%
Olive Township	5,007	+5.70%	78.60%	13.40%	1.80%	1.70%	4.50%
Park Township	18,625	+4.60%	81.70%	11.40%	2.60%	0.90%	3.40%
Port Sheldon Township	5,206	+22.80%	85.40%	7.80%	2.50%	0.10%	4.20%
Zeeland	5,719	+3.90%	86.10%	7.40%	1.60%	1.30%	3.60%
Zeeland Township	12,008	+20.40%	81.50%	10.30%	3.80%	0.90%	3.50%
TOTALS	127,925	+7.40%	70.80%	18.50%	4.60%	2.20%	3.90%

Source: U.S. Census (2010 and 2020)

The following maps show White, Hispanic, Asian, and Black populations with the MACC area:



Asian Percentage of Population - 2020
Figure 7.3



Source: 2020 U.S. Census

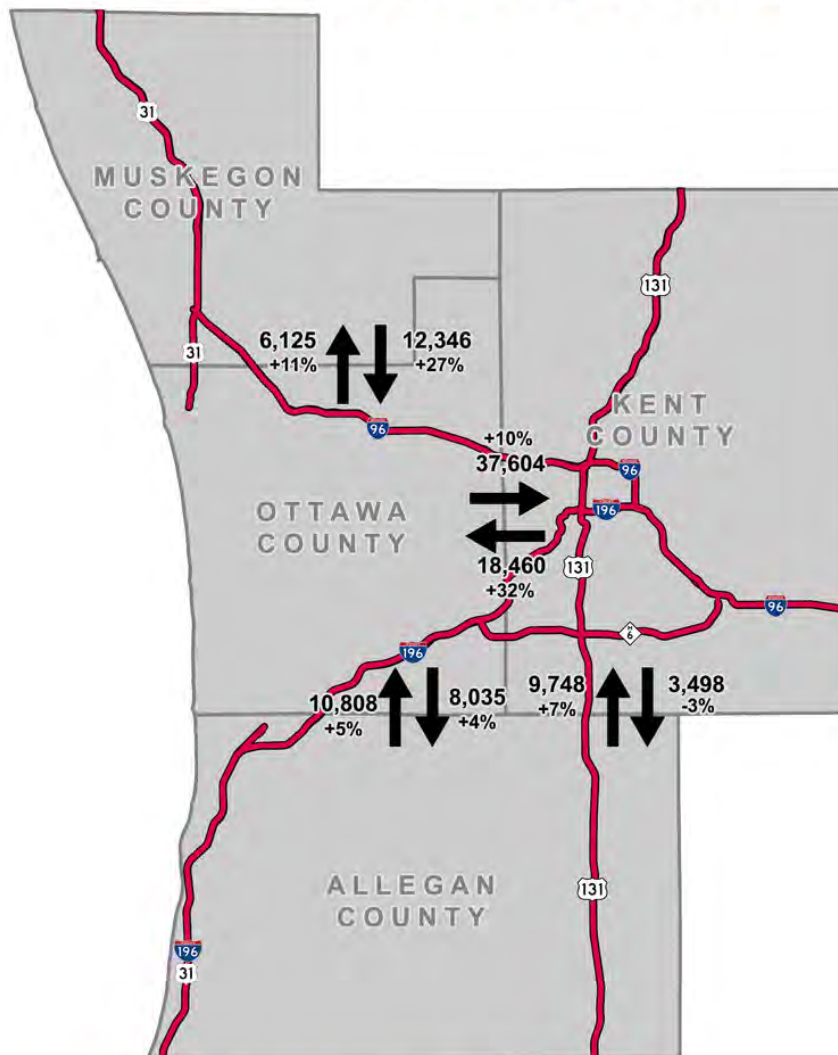


Black Percentage of Population - 2020
Figure 7.4

TRAVEL PATTERNS

There is a significant amount of commuting to the MACC area for employment. The 2020 county-to-county commute data, illustrates significant worker flows into and out of the MACC area to neighboring counties. Utilizing the 2015-2019 American Community Survey (ACS) data from the U.S. Census Bureau, we can see the extent of commute flows from one county to another. This is highlighted on the following page. Ottawa County draws 12,346 workers from Muskegon County, 10,808 workers from Allegan County and 18,460 workers from Kent County. Conversely, 6,125 Ottawa County workers travel to Muskegon County, 8,035 to Allegan County and 37,604 to Kent County. The percentages represent the percentage change from the last plan.

2019 COUNTY-TO-COUNTY COMMUTING FLOWS



Source: 2015-2019 American Community Survey (ACS)

The American Community Survey Data (ACS) also provides information about the average commute times to work and means of transportation to work. The table below shows the percentage of commuters for each jurisdiction by minutes travelled to and from their place of employment. The average commute time for the MACC area in 2010 was 19.9 minutes and 18.5 minutes in 2015.

AVERAGE COMMUTE TIMES BY JURISDICTION (2021)

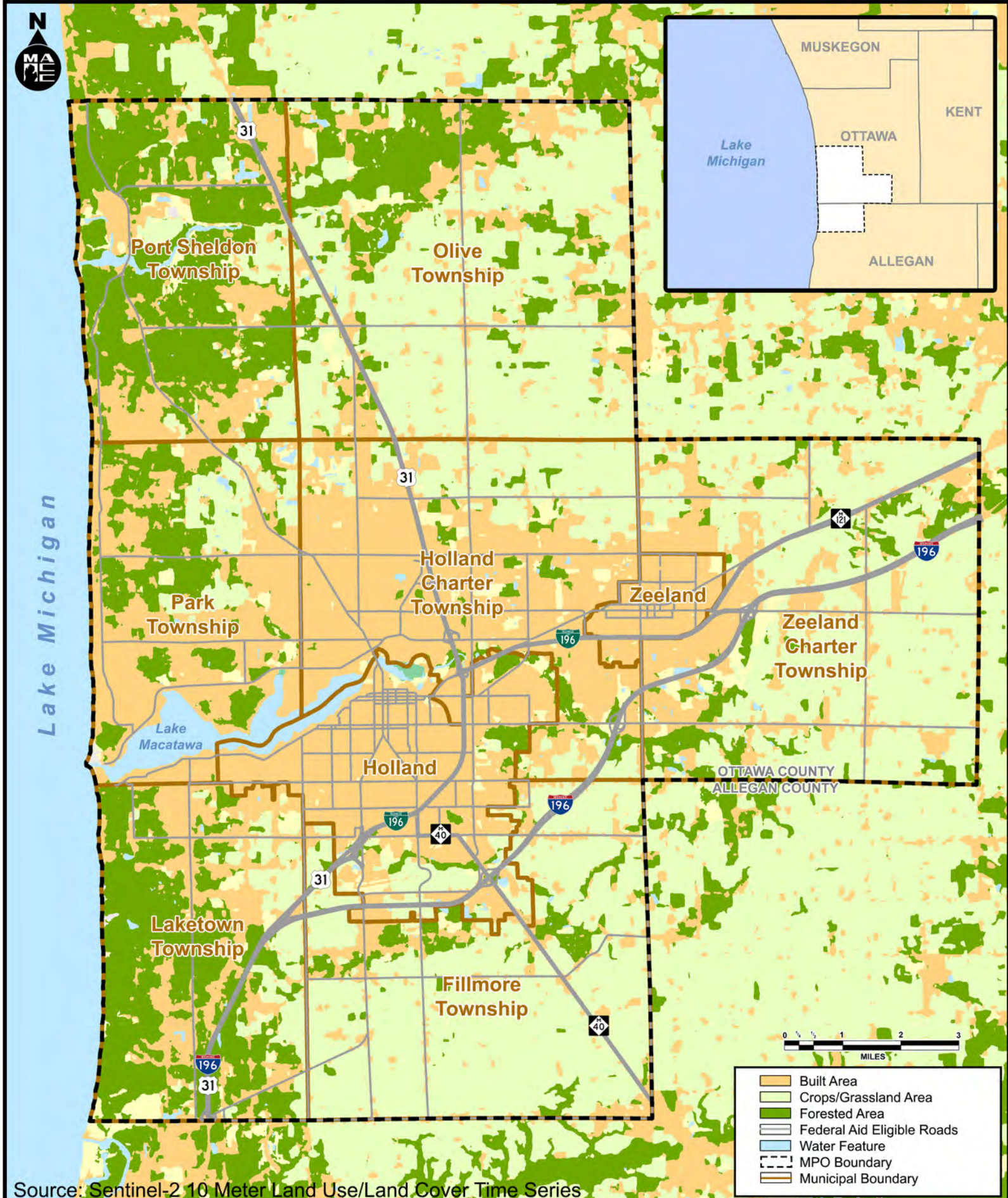
MUNICIPALITY	<10 MINUTES	10-15 MINUTES	15-20 MINUTES	20-25 MINUTES	25-30 MINUTES	30-45 MINUTES	>45 MINUTES
Fillmore Township	16%	23%	23%	18%	4%	13%	5%
Holland	25%	26%	20%	10%	3%	10%	5%
Holland Township	23%	26%	23%	7%	4%	9%	7%
Laketown Township	9%	24%	18%	22%	3%	15%	8%
Olive Township	9%	9%	27%	27%	6%	16%	6%
Park Township	8%	22%	29%	19%	5%	8%	9%
Port Sheldon Township	6%	10%	17%	31%	8%	19%	8%
Zeeland	29%	20%	22%	11%	5%	8%	6%
Zeeland Township	18%	23%	21%	9%	9%	16%	3%

Source: 2021 American Community Survey (ACS) 5-Year Estimated Data Tables

AVERAGE MEANS OF TRANSPORTATION (2021)

Mode of Travel	Percentage	Change From 2045 LRTP
Car, Truck, or Van	89.56%	-3.11%
Work From Home	5.62%	+2.22%
Walk	3.15%	+1.37%
Bike, Taxi, Motorcycle, or Other	1.11%	-0.34%
Public Transportation	0.6%	+0.17%

Source: 2021 American Community Survey (ACS) 5-Year Estimated Data Tables



Land Use/Land Cover Map (2023)

Figure 7.5

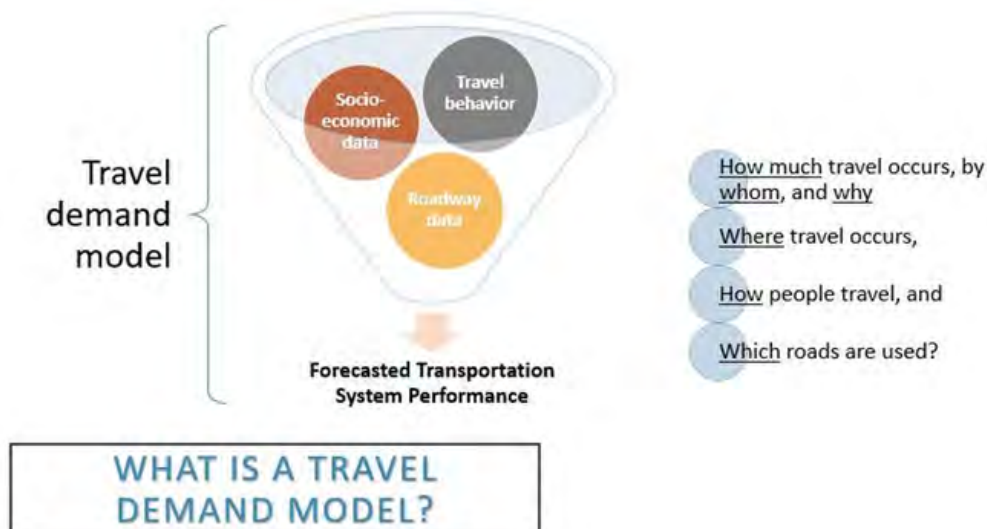


CHAPTER EIGHT

Travel Demand Model

MACC LRTP TRAVEL DEMAND MODEL

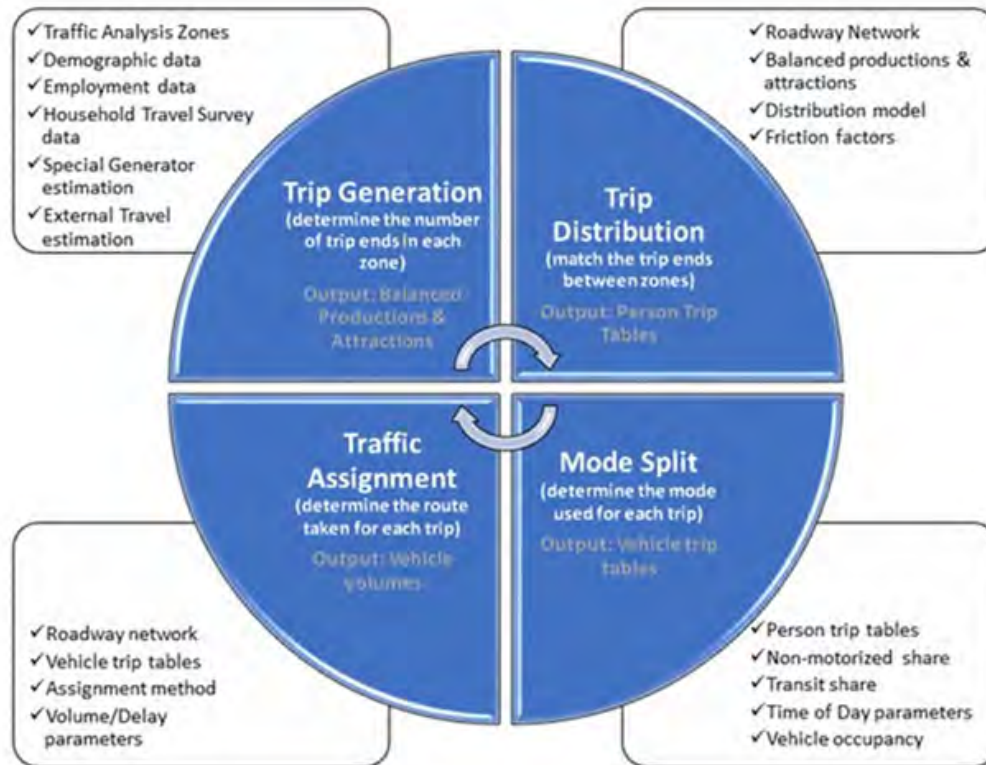
Travel demand forecasting models (TDMs) are a major analysis tool for the development of long-range transportation plans. These mathematical models attempt to estimate the number of trips, connect their origins and destinations, forecast the mode of travel, and identify the roadways or transit routes most likely to be used in completing a trip. Models are used to try to determine where future transportation problems are likely to occur, as indicated by modeled roadway congestion. Once identified, the model can test the ability of roadway to address those problems. The travel demand model provides an important decision-making tool for the MPO Metropolitan Transportation Plan development as well as any transportation related studies that might follow. The modeling process is a systems-level effort. Although individual links of a highway network can be analyzed, the results are intended for determination of system-wide impacts. At the systems level, impacts are assessed on a broader scale than the project level. The model is a computer estimation of current and future traffic conditions and is built and ran through TransCAD software.



MACC LRTP TRAVEL DEMAND MODEL

- The model generates a synthetic population of households based on the aggregate characteristics of the population encoded in the traffic analysis zones (TAZ).
- The level of vehicle ownership is applied to the household.
- The number of trips of various purposes (work, school, other, etc.) are predicted for each household.
- The dominant mode of travel (private automobile, bus, walking/biking) is modeled for the household's trip of each purpose.
- Probable destinations of each trip type are chosen.
- Finally, the trips are assigned to the roadway network and routes are chosen such that travelers minimize their travel time and costs.

COMPONENTS OF THE MODEL



TRAFFIC ANALYSIS ZONE (TAZ)

The Traffic Analysis Zone (TAZ) is the primary geographical unit of analysis of the travel demand model and it represents the origins and destinations of the travel activity within the model area. TAZ's are determined based on several criteria including similarity of land use, compatibility with jurisdictional boundaries, presence of physical boundaries, and compatibility with the road system. Streets and natural features such as rivers are generally utilized as zone boundary edges. TAZ's vary in size depending on population, employment, and road network density. Each TAZ includes population and employment data (aggregated from census blocks) which is fed into the Travel Demand Model.

ROAD NETWORK

Using the TransCAD software, a traffic network is built to represent the existing road system. The Model network includes most roads within the study area classified as a minor collector or higher by the national functional classification system. Other roads are added to provide continuity and/or allow interchange between these facilities.

Transportation system information or network attributes required for each link include facility type, area type, lane width, number of through lanes, parking availability, national functional classification and traffic counts (based on availability).

Link capacities and free flow speeds are determined based on network attributes such as national functional classification, facility type, and area type. These features of the road network are used in the traffic assignment process and in determining traffic conditions.

SOCIO-ECONOMIC (SE) DATA & POPULATION SYNTHESIS

Travel demand models are driven, in part, by the relationship of land use activities and characteristics of the transportation network. Inputs to the modeling process include the number of households, population-in households, vehicles, and employment located in each TAZ. These characteristics are generally referred to as socioeconomic data (SE-Data). The collection and verification of the SE-Data was a collaborative effort between the MPO and MDOT. Household, population, and employment data were derived from several sources including the U.S. Census, the American Community Survey, and the Nielson employment database. For the future years of the model, multiple sources were utilized including the Regional Economic Models Incorporated (REMI) TranSight Model, the MDOT Statewide Travel Demand Model, and input from the MPO & local agencies.

The travel demand model generates a synthetic population of households based on the demographic information associated with the traffic analysis zones. For each zone, individual households are created. Each household has a total number of persons, workers, and students. Each household also has an income variable that indicates whether the household belongs to the lower, middle, or upper-income category. The number of vehicles available to each household is modeled separately, after the population synthesis, based on these variables and other variables describing the zone in which the household is located.

TRIP GENERATION

The trip generation process calculates the number of person-trips produced from or attracted to a zone, based on the socio-economic characteristics of that zone. The relationship between person-trip making and land activity is expressed in equations for use in the modeling process. The formulas were derived from MI Travel Counts Michigan travel survey data and other research throughout the United States. Productions were generated with a cross-classification look-up process based on household demographics. Attractions were generated with a regression approach based on employment and household demographics. To develop a trip table, productions and attractions must be balanced. Walk/bike trips are calculated using a factor for each trip purpose derived from the MI Travel Counts travel survey data. The walk/bike trips are removed from the production/attraction table before trip distribution is performed.

Trips that begin or end beyond the study area boundary are called "External trips." These trips are made up of two components: external to internal (EI) or internal to external (IE) trips and through-trips (EE). EI trips are those trips which start outside the study area and end in the study area. IE trips start inside the study area and end outside the study area. EE trips are those trips that pass through the study area without stopping; this matrix is referred to as the through-trip table.

TRIP DISTRIBUTION

Trip distribution involves the use of a mathematical formula which determines how many of the trips produced in a TAZ will be attracted to each of the other TAZs. It connects the ends of trips produced in one zone to the ends of trips attracted to other TAZs. The equations are based on travel time between TAZs and the relative level of activity in each zone. Trip purpose is an important factor in the development of these relationships. The trip relationship formula developed in this process is based on principals and algorithms commonly referred to as the Gravity Model.

The process that connects productions to attractions is called trip distribution. The most widely used and documented technique is the "gravity model" which was originally derived from Newton's Law of Gravity. Newton's Law states that the attractive force between any two bodies is directly related to the masses of the bodies and inversely related to the distance between them. Analogously, in the trip distribution model, the number of trips between two areas is directly related to the level of activity in an area (represented by its trip generation) and inversely related to the distance between the areas (represented as a function of travel time).

Research has determined that the pure gravity model equation does not adequately predict the distribution of trips between zones. The value of time for each purpose is modified by an exponentially determined "travel time factor" or "F factor" also known as a "Friction Factor." "F factors" represent the average area-wide effect that various levels of travel time have on travel between zones. The "F factors" used were developed using an exponential function described in the Travel Estimation Techniques for Urban Planning, NCHRP 716, and calibrated to observed trip lengths by trip purpose derived from the MI Travel Counts travel survey data. The F factor matrix is generated in TransCAD during the gravity model process.

The primary inputs to the gravity model are the normalized productions (P's) and attractions (A's) by trip purpose developed in the trip generation phase. The second data input is a measure of the temporal separation between TAZs. This measure is an estimate of travel time over the transportation network from TAZ to TAZ, referred to as "skims." In order to more closely approximate actual times between TAZs and to account for the travel time for intra-zonal trips, the skims were updated to include terminal and intra-zonal times. Terminal times account for the non-driving portion of each end of the trip and were generated from a look-up table based on area type.

They represent that portion of the total travel time used for parking and walking to the actual destination. Intra-zonal travel time is the time of trips that begin and end within the same zone. Intra-zonal travel times were calculated utilizing a nearest-neighbor routine.

The Gravity Model utilizes the P's & A's by trip purpose, the "F factors", and the travel times, including terminal and intra-zonal to create a TAZ-to-TAZ matrix of trips for each trip purpose for the model.

MODE CHOICE

The number of person trips and their trip starting and ending points have been determined in the trip generation and trip distribution steps. The mode choice step determines how each person's trip will travel. The travel demand model uses a simplified mode choice to predict mode choice. The process uses a qualitative measure of transit network service at the zonal level to estimate transit mode shares. The transit trips are accounted for but not assigned to a specific route. The split between single occupancy vehicles (SOV) and shared ride trips (SR2 & SR3+) is based on the average auto occupancy for the applicable trip purpose. The output to this step is a vehicle trip matrix by trip purpose. The external trips and the truck trips, which are originally developed as vehicle trips which eliminates the need of the mode choice step for these trip purposes, are added to the vehicle trip matrix.

ASSIGNMENT

Traffic assignment is the final step in the traditional four step TDM process. In this step, trips are assigned to a "route" (or path) on the roadway network between each trip origin and destination. The basic premise of trip assignment is that trip makers will choose the "best" path between each origin and destination. The determination of the "best" path is based upon selecting the route with the least "impedance". Impedance, in this application, is based upon travel time – calculated as a function of link distance and speed (and later as a function of link volume and capacity). Essentially, trip makers on the roadway network will choose the route, between each trip origin and destination, which minimizes travel time.

The "User Equilibrium" algorithm (a commonly used algorithm) is employed in the traffic assignment component. User equilibrium is based on the principle that while selecting the "best" route, trip makers will use "all" possible paths between an origin and destination that have equal travel time – so that altering paths will not save travel time. This algorithm attempts to optimize the travel time between all possible paths, reflecting the effects of system congestion.

Thus, the product of the traffic assignment component is a series of vehicle-trip (volume) tables, by mode, for each link in the model roadway network. These “assigned” link volumes are then compared to “observed” traffic data as part of the model calibration, validation, and reasonability-checking phase of the overall modeling process.

APPLICATIONS OF THE VALIDATED TRAVEL DEMAND MODEL

Generally, three distinct alternative scenarios are developed for a LRTP:

1. Simulated Base Year (2019) volumes assigned to the Base Year (2019) Roadway Network; this scenario includes the assignment of 2019 model volumes, generated using 2019 SE data, onto the roadway network representing 2019 conditions. This is referred to as the "validated", existing network scenario, or "base-year" alternative, and is a prerequisite for the other two scenarios.

*As a result of the COVID-19 pandemic, 2020 presented a unique shift in terms of travel patterns and the collection efforts of traffic counts. Since the model is a long-term forecast model, the 2019 traffic counts provide a more reliable source for representing the base-year travel characteristics of the region.

2. Simulated Forecast Year (e.g. 2050) volumes assigned to a Modified Base Year Roadway Network; this scenario includes the assignment of 2050 volumes, generated using 2050 SE data, onto an amended roadway network representing 2019 conditions, and including any improvements completed since 2019 and future (near term) improvements for which funds have been "committed". This alternative characterizes future capacity and congestion problems if no further improvements to the transportation system are made. This "congestion analysis" on the "existing plus committed" (E+C) network is also called the "do nothing", or "no-build" alternative, and includes only the E+C roadway system.

3. Simulated Forecast Year (e.g. 2050) volumes on a proposed Forecast Year (e.g. 2050) Roadway Network; this scenario includes the assignment of 2050 volumes, generated using 2050 SE data, onto the roadway network as it is proposed to exist in the forecast year of 2050. This scenario is the long-range transportation plan "build" alternative. It includes the E+C roadway network, plus proposed capacity improvement and expansion projects.

SYSTEM ANALYSIS

Once the base and future trips have been estimated, a number of transportation system analyses can be conducted:

- Roadway network alternatives to relieve congestion can be tested as part of the LRTP. Future traffic can be assigned to an amended, existing roadway network (i.e. “No Build” Network) to represent the future impacts to the transportation system if no improvements were made. From this, improvements and/or expansions can be planned that could help alleviate demonstrated capacity issues.
- The impact of planned roadway improvements or expansions can be assessed.
- Individual links can be analyzed to determine which TAZs are contributing to the travel on that link (i.e. the link's service area). This can be shown as a percentage breakdown of total link volume.
- The impacts of land use changes on the roadway network can be evaluated (e.g. what would be the impact of a new major retail establishment).
- Road closure/detour evaluation studies can be conducted to determine the effects of closing a roadway and detouring traffic during construction activities. This type of study is very useful for construction management.

ANALYSIS

With the completion of the travel demand model, areas of potential congestion in the roadway network were identified based on the modeled volume to modeled road capacity ratios of the links, generally referred to as V/C. This means that the higher the V/C ratio, the higher the chances are that the roadway could experience congestion. In the examples below, the following can V/C ranges (potential congestion) of the model can be interpreted as follows:

V/C >.81: Traffic fills capacity of the roadway, vehicles are closely spaced, incidents can cause serious breakdown.

V/C = .61-.8: Movements more restricted, travel speeds begin to decline.

V/C = .41-.6: Stable condition, movements somewhat restricted due to higher volumes, but not objectionable for motorists.

V/C = .21-.4: Minimum delay, stable traffic flow.

V/C = 0-.2: Free flow, low traffic density.

The regional travel demand model identifies areas where traffic congestion is expected and highlights roadway segments that are congested or are close to capacity (in the years 2023 and 2050). It is important to understand that the modeling process is most effective for system-level analysis. Although detailed volumes for individual intersections and "links" of a highway are an output of the model, additional analysis and modification of the model output may be required for project-level analysis. The accuracy of the model is heavily dependent on the accuracy of the socio-economic data and network data provided by the local participating agencies, and the skill of the users in interpreting the reasonableness of the results.

2023

The Base Year scenario shows the existing conditions of the area-wide transportation system as it was in 2023. There is little traffic congestion in the majority of the MACC road network.

According to the model, the following corridors were identified as likely to experience congestion: See Figure 8.1

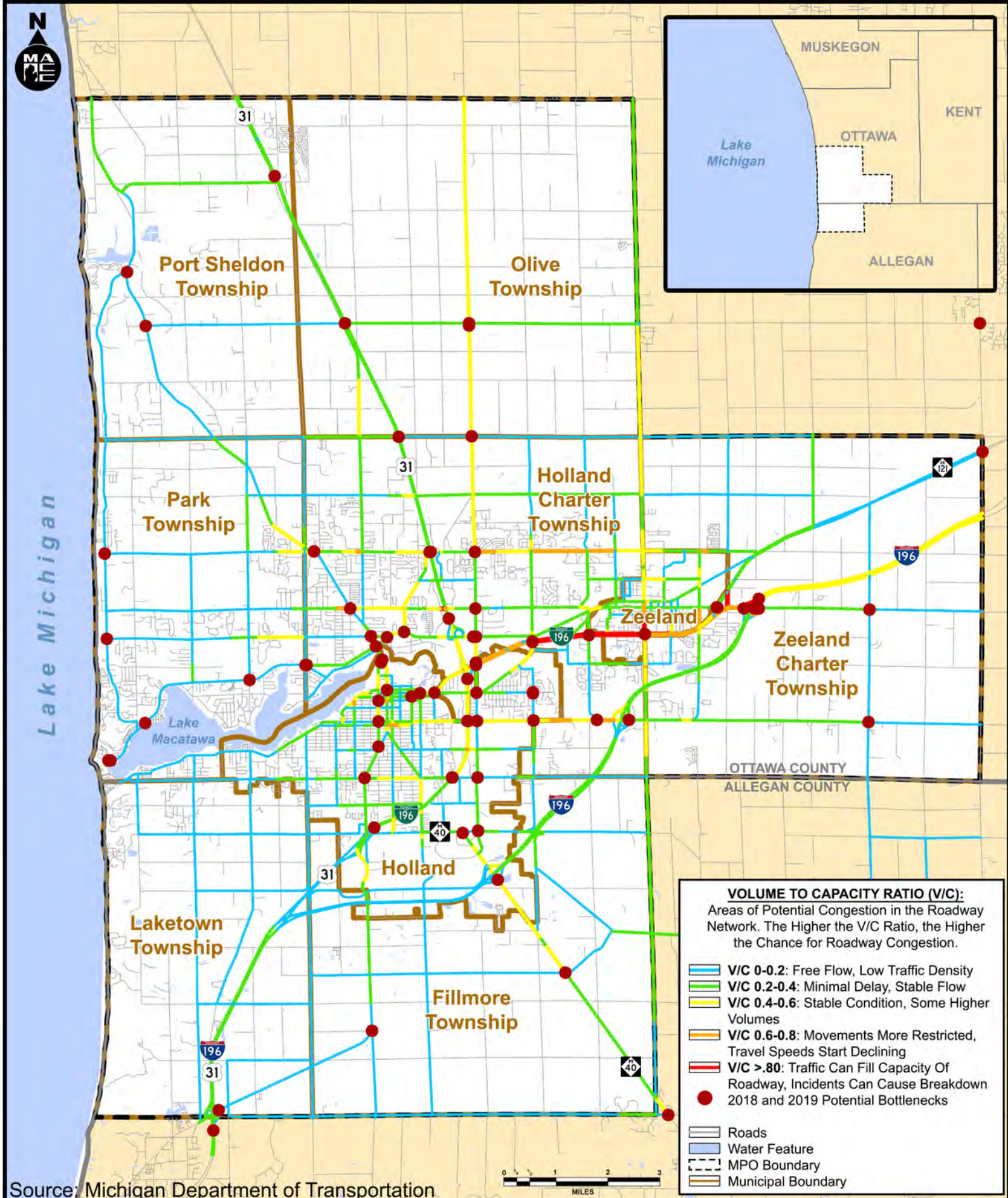
- I-196 BL Eastbound/Westbound (I-196 to US-31)
- James St. & Butternut Dr.
- 32nd St. (Michigan Ave. to State St.)
- 16th St. (River Ave. to I-196)
- River Ave. (Michigan Ave./State St. to Lakewood Blvd.)
- US-31 (Chicago Dr. to Lincoln Ave.)
- Riley St. (120th Ave. to 96th Ave.)

2050

The 2050 scenario shows forecasted conditions of the area-wide transportation system including both committed projects and proposed capacity improvements and expansion projects. In general, congestion increased slightly along the same corridors highlighted from the 2019 model results with additional sections of Pine Avenue, 8th Street, and 120th Avenue

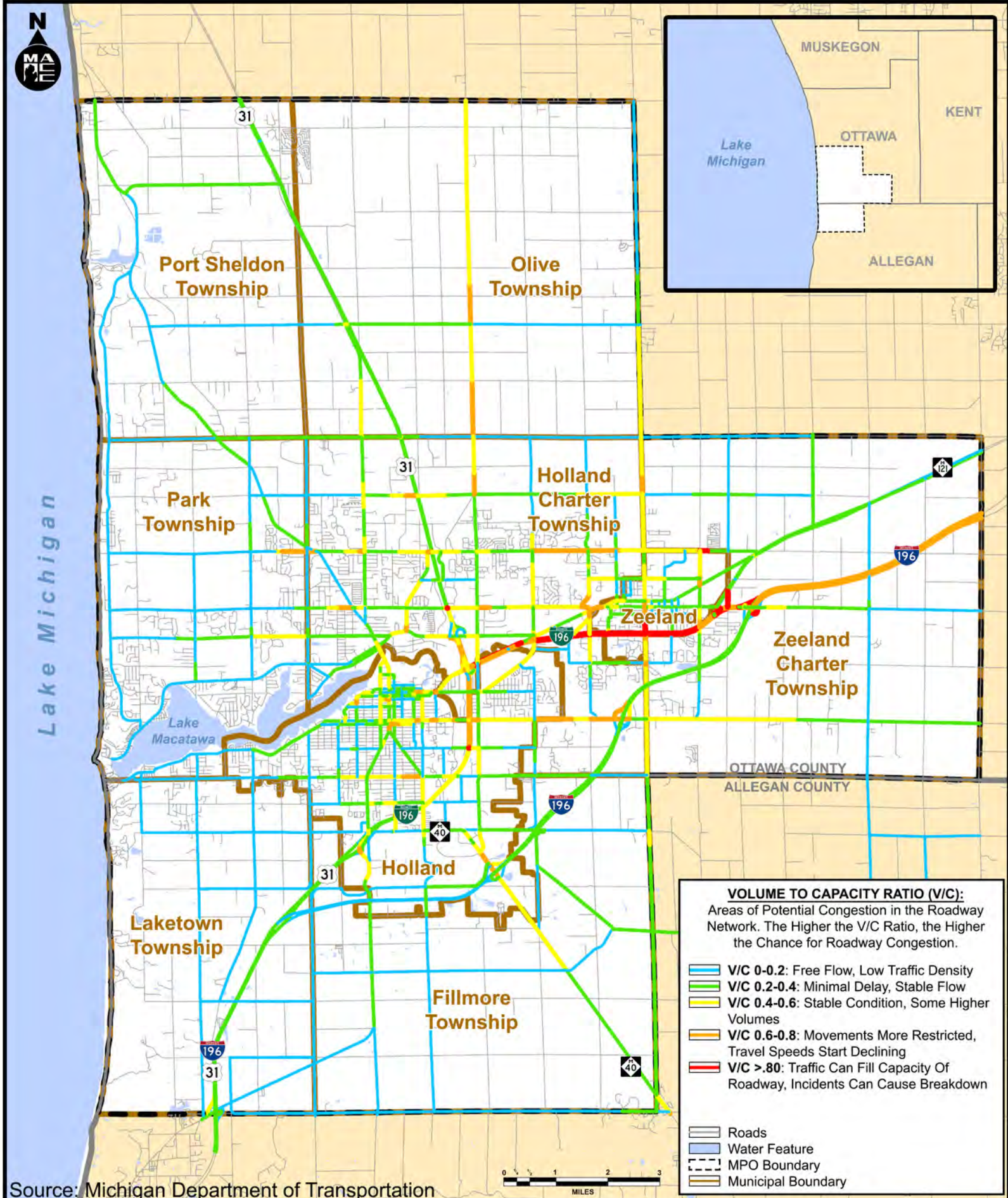
The 2050 model predicts the following corridors will likely experience congestion in the future: See Figure 8.2

- I-196 BL Eastbound/Westbound (I-196 to US-31)
- James St. (144th Ave. to Butternut Dr.)
- 32nd St. (Ottawa Ave. to Lincoln Ave.)
- 16th St. (River Ave. to I-196)
- River Ave. (Michigan Ave./State St. to Lakewood Blvd.)
- US-31 (Chicago Dr. to Lincoln Ave.)
- Riley St. (120th Ave. to 96th Ave.)
- Pine Ave. (9th St. to River Ave.)
- Waverly/120th Ave. (Lakewood Blvd. to Ottogan St.)

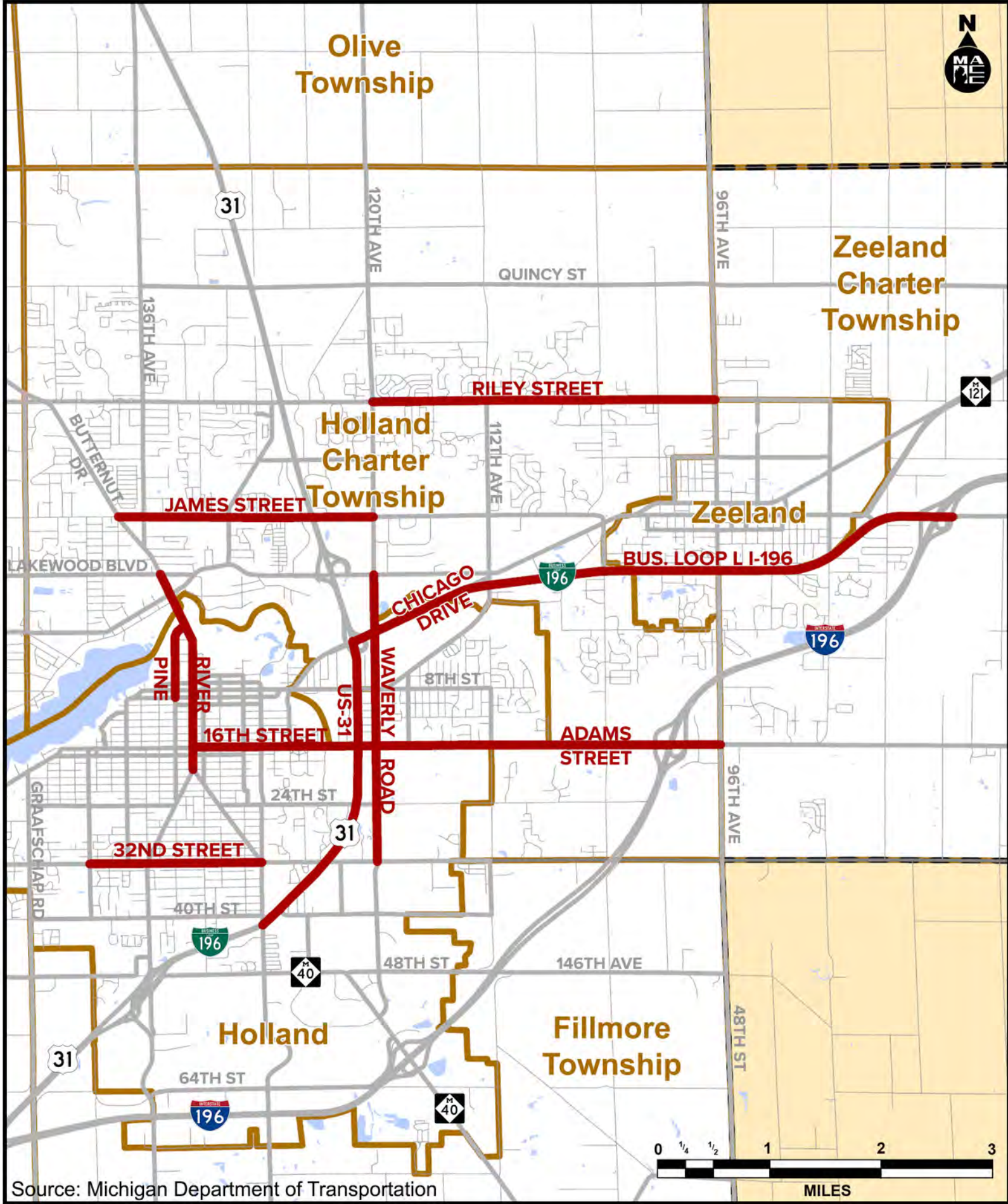


Base Year Congestion (2023)

Figure 8.1



Model Year Congestion (2050)
 Figure 8.2



Likely Corridor Congestion (2050)

Figure 8.3

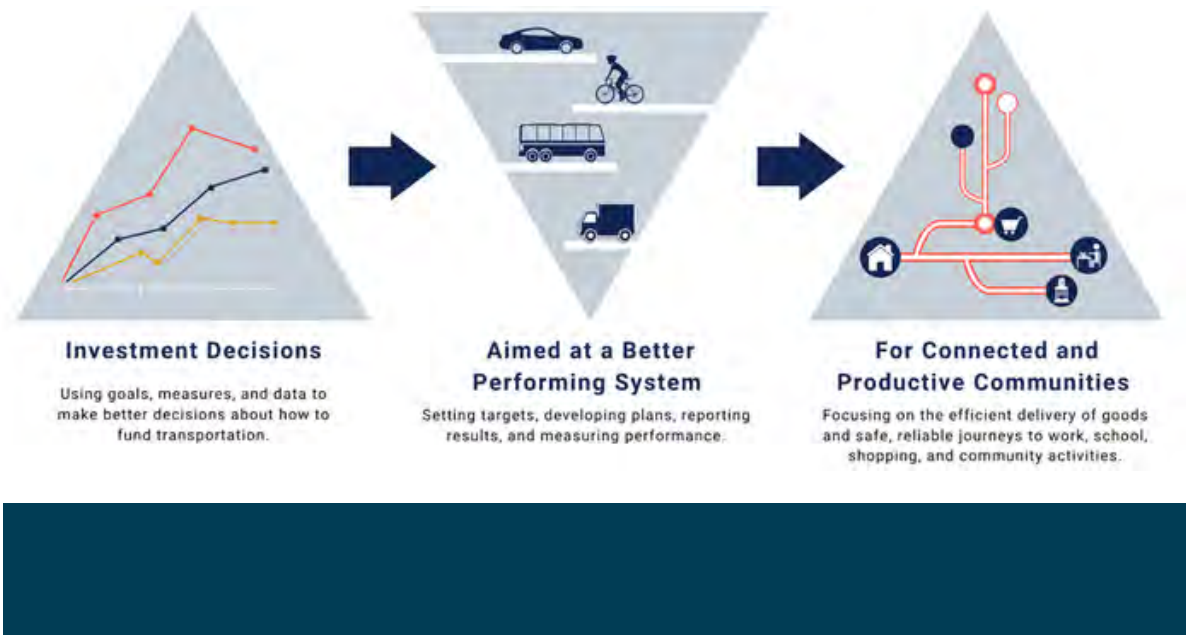


CHAPTER NINE

Performance Measures

PERFORMANCE-BASED PLANNING

Performance-based planning and programming have become a focus in the transportation community as a way to ensure that resources are used effectively and transparently to achieve goals. The objective of a performance-based transportation program is for states and metropolitan planning organizations (MPOs) to invest resources in projects that collectively make progress toward the achievement of national goals. As demonstrated in the graphic below, the Federal Highway Administration (FHWA) defines Transportation Performance Management (TPM) as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Federal rules identify seven areas of performance goals: safety, pavement and bridge condition, system reliability, congestion reduction, freight movement, environmental sustainability, and reduced project delivery delay. The MACC is required to incorporate the first three goals along with a fourth transit target.



The MACC has taken steps to incorporate performance measures and targets into the transportation planning process by using a performance-based approach in its planning activities and when building the Transportation Improvement Program (TIP) and Long-Range Transportation Plan (LRTP). The MACC supports adjusting its long-term planning strategies as necessary to assist the State of Michigan in reaching performance goals. It is the intention that any improvements made within the MACC area, which receives federal funds, will help support at least one of the targets set by the State of Michigan. A System Performance Report, which can be found in the appendix, looks at both state and local trends and provides information and feedback that allows for making any revisions in investment decision-making as required over the duration of the LRTP.

TRANSPORTATION PERFORMANCE MANAGEMENT FRAMEWORK

The U.S. Department of Transportation developed a framework that establishes a feedback loop between performance results and future planning. The framework sets up a process in which a strategic direction is set, standard analysis is conducted to identify trends and establish achievable future targets, available funding is programmed to support the achievement of the targets, and performance is monitored to evaluate and adjust future target setting and programming decisions. There are four main goals of the framework.

GOALS OF THE FRAMEWORK

- Be applied on a regular, ongoing process.
- Provide key information to help decision-makers, allowing them to understand the consequences of investment decisions across transportation assets or modes.
- Improve communication between decision-makers, stakeholders, and the traveling public.
- Ensure targets and measures are developed in cooperative partnerships and based on data and objective information.

FEDERAL REQUIREMENTS

The passage of Federal legislation in 2012, the Moving Ahead for Progress in the 21st Century Act (MAP 21), strengthened the growing focus within transportation agencies on using performance-based approaches in transportation planning. The law requires agencies to set targets in relation to established national performance measures and requests coordination between States and MPOs when setting targets to ensure consistency. These requirements are continued in the BIL.

FEDERAL REQUIREMENTS FOR PERFORMANCE- BASED PLANNING

Metropolitan transportation planning: “[MPOs]..., in cooperation with the State and public transportation operators, shall develop long-range transportation plans and transportation improvement programs through a performance-driven, outcome-based approach to planning.” 23 USC § 134(c)(1); 49 USC § 5303(c)(1). “The metropolitan transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decision making to support the national goals....” 23 USC §134(h)(2); 49 USC § 5303(h)(2). During the TIP development process, the MACC uses performance measures to guide project prioritization.

Statewide and nonmetropolitan transportation planning: “The statewide transportation planning process shall provide for the establishment and use of a performance-based approach to transportation decision making to support the national goals...and the general purposes [of the public transportation program]. The performance measures and targets established [in relation to national performance measures] shall be considered by a State when developing policies, programs, and investment priorities reflected in the statewide transportation plan and statewide transportation improvement program.” 23 USC § 135(d)(2); 49 USC § 5304(d)(2).

STATE SUPPORTED TARGETS

SAFETY

The latest annual State targets for safety performance measures were released by MDOT on August 31, 2022, and were adopted by the MACC’s Policy Board on January 9, 2023. Safety predictions are based on the current trends in the data and determined through models developed by the University of Michigan Transportation Institute. Five-year rolling averages are used for the baseline assumptions. Final safety targets were developed after evaluating the correlation between traffic crashes, VMT, Gross Domestic Product (GDP) per capita, and other economic factors that impact travel. FHWA strongly suggests that targets should be based on trends and projections, and not be simply aspirational. There are currently 24 projects programmed in the MACC’s FY23-26 TIP that are specifically geared toward the improvement of safety.

SAFETY PERFORMANCE MEASURES (STATE OF MICHIGAN 2023)

Safety Performance Measure	Baseline Condition (2017-2021)	Calendar Year 2023 State Safety Target
Fatalities	1,041.8	1,105.6
Fatality Rate*	1.071	1.136
Serious Injuries	5,742.2	5,909.2
Serious Injury Rate*	5.878	6.058
Nonmotorized Fatalities & Serious Injuries	752.0	743.4

*Michigan State Safety Targets (Rate Per 100 Million Vehicle Miles Traveled)

PAVEMENT & BRIDGE CONDITION

MDOT has developed two-year and four-year targets for the National Highway System (NHS) separated by the Interstate and the non-Interstate. The performance measures focus on pavement conditions that are good or poor. Metrics include an International Roughness Index (IRI), cracking, rutting, and faulting.

MDOT has also developed a system to evaluate bridge conditions. The table below illustrates that bridge conditions throughout the state are expected to decline at a rate faster than improvements can be made. There are currently 27 projects programmed in the MACC’s FY23-26 TIP that specifically target improving pavement and bridge conditions.

National Highway System Bridge Performance Measures

Bridge Performance Measure	Baseline Condition (2022-2025)	2-Year Predicted Performance (Target)	4-Year Predicted Performance (Target)
% Of National Highway System Deck Area in Good Condition	22.1%	15.2%	12.8%
% Of National Highway System Deck Area in Poor Condition	7.0%	6.8%	5.8%

Source: MDOT National Highway System (NHS) Bridge Targets

National Highway System Pavement Performance Measures

Pavement Performance Measure	Baseline Condition (2022-2025)	2-Year Predicted Performance (Target)	4-Year Predicted Performance (Target)
% Of Interstate Pavement in Good Condition	70.4%	59.2%	56.7%
% Of Interstate Pavement in Poor Condition	1.8%	5.0%	5.0%
% Of Non-Interstate Pavement in Good Condition	41.6%	33.1%	33.1%
% Of Non-Interstate Pavement in Poor Condition	8.9%	10.0%	10.0%

Source: MDOT National Highway System (NHS) Pavement Targets

SYSTEM RELIABILITY

MDOT has developed targets for travel time reliability on the NHS for Interstate and non-Interstate roads. Freight reliability is also included and is a separate measure. Data on travel time is evaluated to see how it varies over time and to demonstrate consistency. The definitions below help to explain the difference between congestion and travel time reliability:

Congestion – occurs when there are too many vehicles at the same place at the same time (demand exceeds supply). An increase in congestion usually results in a decrease in the “quality” of the driving experience. An increase in congestion relates to an increase in the “use of the system” and usually occurs during the “peak” periods of the day. Most travelers are accustomed to everyday congestion – they can plan for it.

Travel Time Reliability – relates to the consistency or dependability in travel time, and is measured from day to day, or across different times of the day. Unreliable travel times usually occur during the “peak” periods of the day, and most travelers are less tolerant of “unexpected” delays – as they can’t plan for them. Michigan’s highways have been around 85 percent reliable, meaning 85 percent of person-miles traveled are meeting the federally established thresholds. Due to longer travel times, the freight reliability measure is calculated using the 95th percentile travel time.

National Highway System Travel Time Reliability

System Reliability	Baseline Condition (2022-2025)	2-Year Predicted Performance (Target)	4-Year Predicted Performance (Target)
Percent of the Reliable Person-Miles Traveled on the Interstate Based on 80th Percentile Over 4 Time Periods	97.1%	80.0%	80.0%
Percent of the Reliable Person-Miles Traveled on the Non- Interstate Based on 80th Percentile Over 4 Time Periods	94.4%	75.0%	75.0%
Truck Travel Time Reliability (TTTR) Index on the Interstate Based on the 95th Percentile Over 5 Time Periods	1.31	1.60	1.60

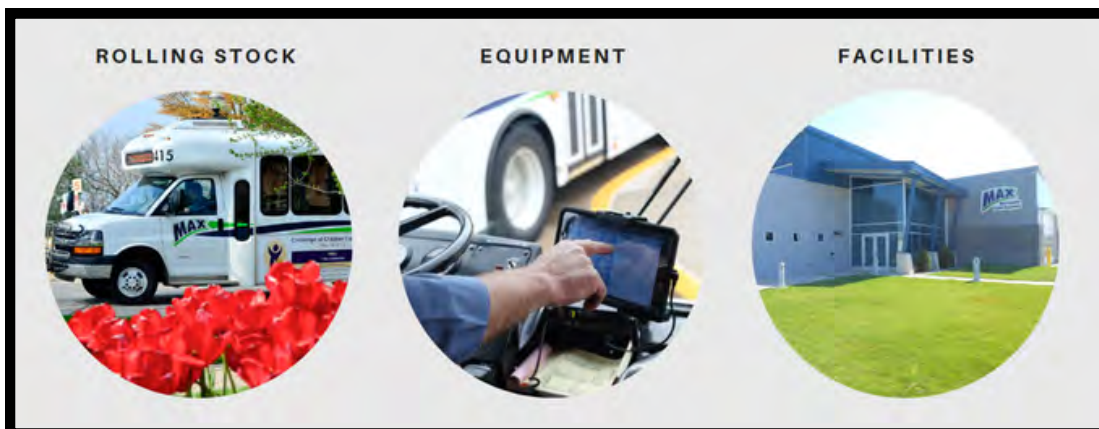
Source: MDOT National Highway System (NHS) Travel Time Reliability Targets

PUBLIC TRANSPORTATION

Transit agencies nationwide vary in size, services, and needs leading the Federal Transit Administration (FTA) to require each agency to develop and submit a Transit Asset Management (TAM) plan by October 1, 2018. Updates to the TAM plan are required at a minimum of every four years, but updates can be submitted sooner. The purpose of the TAM plan is to record the current condition of each federally funded asset owned or maintained by an agency to achieve or maintain a State of Good Repair (SGR), defined as assets above marginal or poor condition ratings. Each asset’s condition is ranked on a scale of 1 to 5, with the ratings being classified as the following:

- 5 - Excellent** - No visible defects, new or near new condition, may still be under warranty if applicable
- 4 - Good** - Good condition, but no longer new, may have some slightly defective or deteriorated component(s) but is overall functional
- 3 - Adequate** - Moderately deteriorated or defective components; but have not exceeded useful life
- 2 - Marginal** - Defective or deteriorated component(s) in need of replacement; exceeded useful life
- 1 - Poor** - Critically damaged component(s) or in need of immediate repair; well past useful life

The federal rules for Transit Asset Management noted that the new standards are meant to help transit agencies keep their systems operating smoothly and efficiently while working at the same time to reduce the nation’s backlog of needed transportation improvements. The Macatawa Area Express Transit Authority (MAX Transit) has prepared a TAM plan and approved SGR targets. The transit agency also created targets, which are adopted by the MACC Policy Board. Transit performance targets include revenue vehicles, equipment, and facilities. The table on the next page shows the performance targets for MAX Transit for the fiscal year 2024.



Revenue Vehicles - MAX Transit expects its full-service revenue fleet to remain within the Useful Life Benchmark (ULB) threshold. Buses, cutaways, and vans are targeted for replacement after reaching FTA’s Useful Life age but before the ULB (or maximum age) is met.

Equipment – MAX Transit is typically able to utilize some of its non-revenue/service automobiles (road supervisor, staff, and maintenance vehicles) slightly beyond the 8-year Useful Life Benchmark provided preventative maintenance costs remain reasonable.

Facilities – MAX Transit owns and operates two facilities, Padnos and Greenway. They are expected to remain well above a 3.0 score. Building systems are monitored monthly and scores are calculated following inspections of each facility's HVAC, substructure, electrical, fire protection, rooftop, and plumbing systems.

MAX Transit Annual Performance Target (FY2024)

Asset Category	Performance Measures	FY2024 Target
ROLLING STOCK		
Bus	Age - % of Revenue Vehicles Within a Particular Asset Class That Have Met Or Exceeded Their Useful Life Benchmark (ULB)	10%
Cutaway Bus		5%
Rubber Tire Vintage Trolley		0%
Van		0%
EQUIPMENT		
Non-Revenue/Service Automobile	Age - % of Vehicles That Have Met or Exceeded Their ULB	0%
Non-Vehicle Equipment (>\$50,000)		0%
FACILITIES		
Maintenance	Condition - % of Facilities With a Condition Rating Below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	0%
Passenger Facilities		0%

Source: MAX Transit Authority

PUBLIC TRANSPORTATION AGENCY SAFETY PLAN

In January 2021, the MACC approved MAX’s Public Transportation Agency Safety Plan (PTASP). The PTASP is a plan that standardizes how each transit authority focuses on safety concerns and identifies weaknesses while considering risks and risk management throughout the agency. The document was discussed during the February 24, 2020 meeting of the MACC Policy Committee. At that time, it was noted that the safety plan would include performance measures to be brought to the MACC for incorporation into the TIP. Requirements of the Public Transportation Agency Safety Plan are noted below:

Certification of Compliance

- Each transit agency must annually certify via FTA’s Certifications and Assurances process that its safety plan meets the requirements of the final rule.
- States must certify safety plans on behalf of small public transportation providers that operate 100 or fewer vehicles in peak revenue service within their states unless providers opt to certify their own safety plans upon notification to the state.

Documentation and Recordkeeping

- A transit agency must maintain documents that set forth its safety plan, including those related to SMS implementation.
- These documents must be made available upon request by FTA and other agencies with safety jurisdiction, such as the National Transportation Safety Board (NTSB) and State Safety Oversight Agencies (SSOAs).
- A transit agency must maintain these documents for a minimum of three years after they are created.

Mode of Transit Service	Fatalities (Total)	Fatalities (Per 100K VRM)	Injuries (Total)	Injuries (Per 100K VRM)	Safety Events (Total)	Safety Events (Per 100K VRM)	System Reliability (Failures/100K VRM)
Fixed Route	0	0	3	0.00003	3	0.00003	90/ 0.0009
Demand Response	0	0	5	0.00005	2	0.00002	85/ 0.00085

Source: MAX Transit

The MAX Authority Board approved the PTASP in May of 2020. MAX Transit prepares an annual report with highlights from the five-year statistics and includes a narrative explaining how the risk assessment matrix has been used to monitor and assess future risks. For the occasional, probable, and frequent incidents, the narrative would include examples from the five-year data and explain how the safety risk index would be used to determine whether to “accept the safety risk with monitoring or require additional action (medium)” or whether “safety risk must be mitigated or eliminated (high)”. MAX will continue to evaluate safety records and incorporate safety performance in the training of new drivers, and retraining existing drivers.

SEVERITY CATEGORIES			
DESCRIPTION	LEVEL	INDIVIDUAL ITEM	SYSTEM OR VEHICLE FLEET
FREQUENT	A	Continuously Experienced	More Than 10 Events Throughout The Year
PROBABLE	B	Likely to Occur Frequently	No Fewer Than 5 and No More Than 10 Events Throughout the Year
OCCASIONAL	C	Likely to Occur Several Times	No Fewer Than 2 and No More Than 5 Events Throughout the Year
REMOTE	D	Unlikely, But Can Be Reasonably Expected to Occur	Fewer Than 2 Documented Events During the Year
IMPROBABLE	E	Unlikely to Occur, But Possible	0 To 1 Documented Events Throughout the Year

Source: MAX Transit



CHAPTER TEN

Future Planned Projects

FUTURE PLANNED PROJECTS

To meet the current and future needs of the MACC region, our transportation system must both sustain existing infrastructure in a state of good repair as well as recondition the system to expand access, increase safety, improve local quality of life, reduce the impacts of large weather events, and implement innovations in transportation technology.

Due to the Transportation Improvement Program (TIP) process, the MACC region knows which projects in our area will have federal funds available for the fiscal years of 2023-2026. The 2050 LRTP's project list is made up of current FY2023-2026 TIP projects as well as any roadway preservation or capacity changing project in the MACC region that has reasonably assumed funding, essentially meaning, that while a project may not currently have funding attached to it, possibly due to a later construction year, it is assumed that funding will be available in the future based on historically available funding levels. It should also be stressed that the construction of all projects is not guaranteed, as unforeseen factors could prevent or delay construction.

Other projects that may occur but currently do not have a set funding source, construction date, or are simply still in the exploratory phase are included in an illustrative list in the appendix. Also in the illustrative list are any projects that are likely to be built between the years 2023-2026 with local funds but are not currently in the MACC's TIP.

The 2050 LRTP contains 291 projects totaling around \$215.3 million that work to improve the transportation system in the MACC. Note that while reviewing the list of projects for years 2027-2050, two columns show project cost. The first is the total estimated budget amount in current 2023 dollars the second is the total estimated job cost which is based on an estimated 4% inflation in project costs and is tied to the year open to traffic. A map of the projects shown in the list can be found in the appendix.



ROAD

Between the fiscal years of 2023-2026, there will be 48 programmed jobs within the road category. This grouping can be quite wide-ranging and includes projects such as resurfacing, bridge repair, traffic safety improvements, and the installation of Intelligent Transportation Systems (ITS). It is estimated that \$37,807,720 in federal funds will be invested in roadways in the MACC planning area over the four years. State match will likely be around \$6,122,889, and local match near \$10,380,559.



TRANSIT

Over the next four years, there are 43 jobs programmed that relate to public transportation. There are various funding sources for transit activities, but generally, funding is broken up into operating and capital expenses. For instance, one funding type may be allocated to support building/facility infrastructure, while another type may support the mobility of senior citizens or those with disabilities. The MACC area is expected to receive \$8,667,483 in federal assistance for these programs. State match will likely be around \$7,233,336, and the local match is estimated to be around \$4,953,381. The 2050 LRTP's project list shows specific projects past FY 2026 for transit, and the MACC is expecting funding to be available and will work to ensure that the system is maintained and enhanced over the life of the plan (2024-2050). Funding projections for transit can be found in the financial chapter ([chapter 11](#)).

While not finalized, West Michigan may see commuter bus service operating between Holland and Grand Rapids along the Chicago Drive corridor in the near future. The West Michigan Express Study is an effort to link communities in West Michigan with commuter-based public transportation. The study plans to begin with an express bus service spanning the area before potentially establishing a commuter rail to enhance economic growth. The current plan looks to acquire, lease or contract eight to ten coach-style buses to transport workers each day to and from work along the corridor. Full trips between Holland and Grand Rapids are expected to take just under an hour, with intermediate stops planned for Zeeland, Hudsonville, and Grandville. The tentative launch date was set for some time in the fall of 2020, but has been pushed back due to the lingering effects of the COVID-19 pandemic.

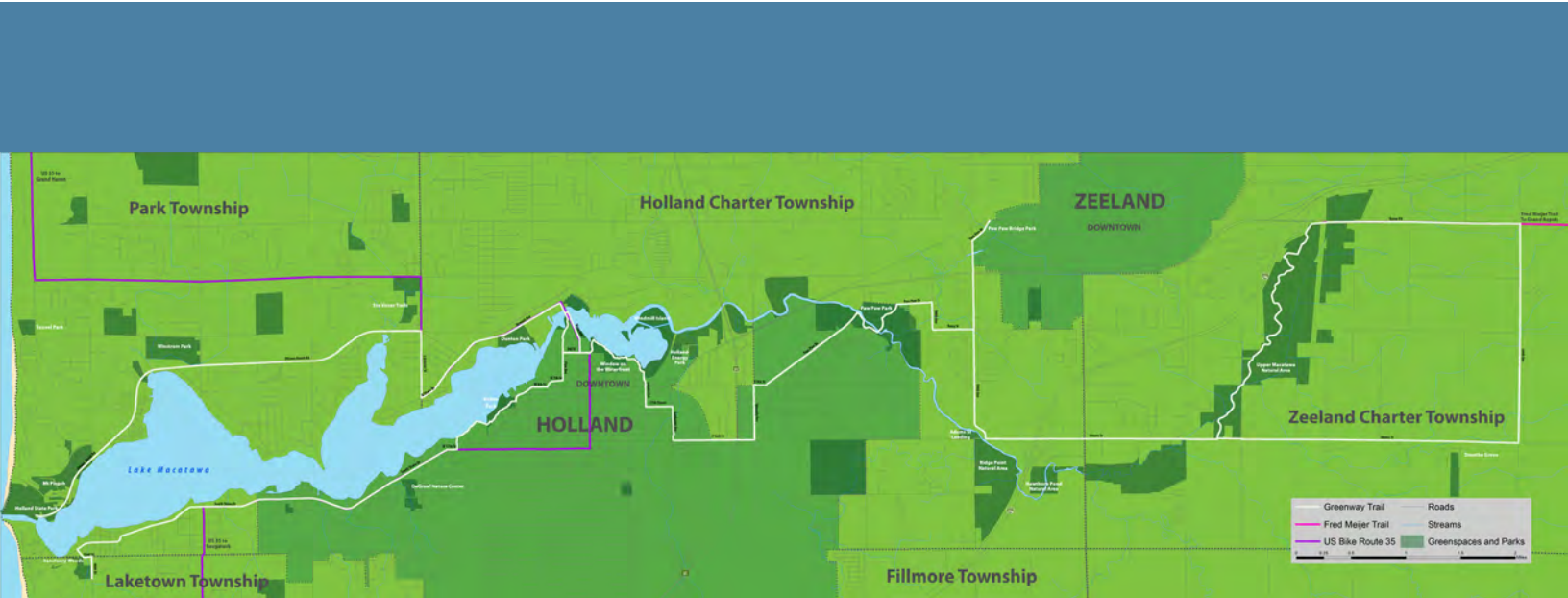


NON-MOTORIZED

Non-motorized infrastructure funding often comes from the Congestion Mitigation and Air Quality (CMAQ) program which is a federal funding source dedicated to projects that help improve air quality by encouraging active transportation such as walking and cycling, or public transportation. Safety-related funds can also be used as a means to improve pedestrian infrastructure. Overall, a majority of the funds designated to non-motorized will go towards the construction of pathways. Currently (2023-2026), \$892,689 is programmed at the federal level, with \$908,575 in local contributions.

Another aspect of our area’s non-motorized system is the Macatawa River Greenway Trail (MRGT). The greenway has been a collaborative effort between local partners to connect and preserve properties along the banks of the Macatawa River for over twenty years. Currently led by the Outdoor Discovery Center Network in collaboration with Ottawa County Parks Department and local units of government, the first version of the greenway trail was designated in 2018. Comprising over 30 miles of trails, bike paths, bike lanes, and sidewalks, it connects the Fred Meijer Kenowa Trail system to the lakeshore and US Bike Route 35. It connects local parks along the greenway and provides connections between the various townships and cities in the region. The route connects to and passes through more than a dozen parks, and with future connections will reach even more.

Currently, the MRGT connects riders from Lake Michigan to Zeeland Township. This is only a preliminary version of the trail, as several key connections need improvement. Additional limited land and easement acquisition are still planned along the route to provide safer and greener connections along the trail. At the time of its completion in 2018, the first greenway trail connected 85% of the corridor originally planned in the mid-1990s and connected with over half of the trail. Some additional areas are being worked on by project partners to make connections shorter and greener. There is still a need to upgrade some of the connection infrastructure along the MRGT. The route will continue to be updated to improve navigability and safety.



PROJECT LIST & KEY

The following table (next page) is sorted/ordered in the following manner:

1. By fiscal year
2. By Job Type
3. By responsible agency

Category/Field	Acronym
Responsible Agency	ACRC – Allegan County Road Commission OCRC – Ottawa County Road Commission MAX – Macatawa Area Express Transportation Authority MDOT – Michigan Department of Transportation MACC - Macatawa Area Coordinating Council
Phase	PE - Preliminary Engineering CON – Construction NI – Non Infrastructure ROW – Right of Way Phase Type
Advanced Construct	AC – Advance Construct ACC – Advance Construct Conversion
Federal/State Fund Source	5307 – Transit – Section 5307 – UZA Formula 5310 – Transit – Section 5310 – Enhanced Mobility of Seniors and Persons with Disabilities 5339 – Transit – Section 5339 – Bus and Bus Facilities BFPI – Bridge Formula Program - Interstate BHT – Bridge Rehabilitation – Surface Transportation Program (STP) BRT – Bridge Replacement – Surface Transportation Program (STP) CM – Congestion Mitigation/Air Quality CRSM – Carbon Reduction – Small MPO EDD – Economic Development HSIP – Highway Safety Improvement Program – SAFETEA-LU IM- Interstate Maintenance – No Added Lanes STUL – Surface Transportation Program (STP) – Urban Area <200,000 NH – National Highway System ST – Surface Transportation Program – Any Area STG – STP- Safety – 100% Federal for ST STL – Surface Transportation – Rural STUL – Surface Transportation Program – Small MPO VRU – Vulnerable Road Users

Expected Fiscal Year/Year Open to Traffic	Job Type	Responsible Agency	County	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Total Estimated Budget Amount (Current Year Dollars)	Total Estimated Job Cost (Future Year, 4% growth)
2024	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(5) LghtDty-Cutaways	NI	\$870,205	\$870,205
2024	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(5) LghtDty-Cutaways	NI	\$875,590	\$875,590
2026	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(5) MedHvyDty Buses	NI	\$4,000,000	\$4,499,456
2027	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(4) LghtDty-Cutaways	NI	\$700,472	\$819,453
2028	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(4) Full Size Van	NI	\$304,000	\$369,862
2030	Local	ACRC	Allegan	146 th Avenue	60 th Street to City Limits	0.50	Road Rehabilitation	Resurface existing roadway	CON	\$107,095	\$164,868
2030	Local	ACRC	Allegan	56 th Street	141 st Avenue to City Limits	1.00	Road Rehabilitation	Resurface existing roadway	CON	\$208,671	\$321,239
2030	Local	ACRC	Allegan	60 th Street	146 th Avenue to City Limits	0.20	Road Rehabilitation	Resurface existing roadway	CON	\$107,095	\$164,868
2030	Local	ACRC	Allegan	Blue Star Highway	141st to 142nd Ave	0.50	Reconstruction	Reconstruct, add continuous left turn lane	CON	\$603,197	\$928,594
2030	Local	City of Zeeland	Ottawa	Business Loop I-196	State Street to City Limit	0.73	New Facilities	Non-Motorized Pathway	CON	\$146,000	\$192,126
2030	Local	City of Zeeland	Ottawa	Business Loop I-196	State Street to Fairview Road	0.98	New Facilities	Non-Motorized Pathway	CON	\$196,000	\$257,922
2030	Local	City of Zeeland	Ottawa	Maple/92nd Bridge	Maple Street and BL I-196	0.00	New Facilities	New Non-Motorized Bridge	CON	\$11,639,100	\$18,622,560
2030	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(2) LghtDty-Cutaways	NI	\$350,236	\$460,887
2030	Local	OCRC	Ottawa	136th Avenue	New Holland St to Bingham St	1.50	Road Rehabilitation	Resurfacing	CON	\$459,256	\$707,003
2030	Local	OCRC	Ottawa	160th Avenue	32nd Ave to South Shore Dr	0.40	Road Rehabilitation	Resurfacing + Shoulder	CON	\$142,305	\$219,072
2030	Local	OCRC	Ottawa	64th Avenue	Ottogan St to Byron Rd	3.00	Road Rehabilitation	Resurfacing + Shoulder	CON	\$986,429	\$1,518,563
2030	Local	OCRC	Ottawa	96th Avenue	Roosevelt Ave to Riley St	0.40	Road Rehabilitation	Resurfacing	CON	\$161,710	\$248,945
2030	Local	OCRC	Ottawa	96th Avenue	Riley St to Quincy St	1.00	Road Rehabilitation	Resurfacing	CON	\$307,249	\$472,995
2030	Local	OCRC	Ottawa	96th Avenue	Quincy St to New Holland St	1.00	Road Rehabilitation	Resurfacing	CON	\$307,249	\$472,995
2030	Local	OCRC	Ottawa	Butternut Drive	144th Ave to New Holland St	2.60	Road Rehabilitation	Resurfacing	CON	\$792,378	\$1,219,829
2030	Local	OCRC	Ottawa	Byron Road	I-196 to 48th Ave	4.00	Road Rehabilitation	Resurfacing	CON	\$1,228,994	\$1,891,980
2030	Local	OCRC	Ottawa	Port Sheldon Street	144th Ave to US-31	0.80	Road Rehabilitation	Resurfacing + Shoulder	CON	\$265,204	\$408,270
2030	Local	OCRC	Ottawa	Port Sheldon Street	Butternut Drive to 144th Ave	2.70	Road Rehabilitation	Resurfacing + Shoulder	CON	\$889,404	\$1,369,196
2030	Local	OCRC	Ottawa	West Olive Road	Bingham St to Port Sheldon St	0.60	Road Rehabilitation	Resurfacing	CON	\$206,988	\$318,649
2030	Local	OCRC	Ottawa	120th Avenue	BL-196 to Lakewood Blvd.	0.40	Road Rehabilitation	Resurfacing	CON	\$180,959	\$278,578
2030	Local	OCRC	Ottawa	120th Avenue	Lakewood Blvd to James St	0.50	Road Rehabilitation	Resurfacing	CON	\$225,194	\$346,675
2030	Local	OCRC	Ottawa	120th Avenue	Riley St to Quincy St	1.00	Reconstruction	Improve and Expand 3 to 5 lanes	CON	\$1,407,460	\$2,166,720
2030	Local	OCRC	Ottawa	120th Avenue	Quincy St to New Holland St	1.00	Road Rehabilitation	Resurfacing	CON	\$386,046	\$594,300
2030	Local	OCRC	Ottawa	136th Avenue	Butternut Dr to Riley St	1.30	Road Rehabilitation	Resurfacing	CON	\$583,091	\$897,641
2030	Local	OCRC	Ottawa	136th Avenue	Quincy St to New Holland St	1.00	Road Rehabilitation	Resurfacing	CON	\$386,046	\$594,300
2030	Local	OCRC	Ottawa	Butternut Drive	136th Ave to Riley St	1.60	Road Rehabilitation	Resurfacing	CON	\$723,837	\$1,114,313
2030	Local	OCRC	Ottawa	Butternut Drive	Riley St to 144th Ave	0.20	Road Rehabilitation	Resurfacing	CON	\$100,533	\$154,766
2030	Local	OCRC	Ottawa	Douglas Avenue	River Ave to Lakewood Blvd	0.30	Road Rehabilitation	Resurfacing	CON	\$140,746	\$216,672
2030	Local	OCRC	Ottawa	James Street	136th Ave to Beeline Rd	0.80	Reconstruction	Improve and Expand 3 to 5 lanes	CON	\$1,125,968	\$1,733,376
2030	Local	OCRC	Ottawa	James Street	Beeline Rd to US-31	0.70	Reconstruction	Improve and Expand 3 to 5 lanes	CON	\$985,222	\$1,516,704
2031	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(10) LghtDty-Cutaways	NI	\$1,751,180	\$2,396,611
2033	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(4) Full Size Van	NI	\$304,000	\$449,994
2034	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(4) LghtDty-Cutaways	NI	\$700,472	\$1,078,344

Expected Fiscal Year/Year Open to Traffic	Job Type	Responsible Agency	County	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Total Estimated Budget Amount (Current Year Dollars)	Total Estimated Job Cost (Future Year, 4% growth)
2035	Local	ACRC	Allegan	60 th Street	136 th Avenue to 146 th Avenue	5.00	Road Rehabilitation	Resurface existing roadway	CON	\$775,064	\$1,451,680
2035	Local	OCRC	Ottawa	96th Avenue	Ottogan Street to Adams Street	1.00	Road Rehabilitation	Resurfacing	CON	\$275,929	\$516,811
2035	Local	OCRC	Ottawa	96th Avenue	Adams Street to Perry Street	1.00	Reconstruction	Improve and Expand 2 to 3 lanes	CON	\$870,239	\$1,629,940
2035	Local	OCRC	Ottawa	96th Avenue	Perry Street to BL-196	0.50	Reconstruction	Improve and Expand 2 to 3 lanes	CON	\$485,120	\$814,971
2035	Local	OCRC	Ottawa	Lakeshore Drive	New Holland St to Butternut Dr	3.30	Road Rehabilitation	Resurfacing	CON	\$902,077	\$1,689,573
2035	Local	OCRC	Ottawa	Ottawa Beach Road	State Park to 160th Ave	2.30	Road Rehabilitation	Resurfacing	CON	\$636,760	\$1,192,640
2035	Local	OCRC	Ottawa	Port Sheldon Street	US-31 to 120th Ave	2.20	Road Rehabilitation	Resurfacing	CON	\$668,598	\$1,252,272
2035	Local	OCRC	Ottawa	Port Sheldon Street	120th Ave to 96th Ave	3.00	Road Rehabilitation	Resurfacing	CON	\$912,689	\$1,709,450
2035	Local	OCRC	Ottawa	136th Avenue	Riley St to Quincy St	1.00	Road Rehabilitation	Resurfacing	CON	\$422,499	\$791,332
2035	Local	OCRC	Ottawa	Douglas Avenue	144th Ave to River Ave	1.40	Reconstruction	Improve and Expand 4 to 5 lanes	CON	\$2,403,871	\$4,502,406
2035	Local	OCRC	Ottawa	James Street	Butternut Dr to 136th Ave	0.20	Road Rehabilitation	Resurfacing	CON	\$94,698	\$177,367
2035	Local	OCRC	Ottawa	Riley Street	Butternut Dr to 136th Ave	0.80	Reconstruction	Improve and Expand 2 to 3 lanes	CON	\$946,980	\$1,773,675
2035	Local	OCRC	Ottawa	Van Hill Bridge	Van Hill Drive and BL I-196	0.00	New Facilities	New Non-Motorized Bridge	CON	\$7,321,260	\$11,714,016
2036	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(5) MedHvyDty Buses	NI	\$4,000,000	\$6,660,294
2037	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(2) LghtDty-Cutaways	NI	\$350,236	\$606,495
2038	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(10) LghtDty-Cutaways	NI	\$1,751,180	\$3,153,776
2038	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(4) Full Size Van	NI	\$304,000	\$547,487
2040	Local	ACRC	Allegan	145th Avenue	60th Street to 64th Street	2.02	New Facilities	Non-Motorized Pathway	CON	\$404,000	\$786,951
2040	Local	ACRC	Allegan	Blue Star Highway	Shangrai La Drive to 60th Street	1.00	New Facilities	Non-Motorized Pathway	CON	\$200,000	\$389,580
2040	Local	ACRC	Allegan	136th Avenue	60th Street to 63rd Street	1.43	New Facilities	Non-Motorized Pathway	CON	\$286,000	\$557,099
2040	Local	ACRC	Allegan	136th Avenue	50th Street to 60th Street	5.11	New Facilities	Non-Motorized Pathway	CON	\$1,022,000	\$1,990,754
2040	Local	ACRC	Allegan	60th Street	Blue Star Highway to 136th Avenue	0.89	New Facilities	Non-Motorized Pathway	CON	\$178,000	\$346,726
2040	Local	ACRC	Allegan	63rd Avenue	136th Avenue to Blue Star Highway	0.23	New Facilities	Non-Motorized Pathway	CON	\$46,000	\$89,603
2040	Local	OCRC	Ottawa	120th Avenue	New Holland St to Port Sheldon St	2.00	Road Rehabilitation	Resurfacing	CON	\$500,600	\$1,140,750
2040	Local	OCRC	Ottawa	152nd Avenue	Ottawa Beach Rd to Lakewood Blvd	0.80	Road Rehabilitation	Resurfacing + Shoulder	CON	\$217,652	\$495,979
2040	Local	OCRC	Ottawa	168th Avenue	Ottawa Beach Rd to Lakeshore Dr	0.10	Road Rehabilitation	Resurfacing + Shoulder	CON	\$43,531	\$99,196
2040	Local	OCRC	Ottawa	Adams Street	96th Ave to 88th Ave	0.90	Road Rehabilitation	Resurfacing	CON	\$226,358	\$515,817
2040	Local	OCRC	Ottawa	Adams Street	88th Ave to 48th Ave	5.10	Road Rehabilitation	Resurfacing	CON	\$1,273,264	\$2,901,474
2040	Local	OCRC	Ottawa	Lakeshore Drive	Riley Street to New Holland St	2.00	Road Rehabilitation	Resurfacing	CON	\$500,600	\$1,140,750
2040	Local	OCRC	Ottawa	Lakeshore Drive	Butternut Dr to Croswell Dr	1.00	Road Rehabilitation	Resurfacing	CON	\$250,300	\$570,375
2040	Local	OCRC	Ottawa	Lakeshore Drive	Croswell Dr to Fillmore St	1.60	Road Rehabilitation	Resurfacing	CON	\$400,480	\$912,601
2040	Local	OCRC	Ottawa	120th Avenue	James St to Riley St	1.00	Road Rehabilitation	Resurfacing	CON	\$448,648	\$1,022,364
2040	Local	OCRC	Ottawa	Adams Street	Quarterline Rd to 96th Ave	1.50	Road Rehabilitation	Resurfacing	CON	\$672,971	\$1,533,546
2040	Local	OCRC	Ottawa	Beeline Road	Lakewood Blvd to Riley St	1.50	Road Rehabilitation	Resurfacing	CON	\$577,304	\$1,315,542
2040	Local	OCRC	Ottawa	James Street	US-31 to 112th Ave	1.50	Road Rehabilitation	Resurfacing	CON	\$672,971	\$1,533,546
2040	Local	OCRC	Ottawa	James Street	112th Ave to Chicago Dr	1.10	Reconstruction	Improve and Expand 2 to 3 lanes	CON	\$1,306,356	\$2,976,883
2040	Local	OCRC	Ottawa	Lakewood Boulevard	River Ave to Douglas Ave	0.30	Road Rehabilitation	Resurfacing	CON	\$138,553	\$315,730
2040	Local	OCRC	Ottawa	Lakewood Boulevard	Douglas Ave to US-31	1.20	Road Rehabilitation	Resurfacing	CON	\$541,016	\$1,232,850
2040	Local	OCRC	Ottawa	Lakewood Boulevard	US-31 to 120th Ave	0.40	Road Rehabilitation	Resurfacing	CON	\$181,438	\$413,456

Expected Fiscal Year/Year Open to Traffic	Job Type	Responsible Agency	County	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Total Estimated Budget Amount (Current Year Dollars)	Total Estimated Job Cost (Future Year, 4% growth)
2040	Local	OCRC	Ottawa	76th Avenue	Byron Road to Perry Street	1.00	New Facilities	Non-Motorized Pathway	CON	\$200,000	\$389,580
2040	Local	OCRC	Ottawa	Perry Street	76th Avenue to 74th Avenue	0.25	New Facilities	Non-Motorized Pathway	CON	\$50,000	\$97,395
2040	Local	OCRC	Ottawa	74th Avenue	Perry Street to Adams Street	1.00	New Facilities	Non-Motorized Pathway	CON	\$200,000	\$389,580
2040	Local	OCRC	Ottawa	96th Avenue	Bingham Street to Blair Street	1.00	New Facilities	Non-Motorized Pathway	CON	\$200,000	\$389,580
2040	Local	OCRC	Ottawa	144th Avenue	Georgian Bay Drive to New Holland Street	0.48	New Facilities	Non-Motorized Pathway	CON	\$96,000	\$186,998
2040	Local	OCRC	Ottawa	New Holland Street	144th Avenue to 136th Avenue	1.00	New Facilities	Non-Motorized Pathway	CON	\$200,000	\$389,580
2040	Local	OCRC	Ottawa	Quincy Street	West Shore Drive to John F Donnelly Drive	0.36	New Facilities	Non-Motorized Pathway	CON	\$72,000	\$140,248
2040	Local	OCRC	Ottawa	West Shore Drive	Greenly Street to Quincy Street	0.50	New Facilities	Non-Motorized Pathway	CON	\$100,000	\$194,790
2040	Local	OCRC	Ottawa	Ottawa Beach Road	144th Avenue to Holland State Park Entrance	4.39	New Facilities	Non-Motorized Pathway	CON	\$878,000	\$1,710,256
2040	Local	OCRC	Ottawa	Old Orchard Road	South Shore Drive to 32nd Street	0.49	New Facilities	Non-Motorized Pathway	CON	\$98,000	\$190,894
2040	Local	OCRC	Ottawa	Stanton Street	US-31 to Lakeshore Avenue	2.78	New Facilities	Non-Motorized Pathway	CON	\$556,000	\$1,083,032
2040	Local	OCRC	Ottawa	Van Buren Street	152nd Avenue to Lakeshore Avenue	2.51	New Facilities	Non-Motorized Pathway	CON	\$502,000	\$977,846
2040	Local	OCRC	Ottawa	Port Sheldon Street	152nd Avenue to Butternut Drive	1.71	New Facilities	Non-Motorized Pathway	CON	\$342,000	\$666,182
2040	Local	OCRC	Ottawa	Business Loop I-196	104th Avenue to Zeeland City Limit	0.26	New Facilities	Non-Motorized Pathway	CON	\$52,000	\$101,291
2040	Local	OCRC	Ottawa	Business Loop I-196	96th Avenue to 88th Avenue	0.98	New Facilities	Non-Motorized Pathway	CON	\$196,000	\$381,788
2040	Local	OCRC	Ottawa	Baldwin Street	152nd Avenue to 144th Avenue	1.00	New Facilities	Non-Motorized Pathway	CON	\$200,000	\$389,580
2040	Local	OCRC	Ottawa	152nd Avenue	Baldwin Street to New Holland Street	3.52	New Facilities	Non-Motorized Pathway	CON	\$704,000	\$1,371,322
2040	Local	OCRC	Ottawa	160th Avenue	Blair Street to Port Sheldon Street	0.50	New Facilities	Non-Motorized Pathway	CON	\$100,000	\$194,790
2040	Local	OCRC	Ottawa	152nd Avenue	Stanton Street to Croswell Street	1.00	New Facilities	Non-Motorized Pathway	CON	\$100,000	\$194,790
2040	Local	OCRC	Ottawa	Olive Shores Avenue	Lakeshore Avenue to Polk Street	1.21	New Facilities	Non-Motorized Pathway	CON	\$242,000	\$471,392
2040	Local	OCRC	Ottawa	Polk Street	Margaret Avenue to Olive Shores Avenue	0.14	New Facilities	Non-Motorized Pathway	CON	\$28,000	\$54,541
2040	Local	OCRC	Ottawa	Margaret Avenue	Windsnest Park to Polk Street	0.17	New Facilities	Non-Motorized Pathway	CON	\$34,000	\$66,228
2040	Local	OCRC	Ottawa	Croswell Street	Lakeshore Avenue to Olive Shores Avenue	0.31	New Facilities	Non-Motorized Pathway	CON	\$62,000	\$120,769
2040	Local	OCRC	Ottawa	New Holland Street	Butternut Drive to 152nd Avenue	0.57	New Facilities	Non-Motorized Pathway	CON	\$114,000	\$222,061
2040	Local	OCRC	Ottawa	Van Hill	Chicago Drive to Paw Paw Drive	0.41	New Facilities	Non-Motorized Pathway	CON	\$410,000	\$798,639
2041	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(4) LghtDty-Cutaways	NI	\$700,472	\$1,419,028
2043	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(4) Full Size Van	NI	\$304,000	\$666,101
2044	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(2) LghtDty-Cutaways	NI	\$350,236	\$798,107
2045	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(10) LghtDty-Cutaways	NI	\$1,751,180	\$4,150,154

Expected Fiscal Year/Year Open to Traffic	Job Type	Responsible Agency	County	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Total Estimated Budget Amount (Current Year Dollars)	Total Estimated Job Cost (Future Year, 4% growth)
2045	Local	OCRC	Ottawa	Riley Street	120th Ave to 112th Ave	1.00	Reconstruction	Improve and Expand 3 to 5 lanes	CON	\$821,332	\$2,277,118
2045	Local	OCRC	Ottawa	River Avenue	City of Holland to CSX Crossing	0.20	Road Rehabilitation	Epoxy Overlay	CON	\$107,130	\$297,016
2045	Local	OCRC	Ottawa	River Avenue	CSX Crossing to 136th Ave	0.40	Reconstruction	Improve and Expand 5 to 7 lanes	CON	\$785,622	\$2,178,113
2046	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(5) MedHvyDty Buses	NI	\$4,000,000	\$9,858,862
2048	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(4) Full Size Van	NI	\$304,000	\$810,414
2048	Multi-Modal	MAX Transit	Ottawa	Transit Capital	MAX Service Area	0.00	1101 Bus Rolling Stock	(4) LghtDty-Cutaways	NI	\$700,472	\$1,867,344
2023 - 2024	Multi-Modal	MAX Transit	Ottawa	Route Study	MAX Service Area	0.00	Planning	Route Study	NI	\$100,000	\$0
2023 - 2028	Multi-Modal	MAX Transit	Ottawa	Scheduling Software	MAX Service Area	0.00	Operations	VIA Scheduling Software	NI	\$750,000	\$750,000
2023-2028	Multi-Modal	MAX Transit	Ottawa	Financial Management Software	MAX Service Area	0.00	Financial	BC&A Financial Software	NI	\$20,000	\$20,000
2024-2034	Multi-Modal	MAX Transit	Ottawa	Facility Upgrade - Lo/No Emissions	MAX Service Area	0.00	Facility Upgrade	EV Infrastructure & Buses	CON	\$3,800,000	\$4,800,000**
2025 - 2029	Local	City of Holland	Allegan/Ottawa	32 nd Street	Old Orchard to Ottawa Avenue	2.03	Road Rehabilitation	Resurface existing roadway	CON	\$2,000,000	\$2,160,000
2025 - 2029	Local	City of Holland	Allegan/Ottawa	32 nd Street	US-31 to East City Limit	1.20	Road Rehabilitation	Resurface existing roadway	CON	\$1,000,000	\$1,265,319
2025 - 2029	Local	City of Holland	Ottawa	Columbia Avenue	10th Street to 24th Street	0.95	Reconstruction	Reconstruct existing roadway	CON	\$4,000,000	\$4,320,000
2025 - 2029	Local	City of Holland	Ottawa	Lincoln Avenue	7th Street to 24th Street	1.10	Road Rehabilitation	Resurface existing roadway	CON	\$1,000,000	\$1,265,319
2025 - 2029	Local	City of Holland	Ottawa	24th Street	Country Club to US-31	1.17	Reconstruction / Widening	Reconstruct/Widen existing roadway	CON	\$2,500,000	\$2,700,000
2025 - 2029	Local	City of Holland	Ottawa	Pine Avenue	9th Street to River Bridge (North City Limit)	0.80	Reconstruction	Reconstruct existing roadway	CON	\$1,000,000	\$1,265,319
2025 - 2029	Local	City of Holland	Ottawa	River Avenue	River Bridge (North City Limit) to 19th Street	1.40	Road Rehabilitation	Resurface existing roadway	CON	\$1,500,000	\$1,897,979
2025 - 2029	Local	City of Holland	Ottawa	Waverly Road	Chicago Drive to 16th Street	1.00	Road Rehabilitation	Resurface existing roadway	CON	\$1,000,000	\$1,265,319
2025 - 2029	Local	City of Holland	Ottawa	7th & Central Traffic Signal	7th Street & Central Avenue Intersection	0.01	Traffic Signal	Traffic Signal Installation	CON	\$300,000	\$324,000
2025 - 2029	Local	City of Holland	Ottawa	32nd & Washington Traffic Signal	32nd Street & Washington Avenue Intersection	0.01	Traffic Signal	Traffic Signal Rehab	CON	\$300,000	\$324,000
2025-2028	Multi-Modal	MAX Transit	Ottawa	Facility Upgrade - Bus Wash	MAX Service Area	0.00	Facility Upgrade	Internal Bus Wash / Maintenance Area	CON	\$450,000	\$526,435
2025-2029	Local	City of Holland	Ottawa	8 th Street	Lincoln Avenue to Maple Avenue	0.80	Road Rehabilitation	Resurface existing roadway	CON	\$500,000	\$540,000
2030 - 2034	Local	City of Holland	Allegan	Lincoln Avenue	M-40 to South City Limit	1.71	Road Rehabilitation	Resurface existing roadway	CON	\$1,000,000	\$1,265,319
2030 - 2034	Local	City of Holland	Ottawa	32 nd Street	Ottawa Avenue to US-31	2.06	Road Rehabilitation	Resurface existing roadway	CON	\$2,200,000	\$2,376,000
2030 - 2034	Local	City of Holland	Ottawa	24 th Street	Graafschap Road to River Ave	1.30	Road Rehabilitation	Resurface existing roadway	CON	\$750,000	\$1,154,591
2030 - 2034	Local	City of Holland	Ottawa	8 th Street	Fairbanks Ave to Lincoln Ave	0.20	Road Rehabilitation	Resurface existing roadway	CON	\$250,000	\$384,864
2030 - 2034	Local	City of Holland	Ottawa	Central Avenue	3rd Street to State Street	1.10	Road Rehabilitation	Resurface existing roadway	CON	\$1,000,000	\$1,539,454
2030 - 2034	Local	City of Holland	Allegan	Washington Avenue	32nd Street to Matt Urban Drive	0.81	Road Rehabilitation	Rehab existing roadway	CON	\$3,000,000	\$3,250,000
2030 - 2034	Local	City of Holland	Ottawa	17th Street	South Shore Drive to Central Avenue	1.30	Road Rehabilitation	Resurface existing roadway / Add Bike Lanes	CON	\$2,000,000	\$2,500,000
2030 - 2034	Local	City of Holland	Ottawa	Michigan Avenue	19 th Street to 32nd Street	0.90	Road Rehabilitation	Resurface existing roadway	CON	\$1,500,000	\$1,897,979
2030 - 2034	Local	City of Holland	Allegan	Waverly Road	M-40 to E. 48 th Street	0.40	Road Rehabilitation	Resurface existing roadway	CON	\$250,000	\$384,864
2030 - 2034	Local	City of Zeeland	Ottawa	E. Washington Ave.	Elm to Maple	0.40	Reconstruction	Reconstruct Roadway	CON	\$1,470,083	\$1,934,528
2030 - 2034	Local	City of Zeeland	Ottawa	N. Jefferson	W. McKinley to Roosevelt	0.30	Reconstruction	Reconstruct Roadway	CON	\$1,691,244	\$2,225,561
2030 - 2040	Local	City of Holland	Ottawa	32nd Street	Lincoln Avenue to US-31	0.55	New Facilities	Non-Motorized Pathway	CON	\$700,000	\$1,363,530
2030 - 2040	Local	City of Holland	Ottawa	7th Street	Pine Avenue to 8th Street	0.17	New Facilities	Non-Motorized Pathway	CON	\$200,000	\$389,580
2030 - 2040	Local	City of Holland	Ottawa	8th Street	Washington Boulevard to Maple Avenue	0.15	New Facilities	Non-Motorized Pathway	CON	\$200,000	\$389,580

Expected Fiscal Year/Year Open to Traffic	Job Type	Responsible Agency	County	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Total Estimated Budget Amount (Current Year Dollars)	Total Estimated Job Cost (Future Year, 4% growth)
2030 - 2040	Local	City of Holland	Ottawa	Kollen Park Drive	Washington Boulevard to 9th Street	0.12	New Facilities	Non-Motorized Pathway	CON	\$200,000	\$389,580
2030 - 2040	Local	City of Holland	Ottawa	Paw Paw Drive	Legion Park Drive to Macatawa River Bridge	0.28	New Facilities	Non-Motorized Pathway	CON	\$300,000	\$584,370
2030 - 2040	Local	City of Holland	Ottawa	Country Club Road	16th Street to 24th Street	0.50	New Facilities	Non-Motorized Pathway	CON	\$500,000	\$973,950
2030 - 2040	Local	City of Holland	Ottawa	32nd Street	Lugers Road to Ruth Avenue	0.07	New Facilities	Non-Motorized Pathway	CON	\$100,000	\$194,790
2030 - 2040	Local	City of Holland	Ottawa	Myrtle Avenue	32nd Street to South City Limit	0.11	New Facilities	Non-Motorized Pathway	CON	\$150,000	\$292,185
2030 - 2040	Local	City of Holland	Ottawa	17th Street	South Shore Drive to Central Avenue	1.30	New Facilities	Road Widening and Bike Lanes	CON	\$1,300,000	\$2,532,270
2030-2035	Local	ACRC	Allegan	48 th Street	136 th Avenue to 142 nd Avenue	3.20	Road Rehabilitation	Resurface existing roadway	CON	\$624,909	\$962,019
2035 - 2039	Local	City of Holland	Allegan	40th Street	Lincoln Avenue to Graafschap Road	2.00	Road Rehabilitation	Resurface existing roadway	CON	\$1,000,000	\$1,872,981
2035 - 2039	Local	City of Holland	Ottawa	Country Club Road	8th Street to 24th Street	1.00	Road Rehabilitation	Resurface existing roadway	CON	\$500,000	\$936,491
2035 - 2039	Local	City of Holland	Allegan/Ottawa	Ottawa Avenue	40th Street to 16th Street	1.50	Road Rehabilitation	Resurface existing roadway	CON	\$1,000,000	\$1,872,981
2035-2039	Local	City of Zeeland	Ottawa	104th	Huizenga to Alice	0.08	Road Rehabilitation	Mill and Resurface roadway	CON	\$84,160	\$134,742
2035-2039	Local	City of Zeeland	Ottawa	Fairview	East Roosevelt to Riley	0.49	Road Rehabilitation	Mill and Resurface roadway	CON	\$535,550	\$857,432
2035-2039	Local	City of Zeeland	Ottawa	East Central Avenue	S. Elm to Maple	0.36	Road Rehabilitation	Mill and Resurface roadway	CON	\$396,743	\$635,198
2035-2039	Local	City of Zeeland	Ottawa	East Washington	Maple to Fairview	0.57	Road Rehabilitation	Mill and Resurface roadway	CON	\$621,893	\$995,670
2035-2039	Local	City of Zeeland	Ottawa	Lee	Lawrence to Main	0.13	Road Rehabilitation	Mill and Resurface roadway	CON	\$140,991	\$225,731
2035-2040	Local	ACRC	Allegan	56 th Street	136 th Avenue to 141 st Avenue	2.50	Road Rehabilitation	Resurface existing roadway	CON	\$481,379	\$901,614
2035-2040	Local	ACRC	Allegan	58 th Street	136 th Avenue to 139 th Avenue	1.50	Road Rehabilitation	Resurface existing roadway	CON	\$324,599	\$607,968
2035-2040	Local	ACRC	Allegan	64th Street	Blue Star Hwy to Ottogan (32nd Street)	6.10	Road Rehabilitation	Resurface existing roadway	CON	\$828,060	\$1,550,941
2040 - 2045	Local	City of Holland	Allegan	48th Street	Lincoln Avenue to Regent Blvd	1.50	Road Rehabilitation	Resurface existing roadway	CON	\$1,000,000	\$1,872,981
2040 - 2045	Local	City of Holland	Ottawa	Fairbanks Avenue	16th Street to 8th Street	0.50	Road Rehabilitation	Resurface existing roadway	CON	\$250,000	\$468,245
2040 - 2045	Local	City of Holland	Allegan/Ottawa	Graafschap Road	South City Limit to South Shore Drive	1.50	Reconstruction	Reconstruct existing roadway	CON	\$3,000,000	\$5,618,944
2040-2044	Local	City of Zeeland	Ottawa	Riley Street	Centennial to Case Karsten	0.29	Road Rehabilitation	Mill and Resurface roadway	CON	\$315,586	\$614,730
2040-2044	Local	City of Zeeland	Ottawa	Fairview	BL-196 to Main	0.24	Reconstruction	Reconstruct existing roadway	CON	\$1,407,647	\$2,741,956
2040-2044	Local	City of Zeeland	Ottawa	East Washington	State to Elm	0.13	Reconstruction	Reconstruct existing roadway	CON	\$726,528	\$1,415,204
2040-2044	Local	City of Zeeland	Ottawa	West Washington	Franklin to N. Colonial	0.13	Reconstruction	Reconstruct existing roadway	CON	\$1,441,704	\$2,808,295
2040-2044	Local	City of Zeeland	Ottawa	West Central	State to Taft	0.29	Road Rehabilitation	Mill and Resurface roadway	CON	\$314,771	\$613,142
2040-2045	Local	ACRC	Allegan	146 th Avenue	66 th Street to 60 th Street	3.00	Road Rehabilitation	Resurface existing roadway	CON	\$389,740	\$888,127
2040-2045	Local	ACRC	Allegan	136 th Avenue	58 th to 54 th Street	2.00	Road Rehabilitation	Resurface existing roadway	CON	\$411,822	\$938,447
2040-2045	Local	ACRC	Allegan	136 th Avenue	54 th Street to 48 th Street	3.00	Road Rehabilitation	Resurface existing roadway	CON	\$614,973	\$1,401,381
2040-2045	Local	ACRC	Allegan	141 st Avenue	60 th Street to M-40	4.60	Road Rehabilitation	Resurface existing roadway	CON	\$780,585	\$1,778,772
2040-2045	Local	ACRC	Allegan	58 th Street	139 th Avenue to City Limits	2.00	Road Rehabilitation	Resurface existing roadway	CON	\$517,813	\$1,179,976
2040-2045	Local	ACRC	Allegan	60 th Street	City Limit to 136 th Avenue	5.30	Road Rehabilitation	Resurface existing roadway	CON	\$772,856	\$1,761,160
2040-2045	Local	ACRC	Allegan	66 th Street	Ottogan Street to 146 th Avenue	1.00	Road Rehabilitation	Resurface existing roadway	CON	\$230,752	\$525,830
2040-2045	Local	ACRC	Allegan	Fillmore Road	M-40 to 48 th Street	1.90	Road Rehabilitation	Resurface existing roadway	CON	\$368,762	\$840,323
2045 - 2050	Local	City of Holland	Allegan/Ottawa	Lincoln Avenue	24th Street to US-31	1.00	Road Rehabilitation	Resurface existing roadway	CON	\$1,500,000	\$2,000,000
2045 - 2050	Local	City of Holland	Ottawa	College Avenue	6th Street to North	0.25	New Road Extension	Road Construction	CON	\$2,000,000	\$2,500,000
2045 - 2050	Local	City of Holland	Allegan	40th Street	East City Limit to US-31	1.60	Road Rehabilitation	Resurface existing roadway	CON	\$500,000	\$936,491
2045 - 2050	Local	City of Holland	Ottawa	State Street	Michigan Avenue to 32nd Street	1.00	Road Rehabilitation	Resurface existing roadway	CON	\$1,500,000	\$2,000,000

Expected Fiscal Year/Year Open to Traffic	Job Type	Responsible Agency	County	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	Total Estimated Budget Amount (Current Year Dollars)	Total Estimated Job Cost (Future Year, 4% growth)
2045 - 2050	Local	City of Holland	Allegan	64th Street	Washington Avenue to M-40	2.44	Road Rehabilitation	Resurface existing roadway	CON	\$2,000,000	\$2,500,000
2045-2049	Local	City of Zeeland	Ottawa	West Main	Pine to State	0.21	Road Rehabilitation	Mill and Resurface roadway	CON	\$231,707	\$668,096
2045-2049	Local	City of Zeeland	Ottawa	104th	Alice to Paw Paw	0.15	Road Rehabilitation	Mill and Resurface roadway	CON	\$159,572	\$460,104
2045-2049	Local	City of Zeeland	Ottawa	Fairview	Washington to Roosevelt	0.10	Road Rehabilitation	Mill and Resurface roadway	CON	\$138,805	\$400,225
2045-2049	Local	City of Zeeland	Ottawa	East Central Avenue	Maple to Wall	0.08	Road Rehabilitation	Mill and Resurface roadway	CON	\$86,343	\$248,958
2045-2049	Local	City of Zeeland	Ottawa	State Street	Bl-196 to Central	0.36	Reconstruction	Reconstruct existing roadway	CON	\$2,066,063	\$5,957,221
2045-2049	Local	City of Zeeland	Ottawa	W. Washington	Colonial to State	0.24	Reconstruction	Reconstruct existing roadway	CON	\$1,379,268	\$3,976,938

The following pages contain the FY23-26 TIP Projects

Fiscal Year	Job Type	Job#	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	State Estimated Amount	Local Estimated Amount	Total Estimated Amount
2023	Trunkline	204951	Kent	MDOT	Regionwide	Ottawa	0.000	Traffic Safety	Install traffic signal dilemma zone systems	CON	\$5,063	\$0	\$50,633
2023	Trunkline	205235	Ottawa	MDOT	I-96	I-196 in Ottawa and Allegan	24.146	ITS Applications	Rural Freeway Traffic Management systems	CON	\$326,441	\$0	\$1,798,573
2023	Local	206313	Ottawa	MACC	Areawide	MACC Planning Boundary	0.000	Planning, Research & Design	Data Collection (Date project is authorized to 09/30/2023)	NI	\$0	\$4,250	\$21,250
2023	Local	206322	Allegan	Holland	Waverly Rd	Waverly at M-40	0.100	Traffic Safety	Intersection Improvement	CON	\$0	\$16,250	\$81,250
2023	Local	206322	Allegan	Holland	Waverly Rd	Waverly at M-40	0.100	Traffic Safety	Intersection Improvement	CON	\$0	\$82,127	\$282,127
2023	Local	206323	Allegan	ACRC	136th Ave	58th Street to 50th Street	4.000	Road Rehabilitation	Resurfacing	CON	\$0	\$149,494	\$747,470
2023	Local	206323	Allegan	ACRC	136th Ave	58th Street to 50th Street	4.000	Road Rehabilitation	Resurfacing	CON	\$0	\$40,000	\$200,000
2023	Local	206323	Allegan	ACRC	136th Ave	58th Street to 50th Street	4.000	Road Rehabilitation	Resurfacing	CON	\$0	\$6,506	\$32,530
2023	Local	206344	Ottawa	MACC	Areawide	Area-Wide	0.000	Planning, Research & Design	Clean Air Action Program (Date Project Authorized to 09/30/23)	NI	\$0	\$10,000	\$45,000
2023	Local	206345	Ottawa	OCRC	Greenly St	Greenly Street: 120th-112th	1.020	New Facilities	Non-Motorized Pathway	CON	\$0	\$35,404	\$177,020
2023	Local	206345	Ottawa	OCRC	Greenly St	Greenly Street: 120th-112th	1.020	New Facilities	Non-Motorized Pathway	CON	\$0	\$150,846	\$382,980
2023	Local	206346	Allegan	ACRC	Blue Star Hwy	Blue Star Hwy	0.824	New Facilities	Non-Motorized Pathway	CON	\$0	\$263,805	\$563,805
2023	Local	206346	Allegan	ACRC	Blue Star Hwy	Blue Star Hwy	0.824	New Facilities	Non-Motorized Pathway	CON	\$0	\$18,892	\$94,459
2023	Local	206346	Allegan	ACRC	Blue Star Hwy	Blue Star Hwy	0.824	New Facilities	Non-Motorized Pathway	CON	\$0	\$50,000	\$250,000
2023	Trunkline	207358	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	1.845	Traffic Safety	Longitudinal pavement marking application on trunklines in Grand Region	PE	\$126	\$0	\$1,260
2023	Trunkline	207358	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	1.845	Traffic Safety	Longitudinal pavement marking application on trunklines in Grand Region	CON	\$35,910	\$0	\$359,100
2023	Trunkline	207359	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	1.845	Traffic Safety	Special pavement marking application on trunklines in Grand Region	PE	\$126	\$0	\$1,260

Fiscal Year	Job Type	Job#	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	State Estimated Amount	Local Estimated Amount	Total Estimated Amount
2023	Trunkline	207375	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	2.971	Traffic Safety	Pavement marking retroreflectivity readings on trunklines in Grand Region	CON	\$202	\$0	\$2,016
2023	Multi-Modal	207573	Ottawa	MAX	Transit Capital	areawide	0.000	SP1101-<30 foot replacement bus with or without lift	FY 2022 Section 5307 - Transit Capital Items	NI	\$69,440	\$0	\$347,200
2023	Multi-Modal	207573	Ottawa	MAX	Transit Capital	areawide	0.000	SP1403-office equipment (copier, office furniture, etc.)	FY 2022 Section 5307 - Transit Capital Items	NI	\$2,480	\$0	\$12,400
2023	Multi-Modal	207573	Ottawa	MAX	Transit Capital	areawide	0.000	SP1404-computers (hardware and software)	FY 2022 Section 5307 - Transit Capital Items	NI	\$2,460	\$0	\$12,300
2023	Multi-Modal	207573	Ottawa	MAX	Transit Capital	areawide	0.000	SP1409-administrative vehicle	FY 2022 Section 5307 - Transit Capital Items	NI	\$8,680	\$0	\$43,400
2023	Multi-Modal	207573	Ottawa	MAX	Transit Capital	areawide	0.000	SP1203-admin/maintenance facility improvements	FY 2022 Section 5307 - Transit Capital Items	NI	\$62,473	\$0	\$312,363
2023	Multi-Modal	207573	Ottawa	MAX	Transit Capital	areawide	0.000	SP1408-maintenance equipment (hoists, tools, etc.)	FY 2022 Section 5307 - Transit Capital Items	NI	\$2,460	\$0	\$12,300
2023	Multi-Modal	207573	Ottawa	MAX	Transit Capital	areawide	0.000	SP1410-misc. support equipment (explanation must be provided in work detail)	FY 2022 Section 5307 - Transit Capital Items	NI	\$4,000	\$0	\$20,000
2023	Multi-Modal	207574	Ottawa	MAX	Transit Operating	areawide	0.000	3000-Operating Assistance	FY 2022 Section 5307 - Operating	NI	\$1,724,616	\$1,250,000	\$4,224,616
2023	Multi-Modal	207578	Ottawa	MAX	Transit Capital	MAX Service Area	0.000	SP1101-<30 foot replacement bus with or without lift	FY22 Bus Replacement	NI	\$29,127	\$0	\$145,635
2023	Multi-Modal	207581	Ottawa	MAX	Transit Capital	MAX Service Area	0.000	SP1410-misc. support equipment (explanation must be provided in work detail)	FY23 - 5307 Transit Capital Items	NI	\$9,050	\$0	\$45,250
2023	Multi-Modal	207581	Ottawa	MAX	Transit Capital	MAX Service Area	0.000	SP1106-<30 foot expansion bus with or without lift	FY23 - 5307 Transit Capital Items	NI	\$70,150	\$0	\$350,750

Fiscal Year	Job Type	Job#	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	State Estimated Amount	Local Estimated Amount	Total Estimated Amount
2023	Multi-Modal	207581	Ottawa	MAX	Transit Capital	MAX Service Area	0.000	SP1101-<30 foot replacement bus with or without lift	FY23 - 5307 Transit Capital Items	NI	\$70,150	\$0	\$350,750
2023	Multi-Modal	207581	Ottawa	MAX	Transit Capital	MAX Service Area	0.000	SP1407-security equipment - vehicles	FY23 - 5307 Transit Capital Items	NI	\$2,000	\$0	\$10,000
2023	Multi-Modal	207581	Ottawa	MAX	Transit Capital	MAX Service Area	0.000	SP1404-computers (hardware and software)	FY23 - 5307 Transit Capital Items	NI	\$2,400	\$0	\$12,000
2023	Multi-Modal	207582	Ottawa	MAX	Transit Operating	Areawide	0.000	3000-Operating Assistance	FY23 5307 Operating	NI	\$1,640,827	\$1,291,619	\$4,224,065
2023	Multi-Modal	207584	Ottawa	MAX	Transit Operating	MAX Service Area	0.000	6470-New Freedom Projects	Twilight & Night Owl	NI	\$0	\$142,500	\$285,000
2023	Multi-Modal	207585	Ottawa	MAX	Transit Capital	MAX Service Area	0.000	6410-5310 Projects	Mobility Management	NI	\$14,000	\$0	\$70,000
2023	Multi-Modal	207588	Ottawa	MAX	Transit Capital	MAX Service Area	0.000	SP1101-<30 foot replacement bus with or without lift	Bus Replacement	NI	\$30,567	\$0	\$152,835
2023	Local	207725	Allegan	ACRC	146th Avenue	146th Avenue over South Branch Macatawa River, Str# 189, ACRC	0.000	Bridge Replacement	Bridge Replacement	CON	\$160,984	\$66,461	\$1,086,029
2023	Trunkline	207962	Allegan	MDOT	M-40	48th Street north to Macatawa River	3.264	Road Capital Preventive Maintenance	Single Course Chip Seal	CON	\$95,106	\$0	\$524,000
2023	Local	209821	Ottawa	OCRC	96th Avenue	96th Avenue over Black River Tributary, Str# 8812 - OCRC	0.000	Bridge Replacement	Bridge Replacement	CON	\$297,000	\$297,000	\$2,970,000
2023	Trunkline	210058	Ottawa	MDOT	I-196BL	From US-31 east to 88th Avenue	4.409	Road Rehabilitation	Inlay; Full Depth Concrete Pvmnt Repairs; Resurface 112th Ave Carpool Lot	ROW	\$1,791	\$24	\$10,000
2023	Trunkline	210058	Ottawa	MDOT	I-196BL	From US-31 east to 88th Avenue	4.409	Road Rehabilitation	Inlay; Full Depth Concrete Pvmnt Repairs; Resurface	CON	\$4,301,694	\$57,211	\$24,016,000
2023	Trunkline	216629	Ottawa	MDOT	I-196 BL	From 84th Avenue east to I-196	0.442	Road Rehabilitation	Concrete Pavement Inlay	CON	\$558,113	\$0	\$3,075,000
2023	Local	216918	Ottawa	MACC	Areawide	MACC Planning Area	0.000	Planning, Research & Design	I-196 Business Loop Pedestrian Crossing Study	NI			\$80,000
2023	Multi-Modal	218505	Ottawa	MAX	Transit Operating	Areawide	0.000	SP1806-program administration	FY22 Section 5307Operating	NI	\$0	\$0	\$16,000

Fiscal Year	Job Type	Job#	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	State Estimated Amount	Local Estimated Amount	Total Estimated Amount
2023	Multi-Modal	218505	Ottawa	MAX	Transit Operating	Areawide	0.000	SP10-State Match urban Agency	FY22 Section 5307Operating	NI	\$4,000	\$0	\$4,000
2023	Multi-Modal	218912	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1410-misc. support equipment (explanation must be provided in work detail)	FY23 Section 5339 CTF Bus and Bus Facilities	NI	\$149,000	\$0	\$745,000
2023	Trunkline	219254	Allegan	MDOT	M-40	@CSX Transportation crossing	0.000	Railroad	Railroad crossing surface reconstruction	CON	\$31,592	\$0	\$315,917
2024	Trunkline	207384	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	3.354	Traffic Safety	Permanent pavement marking application on trunklines in Grand Region	PE	\$252	\$0	\$2,520
2024	Trunkline	207384	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	3.354	Traffic Safety	Permanent pavement marking application on trunklines in Grand Region	CON	\$63,504	\$0	\$635,040
2024	Trunkline	207399	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	1.845	Traffic Safety	Pavement marking retroreflectivity readings on trunklines in Grand Region	CON	\$252	\$0	\$2,520
2024	Trunkline	213157	Ottawa	MDOT	US-31 NB	From Ransom Street north to Port Sheldon Street	2.625	Road Rehabilitation	Milling and Two Course Asphalt Resurfacing	PE	\$52,635	\$0	\$290,000
2024	Local	214514	Ottawa	MACC	Areawide	Area-Wide (MACC office, 301 Douglas Ave.)	0.000	Planning, Research & Design	Clean Air Action Program (10/01/2023 - 09/30/2024)	NI	\$0	\$5,000	\$25,000
2024	Multi-Modal	214523	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1409-administrative vehicle	FY 2024 CMAQ - Bus and Administrative Vehicle Purchase	NI	\$10,000	\$0	\$50,000
2024	Multi-Modal	214523	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1101-<30 foot replacement bus with or without lift	FY 2024 CMAQ - Bus and Administrative Vehicle Purchase	NI	\$40,369	\$0	\$201,845
2024	Multi-Modal	214582	Ottawa	MAX	Transit Capital	Area-wide	0.000	SP1106-<30 foot expansion bus with or without lift	FY24 5307: Bus replacement, service vehicle, and expansion bus	NI	\$98,469	\$0	\$492,347
2024	Multi-Modal	214582	Ottawa	MAX	Transit Capital	Area-wide	0.000	SP1409-administrative vehicle	FY24 5307: Bus replacement, service vehicle, and expansion bus	NI	\$4,500	\$0	\$22,500

Fiscal Year	Job Type	Job#	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	State Estimated Amount	Local Estimated Amount	Total Estimated Amount
2024	Multi-Modal	214582	Ottawa	MAX	Transit Capital	Area-wide	0.000	SP1403-office equipment (copier, office furniture, etc.)	FY24 5307: Bus replacement, service vehicle, and expansion bus	NI	\$2,000	\$0	\$10,000
2024	Multi-Modal	214582	Ottawa	MAX	Transit Capital	Area-wide	0.000	SP1410-misc. support equipment (explanation must be provided in work detail)	FY24 5307: Bus replacement, service vehicle, and expansion bus	NI	\$3,000	\$0	\$15,000
2024	Multi-Modal	214582	Ottawa	MAX	Transit Capital	Area-wide	0.000	SP1101-<30 foot replacement bus with or without lift	FY24 5307: Bus replacement, service vehicle, and expansion bus	NI	\$47,574	\$0	\$237,870
2024	Multi-Modal	214582	Ottawa	MAX	Transit Capital	Area-wide	0.000	SP1408-maintenance equipment (hoists, tools, etc.)	FY24 5307: Bus replacement, service vehicle, and expansion bus	NI	\$2,000	\$0	\$10,000
2024	Multi-Modal	214585	Ottawa	MAX	Lincoln Ave	Area-wide	0.000	SP1101-<30 foot replacement bus with or without lift	FY24 5339: Bus Replacement	NI	\$33,015	\$0	\$165,076
2024	Multi-Modal	214587	Ottawa	MAX	Lincoln Ave	Area-wide	0.000	6410-5310 Projects	FY 2024 Section 5310: Mobility Management	NI	\$14,000	\$0	\$70,000
2024	Multi-Modal	214588	Ottawa	MAX	Lincoln Ave	Area-wide	0.000	6470-New Freedom Projects	FY 2024 Section 5310: Twilight & Night Owl	NI	\$0	\$142,500	\$285,000
2024	Multi-Modal	214589	Ottawa	MAX	Lincoln Ave	Area-wide	0.000	3000-Operating Assistance	FY 2024 Section 5307: Transit Operating Assistance	NI	\$1,641,000	\$566,000	\$4,134,000
2024	Local	214789	Allegan	ACRC	Blue Star Hwy	700' S of 141st Avenue to 143rd Avenue	1.137	Road Rehabilitation	Crush and Shape with Asphalt Resurfacing	CON	\$0	\$492,921	\$663,254
2024	Local	214789	Allegan	ACRC	Blue Star Hwy	700' S of 141st Avenue to 143rd Avenue	1.137	Road Rehabilitation	Crush and Shape with Asphalt Resurfacing	CON	\$0	\$136,746	\$683,728
2024	Trunkline	214956	Allegan	MDOT	I-196	I-196 over the CSX Railroad	0.000	Bridge Rehabilitation	Substructure Repairs	CON	\$360,000	\$0	\$3,600,000
2024	Local	215164	Ottawa	OCRC	Riley St	US 131 to 112th Avenue	1.789	Road Capital Preventive Maintenance	Resurfacing	CON	\$0	\$378,667	\$1,000,000
2024	Local	215242	Ottawa	Holland	Columbia Ave	10th Street to 24th Street	0.907	Reconstruction	Reconstruction	CON	\$0	\$20,591	\$102,956

Fiscal Year	Job Type	Job#	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	State Estimated Amount	Local Estimated Amount	Total Estimated Amount
2024	Local	215242	Ottawa	Holland	Columbia Ave	10th Street to 24th Street	0.907	Reconstruction	Reconstruction	CON	\$0	\$2,422	\$12,110
2024	Local	215242	Ottawa	Holland	Columbia Ave	10th Street to 24th Street	0.907	Reconstruction	Reconstruction	CON	\$0	\$2,800,254	\$3,884,934
2024	Local	215447	Ottawa	MACC	Areawide	Areawide	0.000	Planning, Research & Design	Data Collection	NI	\$0	\$4,250	\$21,250
2024	Multi-Modal	215787	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1101-<30 foot replacement bus with or without lift	FY24 Carbon Reduction - SP1101 partial <30 foot replacement bus	NI	\$55,750	\$0	\$278,750
2024	Multi-Modal	219499	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1803-planning/studies	To provide planning services.	NI	\$100,000	\$0	\$500,000
2024	Multi-Modal	220816	Ottawa	MAX	Transit Capital	areawide	0.000	SP1101-<30 foot replacement bus with or without lift	FY24 Carbon Reduction Program (CRP) - Bus Replacement	NI	\$53,231	\$0	\$266,155
2025	Trunkline	209616	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	3.908	Traffic Safety	Longitudinal pavement marking application on trunklines in Grand Region	PE	\$126	\$0	\$1,260
2025	Trunkline	209616	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	3.908	Traffic Safety	Longitudinal pavement marking application on trunklines in Grand Region	CON	\$37,170	\$0	\$371,700
2025	Trunkline	209617	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	1.983	Traffic Safety	Special pavement marking application on trunklines in Grand Region	PE	\$126	\$0	\$1,260
2025	Trunkline	209617	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	1.983	Traffic Safety	Special pavement marking application on trunklines in Grand Region	CON	\$5,859	\$0	\$58,590
2025	Trunkline	209631	Kent	MDOT	Regionwide	All trunkline routes of MACC MPO	2.868	Traffic Safety	Pavement marking retroreflectivity readings on trunklines in Grand Region	CON	\$202	\$0	\$2,016
2025	Local	214268	Ottawa	OCRC	152nd Ave	152nd Avenue from Butternut Drive to Quincy Street	0.526	New Facilities	New non-motorized pathway	CON	\$0	\$51,477	\$257,383
2025	Local	214268	Ottawa	OCRC	152nd Ave	152nd Avenue from Butternut Drive to Quincy Street	0.526	New Facilities	New non-motorized pathway	CON	\$0	\$72,707	\$279,707

Fiscal Year	Job Type	Job#	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	State Estimated Amount	Local Estimated Amount	Total Estimated Amount
2025	Local	214519	Ottawa	MACC	Douglas Ave	Area-Wide	0.000	Planning, Research & Design	Clean Air Action Program (10/01/2024 - 09/30/2025)	NI	\$0	\$5,000	\$25,000
2025	Local	214519	Ottawa	MACC	Douglas Ave	Area-Wide	0.000	Planning, Research & Design	Clean Air Action Program (10/01/2024 - 09/30/2025)	NI	\$0	\$5,000	\$25,000
2025	Local	214776	Allegan	ACRC	48th St	142nd Avenue to Ottogan Street	2.782	Road Capital Preventive Maintenance	Resurfacing	CON	\$0	\$126,583	\$623,250
2025	Local	214927	Ottawa	OCRC	120th Ave	Taylor Street to Fillmore Street	0.973	Road Rehabilitation	Milling and Two Course Asphalt Overlay	CON	\$0	\$91,026	\$330,359
2025	Local	214927	Ottawa	OCRC	120th Ave	Taylor Street to Fillmore Street	0.973	Road Rehabilitation	Milling and Two Course Asphalt Overlay	CON	\$19,641	\$0	\$19,641
2025	Local	215172	Ottawa	OCRC	Riley St	112th Avenue to 96th Avenue	1.993	Road Capital Preventive Maintenance	Resurfacing	CON	\$0	\$17,000	\$85,000
2025	Local	215172	Ottawa	OCRC	Riley St	112th Avenue to 96th Avenue	1.993	Road Capital Preventive Maintenance	Resurfacing	CON	\$0	\$586,334	\$1,115,000
2025	Local	215254	Ottawa	Zeeland	S Church St	Washington Avenue to Central Avenue	0.233	Reconstruction	Reconstruction	CON	\$0	\$1,471,033	\$2,267,700
2025	Local	215453	Ottawa	MACC	Areawide	Areawide	0.000	Planning, Research & Design	Data Collection	NI	\$0	\$4,250	\$21,250
2025	Multi-Modal	215871	Ottawa	MAX	Lincoln Ave	Areawide	0.000	SP3000-operating except JARC and New Freedom	FY25 - 5307 - SP3000 Transit Operating	NI	\$1,640,827	\$1,284,191	\$4,209,209
2025	Multi-Modal	215873	Ottawa	MAX	Lincoln Ave	Areawide	0.000	6470-New Freedom Projects	FY25 - 5310 - 6470 Transit Operating	NI	\$0	\$142,500	\$285,000
2025	Multi-Modal	215895	Ottawa	MAX	Lincoln Ave	Areawide	0.000	SP1101-<30 foot replacement bus with or without lift	FY25 - 5307 - Transit Capital Items	NI	\$40,723	\$0	\$203,616
2025	Multi-Modal	215895	Ottawa	MAX	Lincoln Ave	Areawide	0.000	SP1408-maintenance equipment (hoists, tools, etc.)	FY25 - 5307 - Transit Capital Items	NI	\$2,000	\$0	\$10,000
2025	Multi-Modal	215895	Ottawa	MAX	Lincoln Ave	Areawide	0.000	SP1403-office equipment (copier, office furniture, etc.)	FY25 - 5307 - Transit Capital Items	NI	\$2,000	\$0	\$10,000
2025	Multi-Modal	215895	Ottawa	MAX	Lincoln Ave	Areawide	0.000	SP1404-computers (hardware and software)	FY25 - 5307 - Transit Capital Items	NI	\$2,000	\$0	\$10,000
2025	Multi-Modal	215895	Ottawa	MAX	Lincoln Ave	Areawide	0.000	SP1410-misc. support equipment (explanation must be provided in work	FY25 - 5307 - Transit Capital Items	NI	\$3,000	\$0	\$15,000

Fiscal Year	Job Type	Job#	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	State Estimated Amount	Local Estimated Amount	Total Estimated Amount
2025	Multi-Modal	215896	Ottawa	MAX	Lincoln Ave	Areawide	0.000	SP1101-<30 foot replacement bus with or without lift	FY25 - 5339 - SP1101 Transit Capital (to replace)	NI	\$33,015	\$0	\$165,076
2026	Trunkline	213275	Kent	MDOT	Regionwide	All Trunkline Routes in Grand Region	17.668	Traffic Safety	Longitudinal Pavement Markings on trunkline routes in Grand Region	PE	\$126	\$0	\$1,260
2026	Trunkline	213275	Kent	MDOT	Regionwide	All trunkline routes in Grand Region, All Trunkline Routes in Grand Region	17.668	Traffic Safety	Longitudinal Pavement Markings on trunkline routes in Grand Region	CON	\$37,170	\$0	\$371,700
2026	Trunkline	213339	Kent	MDOT	Regionwide	All trunkline routes in MACC MPO	1.557	Traffic Safety	Application of special pavement markings on trunklines in Grand Region	PE	\$126	\$0	\$1,260
2026	Trunkline	213339	Kent	MDOT	Regionwide	All trunkline routes in MACC MPO	1.557	Traffic Safety	Application of special pavement markings on trunklines in Grand Region	CON	\$11,214	\$0	\$112,140
2026	Local	214521	Ottawa	MACC	Douglas Ave	Area-Wide	0.000	Planning, Research & Design	Clean Air Action Program (10/01/2025 - 09/20/2026)	NI	\$0	\$5,000	\$25,000
2026	Multi-Modal	214524	Ottawa	MAX	Lincoln Ave	Area-Wide	0.000	SP1101-<30 foot replacement bus with or without lift	FY 2026 CMAQ: One <30 foot replacement bus with or without lift	NI	\$52,606	\$0	\$263,030
2026	Local	214775	Allegan	ACRC	136th Ave	50th Street to M-40	1.220	Road Rehabilitation	Resurfacing	CON	\$0	\$1,232,250	\$1,700,000
2026	Local	214812	Ottawa	OCRC	Port Sheldon St	120th Avenue to 96th Avenue	2.998	Road Rehabilitation	Milling and Two Course Asphalt Overlay	CON	\$72,752	\$0	\$72,752
2026	Local	214812	Ottawa	OCRC	Port Sheldon St	120th Avenue to 96th Avenue	2.998	Road Rehabilitation	Milling and Two Course Asphalt Overlay	CON	\$0	\$803,000	\$1,680,000
2026	Local	214974	Ottawa	OCRC	Port Sheldon St	120th Avenue Intersection	2.505	Traffic Safety	Roundabout	CON	\$0	\$25,000	\$125,000
2026	Local	214974	Ottawa	OCRC	Port Sheldon St	120th Avenue Intersection	2.505	Traffic Safety	Roundabout	CON	\$0	\$809,250	\$1,175,000
2026	Local	215125	Ottawa	OCRC	Butternut Drive	Lakewood Boulevard to Riley Street	1.830	Road Capital Preventive Maintenance	Resurfacing	CON	\$0	\$304,250	\$800,000
2026	Local	215249	Ottawa	Holland	Waverly Rd	Chicago Drive to 16th Street	0.996	Road Rehabilitation	Resurfacing	CON	\$0	\$17,250	\$86,250
2026	Local	215249	Ottawa	Holland	Waverly Rd	Chicago Drive to 16th Street	0.996	Road Rehabilitation	Resurfacing	CON	\$0	\$885,000	\$1,413,750

Fiscal Year	Job Type	Job#	County	Responsible Agency	Project Name	Limits	Length	Primary Work Type	Project Description	Phase	State Estimated Amount	Local Estimated Amount	Total Estimated Amount
2026	Local	215454	Ottawa	MACC	Areawide	Areawide	0.000	Planning, Research & Design	Data Collection	NI	\$0	\$4,250	\$21,250
2026	Multi-Modal	215664	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1403-office equipment (copier, office furniture, etc.)	5307: FY26 Bus Replacement	NI	\$2,000	\$0	\$10,000
2026	Multi-Modal	215664	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1408-maintenance equipment (hoists, tools, etc.)	5307: FY26 Bus Replacement	NI	\$2,000	\$0	\$10,000
2026	Multi-Modal	215664	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1410-misc. support equipment (explanation must be provided in work detail)	5307: FY26 Bus Replacement	NI	\$3,000	\$0	\$15,000
2026	Multi-Modal	215664	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1101-<30 foot replacement bus with or without lift	5307: FY26 Bus Replacement	NI	\$48,200	\$0	\$241,000
2026	Multi-Modal	215664	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1404-computers (hardware and software)	5307: FY26 Bus Replacement	NI	\$2,000	\$0	\$10,000
2026	Multi-Modal	215665	Ottawa	MAX	Lincoln Ave	Areawide	0.000	SP3000-operating except JARC and New Freedom	5307: FY26 Transit Operating Assistance	NI	\$1,640,827	\$1,322,716	\$4,286,259
2026	Multi-Modal	215739	Ottawa	MAX	Lincoln Ave	Areawide	0.000	6470-New Freedom Projects	FY26 5310 NF Operating	NI	\$0	\$142,500	\$285,000
2026	Multi-Modal	215747	Ottawa	MAX	Transit Capital	Areawide	0.000	6410-5310 Projects	5310: FY26 Mobility Management	NI	\$14,000	\$0	\$70,000
2026	Multi-Modal	215748	Ottawa	MAX	Lincoln Ave	Areawide	0.000	SP1101-<30 foot replacement bus with or without lift	FY26 5339 - Transit Capital	NI	\$33,015	\$0	\$165,076
2026	Multi-Modal	215793	Ottawa	MAX	Transit Capital	Areawide	0.000	SP1101-<30 foot replacement bus with or without lift	FY26 Carbon Reduction - SP1101 partial <30 foot replacement bus	NI	\$33,000	\$0	\$165,000
2026	Multi-Modal	215874	Ottawa	MAX	Lincoln Ave	Areawide	0.000	6410-5310 Projects	FY25 - 5310 Transit Capital 6410-5310	NI	\$14,000	\$0	\$70,000



CHAPTER ELEVEN

Financial Introduction

FINANCIAL INTRODUCTION

The financial plan summarizes the process used to develop transportation revenue projections, identifies the costs of operating and maintaining the transportation system, and lists planned project and program commitments. This chapter demonstrates financial constraints in the urbanized area by showing that planned commitments do not exceed available annual revenue for both highway and transit funding in the Macatawa Area Coordinating Council (MACC) planning area.

Federal requirements of the Infrastructure Investment and Jobs Act (IIJA); also called the Bipartisan Infrastructure Law (BIL) and the U.S. Code of Federal Regulations [23 CFR Part 450.324] require that the MACC 2050 LRTP be constrained by the amount of revenue available to transportation providers. The estimated cost of the projects and programs offered in this plan to meet the future transportation system needs have been constrained to revenue projections over the length of the plan. Revenue and cost estimates have also been developed to reflect “year of expenditure” dollars, accounting for inflation. This chapter is intended to provide the reader with an understanding of the sources and amounts of available revenue, planned expenditures, and how this LRTP meets the financial constraint requirement noted above.

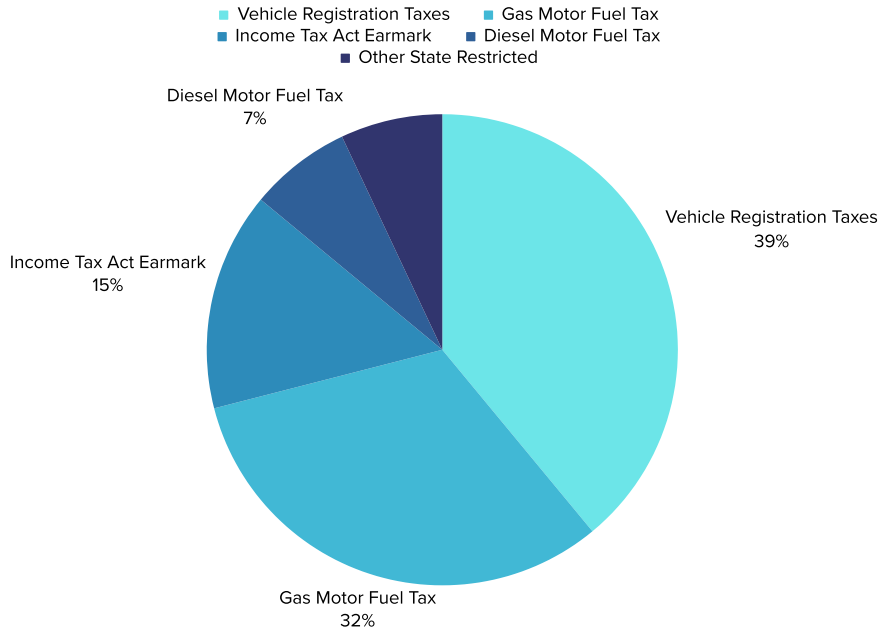
SOURCES OF TRANSPORTATION FUNDING

The basic sources of transportation funding are motor fuel taxes and vehicle registration fees. Both the federal government and the State of Michigan tax motor fuel, the federal government at \$0.184 per gallon on gasoline and \$0.244 per gallon on diesel, and Michigan at \$0.286 per gallon on gasoline and diesel. Michigan also charges sales tax on motor fuel, but this funding is not applied to transportation infrastructure. The motor fuel taxes are excise taxes, which means they are a fixed amount per gallon. The amount collected per gallon does not increase when the price of gasoline or diesel fuel increases.



Image courtesy of MDOT Photo and Video Services

The State of Michigan also collects annual vehicle registration fees when motorists purchase license plates or tabs. This is a very important source of transportation funding for the state. As of February 2023, the State’s revenue is as follows:



COOPERATIVE REVENUE ESTIMATION PROCESS

Estimating the amount of funding available for the 2050 LRTP is a complex process that relies on several factors:

- Economic conditions
- Miles traveled by vehicles nationwide and in Michigan
- Federal and state transportation funding received in previous years

Revenue forecasting relies on a combination of data and experience and represents a “best guess” of future trends. The revenue forecasting process is a cooperative effort. The Michigan Transportation Planning Association (MTPA), a voluntary association of public organizations and agencies responsible for the administration of transportation planning activities throughout the state, formed the Financial Working Group (FWG) to develop a statewide standard forecasting process. The FWG is comprised of members from the Federal Highway Administration (FHWA), the Michigan Department of Transportation (MDOT), transit agencies, and metropolitan planning organizations (MPOs), including the MACC. It represents a cross-section of the public agencies responsible for transportation planning in our state. The revenue assumptions in this financial plan are largely based on the factors formulated by the FWG and approved by the MTPA.

FEDERAL FUNDING SOURCES: *HIGHWAYS*

Federal transportation funding comes from motor fuel taxes (mostly gasoline and diesel). Receipts from these taxes are deposited in the Highway Trust Fund (HTF). Funding is then apportioned to the states. Apportionment is the distribution of funds through formulas in law. The current law governing these apportionments is the Infrastructure Investment and Jobs Act (IIJA); it is also called the Bipartisan Infrastructure Law (BIL). Under this law, Michigan receives approximately \$1.4 billion in federal transportation funding annually. This funding is apportioned through several programs designed to accomplish different objectives, such as road repair, bridge repair, safety, and congestion mitigation. A brief description of the major funding sources follows.

NATIONAL HIGHWAY PERFORMANCE PROGRAM (NHPP)

This funding is used to support conditions and performance on the National Highway System (NHS) and construct new facilities. The National Highway System is the nation's most important highway network, including the Interstate and US highway systems. In Michigan, most roads on the National Highway System are state trunk lines (i.e., "I-," "US-," and "M-" roads), but can also include principal arterials whether state or locally-owned. These funds are currently not available to local road agencies in the MACC area, only MDOT roads within the MACC, even though the Ottawa County Road Commission and the City of Holland have several routes (e.g. River Avenue, Douglas Avenue, Lakewood Boulevard, State Street) that are eligible for NHPP funds.

SURFACE TRANSPORTATION BLOCK GRANT (STBG)

This funding is used for construction, reconstruction, rehabilitation, resurfacing, restoration, preservation, or operational improvements to federal-aid highways and replacement, preservation, and other improvements to bridges on public roads. Michigan's STBG apportionment from the federal government is evenly split, half to areas of the state based on population and half that can be used in any area of the state. STBG funds can also be flexed (transferred) to transit projects.

CARBON REDUCTION PROGRAM (CRP)

New funding source established in IIJA. These funds encompass various eligible activities aimed at reducing transportation emissions defined as carbon dioxide (CO₂) emissions from on-road highway sources. Funds may also be used to promote sustainable transportation practices. Funds are split between the state and various urbanized areas based on population.

HIGHWAY SAFETY IMPROVEMENT PROGRAM (HSIP)

This funding is used to correct or improve a hazardous road location or feature or address other highway safety problems. Projects can include intersection improvements, shoulder widening, rumble strips, improving safety for pedestrians, bicyclists, or disabled persons, highway signs and markings, guardrails, and other activities. The State of Michigan retains all safety funding and uses a portion on the state trunkline system, distributing the remainder to local agencies through a competitive process.

CONGESTION MITIGATION AND AIR QUALITY IMPROVEMENT (CMAQ)

This funding is intended to reduce emissions from transportation-related sources. There is currently an emphasis on certain projects that reduce particulate matter (PM) and ozone, but funds can also be used for traffic signal retiming, actuation, and interconnects; installing dedicated turn lanes; roundabouts; travel demand management such as rideshare and vanpools; transit; and non-motorized projects that divert non-recreational travel from single-occupant vehicles.

TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

This funding is used for a number of activities to improve the transportation system environment, including (but not limited to) non-motorized projects, preservation of historic transportation facilities, outdoor advertising control, vegetation management in rights-of-way, and the planning and construction of projects that improve the ability of students to walk or bike to school. Funds are split between the state and various larger urbanized areas based on population. Local agencies can also apply for funding from the statewide portion through a competitive process.

BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF FEDERAL HIGHWAY FUNDS

Each year, the targets (the amount the MACC area is expected to receive) are calculated for each of these programs, based on federal apportionment documentation and state law. Targets can vary from year to year due to factors including how much funding was actually received by the Highway Trust Fund, the authorization (the annual transportation funding spending ceiling), and the appropriation (how much money is actually approved to be spent). Using FY23 as a base year, the FWG of the MTPA developed a 2.0 percent annual increase in federal-aid highway funds from FY23-26, then a 1.9 percent annual increase from FY27-FY31. From FY32 and beyond, it will be a 1.0 percent growth rate.

STATE FUNDING SOURCES: *HIGHWAYS*

There are two main sources of state highway funding: the state motor fuel tax and vehicle registration fees. The state law governing the collection and distribution of state highway revenue is Public Act 51 of 1951, commonly known simply as Act 51. All revenue from the motor fuel tax and vehicle registration fees is deposited into the Michigan Transportation Fund (MTF). Act 51 contains a number of complex formulas for the distribution of the funding, but essentially, once funding for certain grants and administrative costs are removed, approximately ten percent of the remainder is deposited in the Comprehensive Transportation Fund (CTF) for transit. The remaining funds are then split between MDOT, county road commissions, and municipalities (incorporated cities and villages) in a proportion of 39.1 percent, 39.1 percent, and 21.8 percent, respectively.

Several years ago, major changes to the State of Michigan's surface transportation revenue collection were enacted. These changes included:

- Increasing the motor fuel tax to 26.3¢/gallon from 19¢/gallon (gasoline) and 15¢/gallon (diesel), effective January 1, 2017;
- Raising vehicle registration fees by an average of 20%, effective January 1, 2017;
- Transferring \$150 million from the state's General Fund to highways in fiscal year (FY) 2019;
- Transferring \$325 million from the state's General Fund to highways in FY 2020;
- Transferring \$600 million from the state's General Fund to highways in FY 2021 and subsequent years; and
- Adjusting the motor fuel tax for inflation by up to 5% each year, starting in January 2022.

MTF funds are critical to the operation of the road system in Michigan. Since federal funds cannot be used to operate or maintain the road system (items such as snow removal, mowing grass in the rights-of-way, paying the electric bill for streetlights and traffic signals, etc.), MTF funds are local community and county road agencies' main source for funding these items. Most federal transportation funding must be matched so that each project's cost is a maximum of approximately 80% federal-aid funding and a minimum of 20% non-federal matching funds. In Michigan, most match funding comes from the MTF. Finally, federal funding cannot be used on local public roads, such as subdivision streets, or other roads not designated as federal-aid eligible. Here again, MTF is the main source of revenue for maintenance and repair of these roads.

Funding from the MTF is distributed statewide to incorporated cities, incorporated villages, and county road commissions, collectively known as Act 51 agencies. The formula is based on population and public road mileage under each Act 51 agency's jurisdiction.

BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF STATE HIGHWAY FUNDS

The base for the financial forecast of state MTF funds comes from MDOT's *Estimated Distribution Schedule for Michigan Transportation Funding*. This document shows the estimated revenues for the fiscal years FY 2024 and FY 2025 for cities, villages, and counties. Adding all of the distributions to cities and county road commissions in the MACC area provides an overall distribution total for the region.

LOCAL FUNDING SOURCES: *HIGHWAYS*

Local highway funding can come from a variety of sources, including transportation millages, general fund revenues, and special assessment districts. Locally funded transportation projects that are not of regional significance are not required to be included in the LRTP. This makes it difficult to determine how much local funding is being spent on roads in the MACC area.

BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF STATE HIGHWAY FUNDS

To estimate local revenue over the duration of the 2050 plan, the average local match throughout the current TIP cycle of fiscal years 2023-2026 was found. For consistency, the average dollar amount was then grown at the federal rate of a 2.0 percent annual increase from FY23-26, then a 1.9 percent annual increase from FY27-FY31. From FY32 and beyond, it will be a 1.0 percent growth rate. Local units of government in the MACC area recognize the economic importance of preserving local transportation investments and have passed millages for use on primary and local roads.

INNOVATIVE FINANCE STRATEGIES: *HIGHWAYS*

A number of innovative financing strategies have been developed over the past two decades to help stretch limited transportation dollars. Some are purely public sector; others involve partnerships between the public and private sectors. Some of the more common strategies are discussed below.

TOLL CREDITS

This strategy allows states to count funding they earn through tolled facilities (after deducting facility expenses) to be used as a “soft match,” rather than using the usual cash match for federal transportation projects. States have to demonstrate “maintenance of effort” when using toll credits—in other words, they must show that the toll money is being used for transportation purposes and that they’re not reducing their efforts to maintain the existing system by using the toll credit program. Even though there are no tolled roads, toll credits have been an important source of funding for the State of Michigan in the past because of the Mackinac Bridge, Ambassador Bridge, Blue Water Bridge, Sault Ste. Marie International Bridge, Gross Ile Toll Bridge, and the soon-to-be Gordie Howe International Bridge.

There also is one tolled tunnel – the Detroit-Windsor Tunnel. Toll credits have also helped to partially mitigate the funding crisis in Michigan since insufficient non-federal funding is available to match all of the federal funding apportioned to the state.

STATE INFRASTRUCTURE BANK (SIB)

SIBs are established in a majority of states, including Michigan. Under the SIB program, states can place a portion of their federal highway funding into a revolving loan fund for transportation improvements such as highway, transit, rail, and intermodal projects. Loans are available at 3 percent interest and a 25-year loan period to public entities such as political subdivisions, regional planning commissions, state agencies, transit agencies, railroads, and economic development corporations. Private and nonprofit corporations developing publicly owned facilities may also apply.

TRANSPORTATION INFRASTRUCTURE FINANCE AND INNOVATION ACT (TIFIA)

This nationwide program provides lines of credit and loan guarantees to state or local governments for development, construction, reconstruction, property acquisition, and carrying costs during construction. TIFIA enables states and local governments to use the borrowing power and creditworthiness of the United States to fund finance projects at far more favorable terms than they would otherwise be able to do on their own. Repayment of TIFIA funding to the federal government can be delayed for up to five years after project completion with a repayment period of up to 35 years. Interest rates are also low.

BONDING

Bonding is borrowing, where the borrower agrees to repay lenders the principal and interest. Interest may be fixed over the term of the bond or variable. The amount of interest a borrower will have to pay depends in large part upon its perceived credit risk; the greater the perceived chance of default, the higher the interest rate. In order to bond, a borrower must pledge a reliable revenue stream for repayment. For example, this can be the toll receipts from a new transportation project. In the case of general obligation bonds, future tax receipts are pledged.

States are allowed to borrow against their federal transportation funds, within certain limitations. While bonding provides money upfront for important transportation projects, it also means diminished resources in future years, as funding is diverted from projects to paying the bonds' principal and interest. Michigan transportation law requires money for the payment of bonds and other debts to be taken off the top before the distribution of funds for other purposes. Therefore, the advantages of completing a project more quickly need to be carefully weighed with the disadvantages of reduced resources in future years.

ADVANCE CONSTRUCT/ADVANCE CONSTRUCT CONVERSION

This strategy allows a community or agency to build a transportation project with its own funds (advance construct) and then be reimbursed with federal funds in a future year (advance construct conversion). Tapered match can also be programmed, where the agency is reimbursed over a period of two or more years. Advance construct allows for the construction of highway projects before federal funding is available; however, the agency must be able to build the project with its own resources and then be able to wait for federal reimbursement in a later year.

PUBLIC-PRIVATE PARTNERSHIPS (P3):

Funding available through traditional sources, such as motor fuel taxes, is not keeping pace with the growth in transportation system needs. Governments are increasingly turning to public-private partnerships (P3) to fund large transportation infrastructure projects. Design/Build/Finance/Operate (DBFO) is an example of a public-private partnership. In this arrangement, the government keeps ownership of the transportation asset but hires one or more private companies to design the facility, secure funding, construct the facility, and operate it, usually for a set period of time. The private-sector firm is repaid most commonly through toll revenue generated by the new facility.

FEDERAL FUNDING SOURCES: ***TRANSIT***

Federal revenue for transit comes from federal motor fuel taxes, just as it does for highway projects. Some of the motor fuel tax collected nationwide is deposited in the Mass Transit Account of the Highway Trust Fund (HTF). Federal transit funding is similar to federal highway funding as there are several core programs where the money is distributed on a formula basis and other competitive programs. Here are brief descriptions of some of the most common federal transit programs.

SECTION 5307

This is the largest single source of transit funding that is apportioned to Michigan. Section 5307 funds can be used for capital projects, transit planning, and projects eligible under the former Job Access Reverse Commute (JARC) program (intended to link people without transportation to available jobs). Some of the funds can also be used for operating expenses, depending on the size of the transit agency. One percent of funds received are to be used by the agency to improve security at agency facilities.

Distribution is based on formulas including population, population density, and operating characteristics related to transit service. Urbanized areas of 200,000 population or larger receive their own apportionment. Areas between 50,000 and 199,999 population are awarded funds by the governor from the governor's apportionment.

SECTION 5310, ELDERLY AND PERSONS WITH DISABILITIES

Funding for projects to benefit seniors and disabled persons when service is unavailable or insufficient and transit access projects for disabled persons exceeding Americans with Disabilities Act (ADA) requirements. Section 5310 incorporates the former New Freedom program. The State of Michigan allocates its funding on a per-project basis.

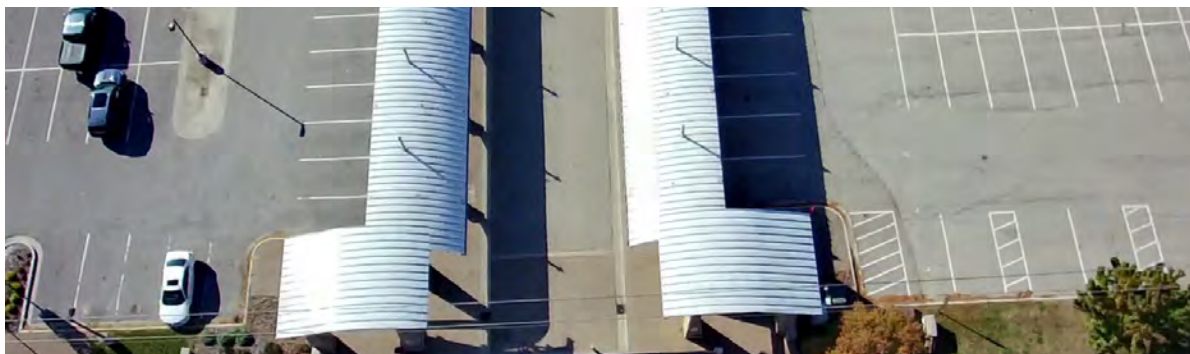
SECTION 5339, BUS AND BUS FACILITIES:

Funds will be made available under this program to replace, rehabilitate, and purchase buses and related equipment, as well as construct bus-related facilities. Each state receives a fixed amount, with the remaining funding apportioned to transit agencies based on various population and service factors.

In addition to these funding sources, transit agencies can also apply for Surface Transportation Program and Congestion Mitigation and Air Quality Improvement (CMAQ) program funds.

BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF STATE HIGHWAY FUNDS

Each year, funding targets (the estimated funding amount the MACC is anticipated to receive) are calculated for each of these programs, based on federal apportionment documentation and state law. Targets can vary from year to year due to factors including actual versus estimated receipts of the Mass Transit Account of the Highway Trust Fund, the authorization (the annual transportation funding spending ceiling), and the appropriation (how much money is approved to be spent). The MACC works with MDOT's Office of Passenger Transportation (OPT) to develop transit funding targets.



STATE FUNDING SOURCES: *TRANSIT*

The majority of state-level transit funding is derived from the same source as state highway funding – the state tax on motor fuels. Act 51 stipulates that 10 percent of receipts into the Michigan Transportation Fund (MTF), after certain deductions, are to be deposited in a sub-account of the MTF called the Comprehensive Transportation Fund (CTF). This is analogous to the Mass Transit Account of the Highway Trust Fund at the federal level. Additionally, a portion of the state-level auto-related sales tax is deposited in the CTF. Distributions from the CTF are used by public transit agencies for matching federal grants and also for operating expenses.

BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF STATE HIGHWAY FUNDS

Calculations of state transit funds are based on historical data. MDOT OPT provides state operating targets for these funds. These funds, in addition to local funding, comprise nearly all of the operating funds such as wages and salaries, vehicle maintenance, and maintenance of facilities necessary to keep MAX Transit functioning.

LOCAL FUNDING SOURCES: *TRANSIT*

Major sources of local funding for transit agencies include farebox revenues, general fund transfers from city governments, and transportation millages. MAX Transit collects fares from riders and also receives funds from a dedicated transportation millage and local operating support.



BASE AND ASSUMPTIONS USED IN FORECAST CALCULATIONS OF STATE HIGHWAY FUNDS

MAX receives revenues from local sources (including passenger fares, transportation millage, local operating assistance, and interest from reserves).

TRANSIT CAPITAL AND OPERATIONS

Transit expenditures are divided into two basic categories of capital and operations. Capital refers to the physical assets of the agency, such as buses and other vehicles, stations and shelters at bus stops, office equipment and furnishings, and certain spare parts for vehicles. Operations refer to the activities necessary to keep the system operating, such as driver wages and maintenance costs. Most expenses of transit agencies are operations expenses. Data on FY2023-2026 capital and operating costs were provided by MAX staff. The MAX Annual Report from 2022 was also used to identify local revenue trends and track expenses.

MAX TRANSIT FINANCIALS (FY2023)

SOURCE	FY2023
Passenger Fares	\$210,279
Tax Levy	\$1,325,925
Local Operating	\$196,498
State Operating	\$1,971,087
State - Capital	\$134,156
Federal Operating	\$1,902,834
Federal - Capital	\$836,911
Interest & Other Revenues	\$918,979
TOTAL	\$7,496,669

Source: MAX Transit

INNOVATIVE FINANCE STRATEGIES: *TRANSIT*

Sources of funding for transit are not limited to the federal, state, and local sources previously mentioned. As with highway funding, alternative funding sources can be utilized to operate transit services. Bonds can be issued (see discussion of bonds in the “Innovative Financing Strategies—Highway” section). The federal government also allows the use of toll credits to match federal funds. Regulations allow for the use of toll revenues (after facility operating expenses) to be used as a “soft match” for transit projects. A soft match means that actual money does not have to be provided—the toll revenues are used as a “credit” against the match. This allows the actual toll funds to be used on other parts of the transportation system, thus stretching the resources available to maintain the system.

COMMITMENTS AND PROJECTED AVAILABLE REVENUE

Estimating the amount of funding available for the LRTP planning period is a complex process. It relies on a number of factors, including economic conditions, miles traveled by vehicles nationwide and in the State of Michigan, and federal and state transportation funding received in previous years. Revenue forecasting relies on a combination of data and experience and represents a “best guess” of future trends.

The revenue forecasting process is a cooperative effort. The Michigan Transportation Planning Association (MTPA), a voluntary association of public organizations and agencies responsible for the administration of transportation planning activities throughout the state, formed the Financial Working Group (FWG) to develop a statewide standard forecasting process. FWG is comprised of members from the Federal Highway Administration (FHWA), the Michigan Department of Transportation (MDOT), transit agencies, and Metropolitan Planning Organizations, including MACC. It represents a cross-section of the public agencies responsible for transportation planning in our state. The revenue assumptions in this financial plan for federal and state dollars are based on the factors formulated by the FWG and approved by the MTPA.

Annual Growth	Federal	State	Local
2023 - 2026	2.0%	2.7%	2.0%
2027 - 2031	1.9%	2.7%	1.9%
2032 - 2050	1.0%	1.3%	1.0%

FEDERAL FUNDING REVENUES

To determine federal funding by program, the MACC took funding allocations for FY2023-2026 directly from the FY2023-2026 Transportation Improvement Program (TIP). For 2024 and beyond, the MACC took the average federal funding amounts for STP, CMAQ, and CRP over the current TIP years which utilizes the approved federal growth rate of 2% up until FY 2026 and then a 1.9 percent annual increase from FY27-FY31. From FY32 and beyond, it will be a 1.0 percent growth rate. Competitive programs, such as safety (HSIP funding), were not included in this analysis, as MDOT manages that program, and such grants are not guaranteed.

STATE FUNDING REVENUES

State revenues were determined through base estimates provided by MDOT, while utilizing growth rates of 2.7% for 2024 – 2031, and 1.3% for 2032 – 2050

LOCAL FUNDING REVENUES

The local program funds consist of local Act 51 revenue estimates which are often supplemented with other local funds, such as general funds, transportation millages, municipal bonds, and special assessments. Agencies that receive Act 51 funding, also sometimes referred to as MTF funds, include road agencies such as the Allegan and Ottawa County Road Commissions and the cities of Holland and Zeeland. To forecast the amount of local revenue over the life of the 2050 LRTP, the average local commitment throughout the current TIP was used and then grown at the same rate as federal revenues (2.0% until 2026, 2.3% from 2027-2031, and 1.0% from FY32 and beyond).

TRUNKLINE SYSTEM REVENUES

All highways with an “I”, “M”, “BL”, “BS”, and “US” designation, such as I-96 and US-31 in the MACC area are part of a network known as the State Trunkline System. While both federal and state funds go towards maintaining the trunkline system, the main agency responsible for the system is MDOT.

The amount of funding projected to be available for system preservation activities (such as road repaving, rehabilitation, or reconstruction) is shown in the following Trunkline Revenue Forecast table which represents funding totals that were provided by MDOT. Note that this table shows predicted funding for critical infrastructure needs and pavement preservation and that the funds listed are not to be used for capacity improvements, new roads, or trunkline modernization.

Years	Federal (80%)	State (20%)	Total Revenue	Total Cost
2023 - 2026	\$29,010,609	\$7,252,652	\$36,263,261	\$36,263,261
2027 - 2030	\$36,263,261	\$7,659,808	\$38,299,042	\$38,299,042
2031 - 2040	\$85,139,774	\$21,284,943	\$106,424,717	\$106,424,717
2041 - 2050	\$112,604,903	\$28,151,225	\$140,756,129	\$140,756,129
Total	\$257,394,520	\$64,348,630	\$321,743,15	\$321,743,15

OPERATIONS & MAINTENANCE REVENUES

Construction, reconstruction, repair, and rehabilitation of roads and bridges are only part of the total cost of the highway system, it must also be operated and maintained. Operations and Maintenance (O&M) are defined as those items necessary to keep the highway infrastructure functional for vehicle travel, other than the construction, reconstruction, repair, and rehabilitation of the infrastructure. O&M includes items such as snow and ice removal, pothole patching, rubbish removal, maintaining the right-of-way, maintaining traffic signs and signals, clearing highway storm drains, paying the electrical bills for street lights and traffic signals, and other similar activities, and the personnel and direct administrative costs necessary to implement these projects. These activities are as vital to the smooth functioning of the highway system as good pavement.

Federal transportation funds cannot be used for O&M of the highway system. Since the LRTP only includes federally-funded transportation projects (and non-federally-funded projects of regional significance), it does not include O&M projects. While in the aggregate, O&M activities are regionally significant, the individual projects do not rise to that level. However, federal regulations require an estimate of the amount of funding that will be spent operating and maintaining the federal-aid-eligible highway system throughout the 2050 LRTP. This section of the Financial Plan provides an estimate for the MACC area and details the method used to estimate these costs.

MDOT produced Operation and Maintenance revenue estimates going out to the year 2050 for each MPO throughout the state based on highway lane miles.

Local Act 51 road agencies (county road commissions, incorporated cities, and incorporated villages) are responsible for operating and maintaining the roads they own, including those roads they own that are designated as part of the federal-aid system. In the MACC area, that would be the Allegan County Road Commission, the Ottawa County Road Commission, the City of Holland, and the City of Zeeland. To estimate local funding contributions to O&M, the MACC used Act 51 allocation estimates for 2024 and 2025. A 2.7% inflation factor was applied from 2024-2031 and then 1.3% from 2032-2050. Once the funds were projected out to 2050, one-third of the annual revenue was used to predict O&M allocations, since, for many agencies, O&M costs are, on average, around one-third of their Act 51 funding total.

Years	Local	MDOT	Total Revenue	Total Cost
2024 - 2026	\$20,152,866	\$18,411,851	\$38,564,718	\$38,564,718
2027 - 2030	\$29,470,076	\$26,322,893	\$55,792,970	\$55,792,970
2031 - 2040	\$82,344,590	\$74,473,240	\$156,817,831	\$156,817,831
2041 - 2050	\$93,697,829	\$88,770,470	\$182,468,299	\$182,468,299
Total	\$225,665,363	\$207,978,456	\$433,643,819	\$433,643,819

FINANCIAL CONSTRAINT

The LRTP must be fiscally constrained; that is, the cost of projects programmed in the LRTP cannot exceed revenues “reasonably expected to be available” during the 26-year LRTP period. Funding for core transit programs such as Section 5307, Section 5339, and Section 5310 are expected to be available to the area based on historical trends of funding from similar programs in past federal surface transportation laws. Likewise, state funding from the state’s Comprehensive Transportation Fund (CTF), and local sources of revenue such as farebox, general fund transfers, and millages, are also expected to be available during the 26-year LRTP period. Funds from other programs are generally awarded on a competitive basis and are therefore impossible to predict. Funds from federal competitive programs are not included in the revenue forecast. Funding for core programs such as CMAQ, STP, or CRP that may be used for highways is also expected to be available to the MACC area based on historical trends of funding from past federal surface transportation laws. Likewise, state funding from the Michigan Transportation Fund (MTF) is also expected to be available during the 26-year period.

All federally funded projects must be in the LRTP. Additionally, any non-federally-funded but regionally significant project must also be included. In these cases, project submitters demonstrate that funding is available and what sources of non-federal funding are to be utilized. Projects programmed in the LRTP are known as commitments. Commitments cannot exceed funds reasonably expected to be available. Projects must also be programmed in the year of expenditure dollars, meaning that they must be adjusted for inflation to reflect the expected purchasing power of a dollar in the year the project is expected to be built. The MTPA/Financial Work Group has decided on an annual inflation rate of 4% for projects over the plan period. This means that a project costing \$1 million in FY 2024 is expected to cost \$1.04 million in FY 2025, \$1.082 million in FY 2026, and so on. Since the amount of growth in available funding, around 2%, is forecasted to be less than the growth rate of project costs, around 4%, this means that likely not enough funds will be available to keep up with the rising costs of projects over the 26 years of this plan. The list of projects can be found in Chapter 10.

The expenditures/programmed amounts in the fiscal constraint tables match the revenue, as the local agencies and MDOT will utilize all funds in the years they are made available. During future TIP developments, final projects will be selected for funding.

ESTIMATED REVENUE AND EXPENDITURES (FY2023 - FY2026)

	Total Revenue	Federal Commitment	Federal Revenue	State Commitment	Local Commitment	Total Commitment
Fiscal Year 2023 - 2026, Local MPO Based Constraints						
Carbon Reduction - Small MPO	\$1,144,936	\$899,183	\$928,871	\$88,750	\$157,003	\$1,144,936
STP - Small MPO	\$13,716,976	\$6,612,155	\$6,889,322	\$0	\$7,104,821	\$13,716,797
STP Flex - Small MPO	\$367,530	\$294,024	\$345,389	\$0	\$73,506	\$367,530
Fiscal Year 2023 - 2026, Local RTF Based Constraints						
STP - Rural/Flexible	\$2,010,359	\$1,116,333	\$1,116,333	\$0	\$894,026	\$2,010,359
TEDF Category D	\$92,393	\$0	\$0	\$92,393	\$0	\$92,393
Fiscal Year 2023 - 2026, Local Projects From Statewide Sources						
CMAQ	\$1,839,043	\$1,244,940	\$1,244,940	\$102,975	\$491,128	\$1,839,043
STP - Flexible (Bridge)	\$4,034,229	\$3,234,584	\$3,234,584	\$457,984	\$350,661	\$4,043,229
Fiscal Year 2023 - 2026, MDOT Project Templates						
Road - Capital Preventative Maintenance	\$524,000	\$428,894	\$428,894	\$95,106	\$0	\$524,000
Road - Rehabilitation and Reconstruction	\$27,391,003	\$22,419,535	\$22,419,535	\$4,914,233	\$57,235	\$27,391,003
Bridge Replacement and Preservation	\$3,600,000	\$3,240,000	\$3,240,000	\$360,000	\$0	\$3,600,000
Traffic & Safety	\$2,032,378	\$1,834,622	\$1,834,622	\$197,756	\$0	\$2,032,378
Other	\$2,114,490	\$1,756,457	\$1,756,457	\$358,033	\$0	\$2,114,490
Fiscal Year 2023 - 2026, Transit Project Categories						
5307	\$24,459,195	\$9,780,363	\$9,780,363	\$8,964,306	\$5,714,526	\$24,459,195
5310	\$1,420,000	\$794,000	\$794,000	\$56,000	\$570,000	\$1,420,000
5339	\$1,578,281	\$1,230,959	\$1,230,959	\$347,322	\$0	\$1,578,281
Fiscal Year 2023 - 2026 Grand Total	\$86,333,813	\$54,886,049	\$55,244,269	\$16,034,858	\$15,412,906	\$86,333,634

Source: Michigan Department of Transportation

Only Carbon Reduction, STP, STP Flex, and CMAQ funds are shown below after 2026 (the current TIP cycle) since other forms of funding, such as HSIP safety funds, are awarded in a grant process and are not guaranteed every year.

ESTIMATED REVENUE AND EXPENDITURES (FY2027 - FY2030)

FISCAL YEAR 2027-2030	TOTAL REVENUE	FEDERAL COMMITMENT	FEDERAL REVENUE	LOCAL COMMITMENT	TOTAL COMMITMENT
CARBON REDUCTION - SMALL MPO	\$1,268,577	\$1,014,862	\$1,014,862	\$253,715	\$1,268,577
STP - SMALL MPO	\$15,784,333	\$8,261,480	\$8,261,480	\$7,522,853	\$15,784,333
STP FLEX - SMALL MPO	\$456,059	\$364,847	\$364,847	\$91,212	\$456,059
CMAQ	\$1,207,895	\$966,316	\$966,316	\$241,579	\$1,207,895
FISCAL YEAR 2027-2030 GRAND TOTAL	\$18,716,864	\$10,607,505	\$10,607,505	\$8,109,359	\$18,716,864

Source: Michigan Department of Transportation

ESTIMATED REVENUE AND EXPENDITURES (FY2041 - FY2050)

FISCAL YEAR 2041-2050	TOTAL REVENUE	FEDERAL COMMITMENT	FEDERAL REVENUE	LOCAL COMMITMENT	TOTAL COMMITMENT
CARBON REDUCTION - SMALL MPO	\$3,840,905	\$3,072,724	\$3,072,724	\$768,181	\$3,840,905
STP - SMALL MPO	\$48,012,479	\$25,013,498	\$25,013,498	\$22,998,981	\$48,012,479
STP FLEX - SMALL MPO	\$1,380,821	\$1,104,657	\$1,104,657	\$276,164	\$1,380,821
CMAQ	\$3,657,177	\$2,925,741	\$2,925,741	\$731,435	\$3,657,177
FISCAL YEAR 2041-2050 GRAND TOTAL	\$56,891,382	\$32,116,620	\$32,116,620	\$24,774,762	\$56,891,382

Source: Michigan Department of Transportation

ESTIMATED REVENUE AND EXPENDITURES (FY2031 - FY2040)

FISCAL YEAR 2031-2040	TOTAL REVENUE	FEDERAL COMMITMENT	FEDERAL REVENUE	LOCAL COMMITMENT	TOTAL COMMITMENT
CARBON REDUCTION - SMALL MPO	\$3,477,121	\$2,781,697	\$2,781,697	\$695,424	\$3,477,121
STP - SMALL MPO	\$43,465,071	\$22,644,393	\$22,644,393	\$20,820,678	\$43,465,071
STP FLEX - SMALL MPO	\$1,250,039	\$1,000,032	\$1,000,032	\$250,008	\$1,250,039
CMAQ	\$3,310,794	\$2,648,635	\$2,648,635	\$662,159	\$3,310,794
FISCAL YEAR 2031-2040 GRAND TOTAL	\$51,503,026	\$29,074,757	\$29,074,757	\$22,428,269	\$51,503,026

Source: Michigan Department of Transportation

For FY 2023 – 2050 the federal revenue growth rate was set to 2% for transit funds. For state match funds, the growth rate will be the same as the federal growth rates and for the state operating assistance, the annual growth rate for predicted funds has been set to 1.01%. On the following table, funds that are apportioned to the transit agency are listed (5307 and 5339), 5310 funding is not included, as the funds are apportioned to the state and then allocated based on annual applications. The information was provided by MDOT’s Office of Passenger Transportation.

MACC ANNUAL GROWTH RATES FOR TRANSIT AND REVENUE PROJECTIONS

	FEDERAL (FORMULA) 5307	FEDERAL (FORMULA) 5339	STATE MATCH	STATE OPERATING	TOTAL REVENUE	TOTAL COST
GROWTH RATE	2.00%	2.00%	2.00%	1.01%	N/A	N/A
FY2023-2026	\$7,849,322	\$503,941	\$922,828	\$6,618,340	\$15,894,431	\$15,894,431
FY2027-2030	\$8,496,359	\$545,482	\$998,899	\$6,889,799	\$16,930,538	\$16,930,538
FY2031-2040	\$24,432,612	\$1,568,618	\$2,872,490	\$18,486,329	\$47,360,049	\$47,360,049
FY2041-2050	\$29,783,218	\$1,912,137	\$3,501,549	\$20,440,635	\$55,637,539	\$55,637,539
TOTAL	\$70,561,511	\$4,530,178	\$8,295,766	\$52,435,103	\$135,822,557	\$135,822,557

Source: Michigan Department of Transportation

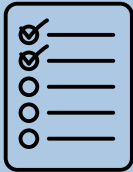


CHAPTER TWELVE

Plan Evaluation

EVALUATION OF GOALS

It is crucial to assess whether the execution of the 2050 LRTP will bring the MACC region closer to achieving the goals and objectives mentioned in Chapter 3. The following are the objectives of the LRTP and a detailed analysis of how effectively it meets each of them.



COMPREHENSIVE PLANNING - Transportation planning and the system it designs shall be comprehensive and coordinated with other planning efforts.

Discussion: The LRTP was developed in conjunction with all MACC local units of government, local road agencies, the Michigan Department of Transportation, private sector partners, and the general public. Local government master plans and the planning emphasis areas contained in the most recent transportation legislation, IJA, were also considered. Future updates to the plan should continue to strive to incorporate more private sector participation as well as special interest groups related to transportation.



ECONOMIC & FINANCIAL CONSIDERATIONS - Planning efforts must recognize funding availability when designing the system, ensure the best allocation of those resources, and promote the development of a system that is an economic asset to the region.

Discussion: The LRTP contains projects that are adjacent to commercial areas and/or will facilitate traffic circulation and access to major employment centers. It also recognizes the importance of maintaining the existing system that maximizes long-term benefits and is a cost-effective strategy.



EFFICIENCY - The transportation system shall be configured and utilized in the most efficient manner possible.

Discussion: It is estimated that by 2050, Vehicle Miles Travelled (VMT) will increase with population growth in the MACC area. Improve and expand projects are regionally coordinated to minimize gaps or unnecessary duplication thus increasing efficiency.



MOBILITY - The transportation system will ensure basic mobility for all persons and goods and allow them to arrive at their destination promptly.

Discussion: The implementation of the proposed projects increases continuous service and needed capacity.

The 2014 MACC Non-Motorized Plan, as well as the potential future transit expansions and pledge to periodically review transit expansion issues, lay a foundation for improvements to the transportation system for those who cannot, or choose not, to use private automobiles. The MACC will continue to identify measures that will help assess the performance of the transportation system and its impact on mobility.



LAND USE & ENVIRONMENTAL IMPACTS - The transportation system shall maximize positive impacts, minimize disruption of existing and anticipated land uses in the MACC area, and maintain and improve the quality of the environment.

Discussion: Projects contained in the LRTP as well as projects that increase capacity, can have impacts on the land use adjacent to them. As noted above, the local government’s master plans were consulted to ensure that there were no conflicts. In terms of environmental impacts, the projects were reviewed through a formal consultation process. This consultation process ensures that agencies involved in natural resources and land management can comment on the impacts of the proposed improve/expand projects.



ACCESSIBILITY - The transportation system will be available to all persons.

Discussion: As noted under the mobility goal, this plan calls for the regular update of a non-motorized plan for the entire MACC area as well as the identification of potential future transit service areas. Both of these initiatives lay the framework for increasing the accessibility of the transportation system to persons who cannot or choose not, to use private automobiles. While both of these initiatives direct the MACC area in the right direction, more can be done to increase the accessibility of the transportation system to all persons and efforts will continue to identify logical methods to increase accessibility.



SAFETY & SECURITY - The transportation system shall be safe and secure for all its users.

Discussion: Safety forums hosted by the MACC should occur periodically. In addition, efforts should be made to continue to research various Intelligent Transportation Systems (ITS) technologies that enhance safety. As recommended in the current MACC Non-Motorized Plan, an inventory of major rail and freeway crossings should be used to identify safety concerns of the transportation system from the perspective of people who walk and bike.

EVALUATION OF FEDERAL PLANNING FACTORS

In addition to the MACC's LRTP goals, the MACC also has ten planning factors to be considered as part of the MACC's overall transportation planning efforts as well as the development of the LRTP and Transportation Improvement Program. These factors are considered below.

Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.

Discussion: The projects contained in this plan preserve and enhance access (by all modes) to major employment centers. It also improves access for workers to many sites of the MACC.

Increase the safety of the transportation system for motorized and non-motorized users.

Discussion: Safety improvements related to ITS and driver education are encouraged in this plan. The specific safety needs of non-motorized users will be further addressed by the MACC's new Non-Motorized Plan.

Increase the security of the transportation system for motorized and non-motorized users.

Discussion: The MACC will identify and advance ITS strategies that increase the security of the transportation system.

Increase the accessibility and mobility options available for people and freight.

Discussion: Mobility options for non-motorized, transit, and roadway users are increased under this plan, and work to preserve and enhance access. While accessibility is improved, it is recognized that additional activities should be considered to further increase the accessibility to persons that have historically been underserved such as those with economic barriers or disabilities.

Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation and State and local planned growth and economic development patterns.

Discussion: This LRTP seeks to minimize any negative impacts on the environment as a result of its programs/projects. The implementation of the programs/projects contained in this plan will reduce gaps in the system allowing for more direct transportation routes. This plan promotes expanding non-motorized infrastructure which can help to improve local and regional air quality. Consistency is achieved by evaluating local master plans and developing the LRTP in conjunction with MDOT and MACC members.

Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

Discussion: The projects/programs of this plan reduce gaps and seek to enhance connectivity and integration. The inventory of the existing transportation system, in Chapter 5, addresses non-motorized improvements, transit linkages, and regional freight movement. Proposed projects to enhance connectivity and address deficiencies are covered in Chapter 10.

Promote efficient system management and operation.

Discussion: The projects/programs contained in this plan were developed in cooperation with the MACC members, state and local transportation providers, and the general public. Such input helps ensure that the current system is efficiently managed and operated and the programs/projects proposed in this plan support the continuation of a system that is efficiently managed and operated.

Emphasize the preservation of the existing transportation system.

Discussion: The LRTP considered the preservation of the existing transportation system through the financial analysis section that identified funds for maintenance activities. Also, the project list contains preservation projects. There is an interest in the application of ITS in small urban areas that could enhance the use of the existing system. Annual evaluation of pavement quality throughout the MACC area will help to prioritize future resurfacing and rehabilitation projects.

Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation

Discussion: The projects in this plan, especially those that focus on the reconstruction of roadways and bridges will help to create a more resilient transportation system. As noted in Chapter 6, the MACC has programs that focus specifically on stormwater mitigation and education. Programs like the volunteer road-stream crossing inventory can identify culvert and bridge issues early, which helps to create a more resilient transportation system. Other practices such as permeable pavement and roadside rain gardens continue to gain popularity in the MACC planning region and mitigate stormwater pollution.

Enhance travel and tourism

Discussion: The projects/programs contained in this plan will help to enhance travel and tourism by increasing transportation mode options, system connectivity, and reducing congestion along main travel corridors. Enhanced pavement quality associated with resurfacing projects can also create a greater user experience and limit wear and tear on vehicles.

EVALUATION OF ENVIRONMENTAL JUSTICE

The projects in the LRTP must meet the principles of Executive Order 12898 relating to environmental justice (EJ). Specifically, the LRTP must identify and address disproportionately high and adverse human health or environmental effects of its programs and policies on minority and low-income populations.

Information provided by USDOT Order on Environmental Justice (Order 5610.2) found on the Environmental Justice page on FHWA's website was instrumental in the selection of the groups to analyze. According to this directive, the groups to be considered when conducting an Environmental Justice analysis must include:

- Black
- Hispanic or Latino
- Asian American
- American Indian & Alaskan Native
- Native Hawaiian and Other Pacific Islander
- Low-Income

Due to the demographic characteristics of the region, the aging population was added to the analysis.

The methodology undertaken to analyze that the principles are being met entailed mapping areas of low-income, minority, and aging population concentrations, overlaying the LRTP's projects and visually analyzing the potential impacts. Utilizing the 2020 Census data and American Community Survey (ACS) 5-year estimates (2017-2021), maps of the above-noted groups were created. These are included in the appendix.

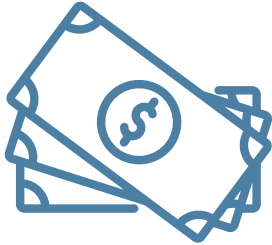
Note that the projects overlaid on the EJ map only include items that have an associated geographic location and therefore do not include projects that deal with region-wide operational funding, special programs, safety improvements, or vehicle purchases. Due to their nature of being region-wide, these projects are considered to be within the EJ area.

STEP 1

DELINEATION OF MINORITY AREAS



Minority areas were delineated using the 2020 Census data at the census tract level. The minority area consists of census tracts whose minority population exceeds the Macatawa Area Coordinating Council planning area minority population of 31%. Recognizing that this would not indicate the absolute number of persons in an area, a dot density map of individuals was overlaid on the minority area map.



STEP 2

DELINEATION OF LOW-INCOME AREAS

Low-income as defined by the Census Bureau is, "...a person whose household income ... is at or below the U.S. Department of Health Services poverty guidelines." Utilizing the American Community Survey (ACS) 5-year estimates (2017-2021) at the census tract level, low-income areas were delineated. The low-income area consists of census tracts whose low-income population exceeds the Macatawa Area Coordinating Council planning area low-income population of 7%. Recognizing that this would not indicate the absolute number of persons in an area, a dot density map of individuals was overlaid on the low-income area map.

STEP 3

DELINEATION OF AGING POPULATION AREAS



Aging population areas were delineated using the 2020 Census data at the census tract level. The aging population area consists of census tracts whose aging population exceeds the Macatawa Area Coordinating Council planning area aging population of 19%. Recognizing that this would not indicate the absolute number of persons in an area, a dot density map of aging individuals was overlaid onto the aging population area map.

STEP 4

ANALYSIS OF IMPACTS ON MINORITY AREAS

With the minority areas now delineated, an analysis of the impacts can be completed. Analysis of potential impacts centers on three major areas of concern:

- Disproportionately high and adverse human health and environmental impacts to minority areas
- Minimizing/blocking access of minority areas to the transportation system
- Neglect of the transportation system in minority areas or otherwise reduce or delay the receipt of benefits to those areas

Disproportionately high and adverse human health and environmental impacts to minority areas:

Of the 160, non-transit related projects and programs contained in the 2050 LRTP, 62 are in minority areas. These projects included roadway reconstruction and resurfacing, intersection improvements, non-motorized, bridge rehabilitation, and transit. Residential areas in the minority areas will have minimal if any, impact in terms of noise, right-of-way takings, or pollution. Impacts, in the form of right-of-way acquisition, are minor. Environmental impacts on all projects will be mitigated according to federal and state laws. Therefore, it has been determined that there are no disproportionately high and adverse human health impacts.

Minimizing/blocking access of minority areas to the transportation system:

Minimizing access can be characterized as the permanent closing of streets or interchanges to accomplish the projects contained in the LRTP. While temporary closures will be necessary as part of the construction process for many projects, no permanent closures are intended as a result of implementing the proposed projects. Therefore, it has been determined that there is no blockage of access to the transportation system or loss of mobility as a result of implementing the LRTP projects.

Neglect of the transportation system in minority areas:

The MACC area is approximately 211 square miles. The minority areas mapped are approximately 34.3 square miles or 16.2% of the entire area of the MACC. As noted earlier, there are 62 projects contained in the minority areas. These projects represent 38.8% of the proposed projects mapped.

MINORITY AREA PERCENTAGES

% of Total MACC Area (211 Square Miles)	% of Total Projects
16.2%	38.8%

Access to public transit by residents in the minority areas was also analyzed. The public transit (Macatawa Area Express) service area covers the minority areas in their entirety and its fixed routes run almost entirely within the minority areas. None of the projects contained in the LRTP restrict access of residents to public transit services (fixed route or demand response). Thus, it has been determined that there is no neglect, reduction, or delay in the receipt of transportation benefits by those residing in the minority area.

STEP 5

ANALYSIS OF IMPACTS ON LOW-INCOME AREAS

The low-income areas were also delineated and an analysis of the impacts was completed. Again, the analysis of potential impacts centers on three major areas of concern:

- Disproportionately high and adverse human health and environmental impacts on low-income areas
- Minimizing/blocking access to low-income areas to the transportation system
- Neglect of the transportation system in low-income areas or otherwise reduce or delay the receipt of benefits to those areas

Disproportionately high and adverse human health and environmental impacts on low-income areas:

Of the 160, non-transit related projects and programs contained in the LRTP, 100 are in the low-income areas. These projects included all project categories: roadway reconstruction and resurfacing, intersection improvements, nonmotorized, bridge rehabilitation, and transit. Residential areas in low-income areas will have minimal if any, impact in terms of noise, right-of-way takings, or pollution. Impacts, in the form of right-of-way acquisition, are minor. Environmental impacts on all projects will be mitigated according to federal and state laws. Therefore, it has been determined that there are no disproportionately high and adverse human health impacts.

Minimizing/blocking access to low-income areas to the transportation system:

Minimizing access can be characterized as the permanent closing of streets or interchanges to accomplish the projects contained in the LRTP. While temporary closures will be necessary as part of the construction process for many projects, no permanent closures are intended as a result of implementing the proposed projects. Therefore, it has been determined that there is no blockage of access to the transportation system or loss of mobility as a result of implementing the LRTP projects.

Neglect of the transportation system in low-income areas:

The MACC area is approximately 211 square miles. The low-income areas mapped are approximately 70.5 square miles or 33.4% of the entire area of the MACC. As noted earlier, there are 100 projects contained in the low-income areas. These projects represent 62.5% of the proposed projects mapped.

LOW-INCOME AREA PERCENTAGES

% of Total MACC Area (211 Square Miles)	% of Total Projects
33.4%	62.5%

Access to public transit by residents in low-income areas was also analyzed. The public transit (Macatawa Area Express) service area covers all low-income areas in their entirety and its fixed routes run almost entirely within the low-income areas. None of the projects contained in the LRTP restrict access of residents to public transit services (fixed route or demand response). Thus, it has been determined that there is no neglect, reduction, or delay in the receipt of transportation benefits by those residing in the minority area.

STEP 6
ANALYSIS OF IMPACTS ON AGING
POPULATION AREAS

While not required, due to the demographic makeup of the region, aging populations were added to the analysis. The MACC area is approximately 211 square miles. The aging population areas mapped are approximately 56.2 square miles or 26.6% of the entire area of the MACC. There are 65 projects contained in the aging population areas. These projects represent 40.6% of the proposed projects mapped.

AGING POPULATION AREA PERCENTAGES

% of Total MACC Area (211 Square Miles)	% of Total Projects
26.6%	40.6%

CONCLUSION

The analyses of the impacts on residents in minority areas and low-income areas as a result of implementing the projects contained in this LRTP led to the following findings:

- No disproportionately high and adverse human health impacts
- No blockage/minimization of access to the transportation system or loss of mobility
- No neglect, reduction, or delay in the receipt of transportation benefits
- No restriction of access to public transit services
- More projects, on a per square mile basis, in the minority and low-income areas than the MACC area as a whole

These findings demonstrate that implementing the projects contained in this LRTP does not result in violations of Executive Order 12898 and the principles of environmental justice. Also, to supplement the analyses done here, the participation process for the LRTP makes a concerted effort to reach out to traditionally disadvantaged populations (including minority and low-income populations) to ascertain the potential effects/impacts of the proposed projects.

EVALUATION OF ENVIRONMENTAL MITIGATION

The current legislation requires a “discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. This discussion shall be developed in consultation with federal, state and tribal land management, wildlife and regulatory agencies.”

Essentially, the purpose of this process, at a region-wide level, is to identify possible impacts of proposed projects on environmentally sensitive resources, list useful guidelines for mitigating these impacts, and provide this information to implementing agencies. A consultation process was undertaken with the types of agencies noted (detailed information regarding the consultation process can be found in Chapter 14).

Mapping Resources/Project Overlay – The MACC searched for maps depicting the following sensitive resources. Staff was able to obtain region-wide data on wetlands and prime and unique farmland. Maps overlaying the proposed 2050 LRTP projects onto the two environmental types were made.

- Wetlands
- Prime and unique farmland
- Endangered species
- State-licensed healthcare facilities
- Properties enrolled under Part 361 of NREPA (formally PA 116 properties)
- Established intra-county or inter-county drains

This analysis was completed to draw attention to those projects that could potentially impact environmentally sensitive resources and provide general guidelines, at a regional level, for mitigating impacts. This information was intended to enhance the transportation planning and decision-making process. No further analysis of potential impacts was made as there were no specific resources identified through the consultation process during the 2050 LRTP.

EVALUATION OF AIR QUALITY

The Clean Air Act of 1990 (as amended) and the National Ambient Air Quality Standards (NAAQSs) establish air quality thresholds for the nation. The US Environmental Protection Agency (USEPA) determines the attainment of these standards for each county in the state. For those areas that exceed the allowable limits set by the standards, the state must develop a plan that shows how the state intends to achieve the standards. This plan is called the State Implementation Plan (SIP). Transportation conformity is the process that combines transportation and air quality planning. Conformity is a joint effort between the Michigan Department of Environment, Great Lakes, and Energy, the Michigan Department of Transportation, the Environmental Protection Agency, the Federal Highway Administration, the Federal Transit Administration, and metropolitan planning organizations.

Transportation activities subject to conformity are LRTPs, TIPs, and projects that receive Federal Highway or Federal Transit Administration funding or need federal approval. The conformity process ensures emissions from implementing the LRTP, TIP, and STIP projects are within acceptable levels specified within the SIP and meet the goals of the SIP.

Transportation conformity only applies to emissions from on-road sources for the following transportation-related pollutants:

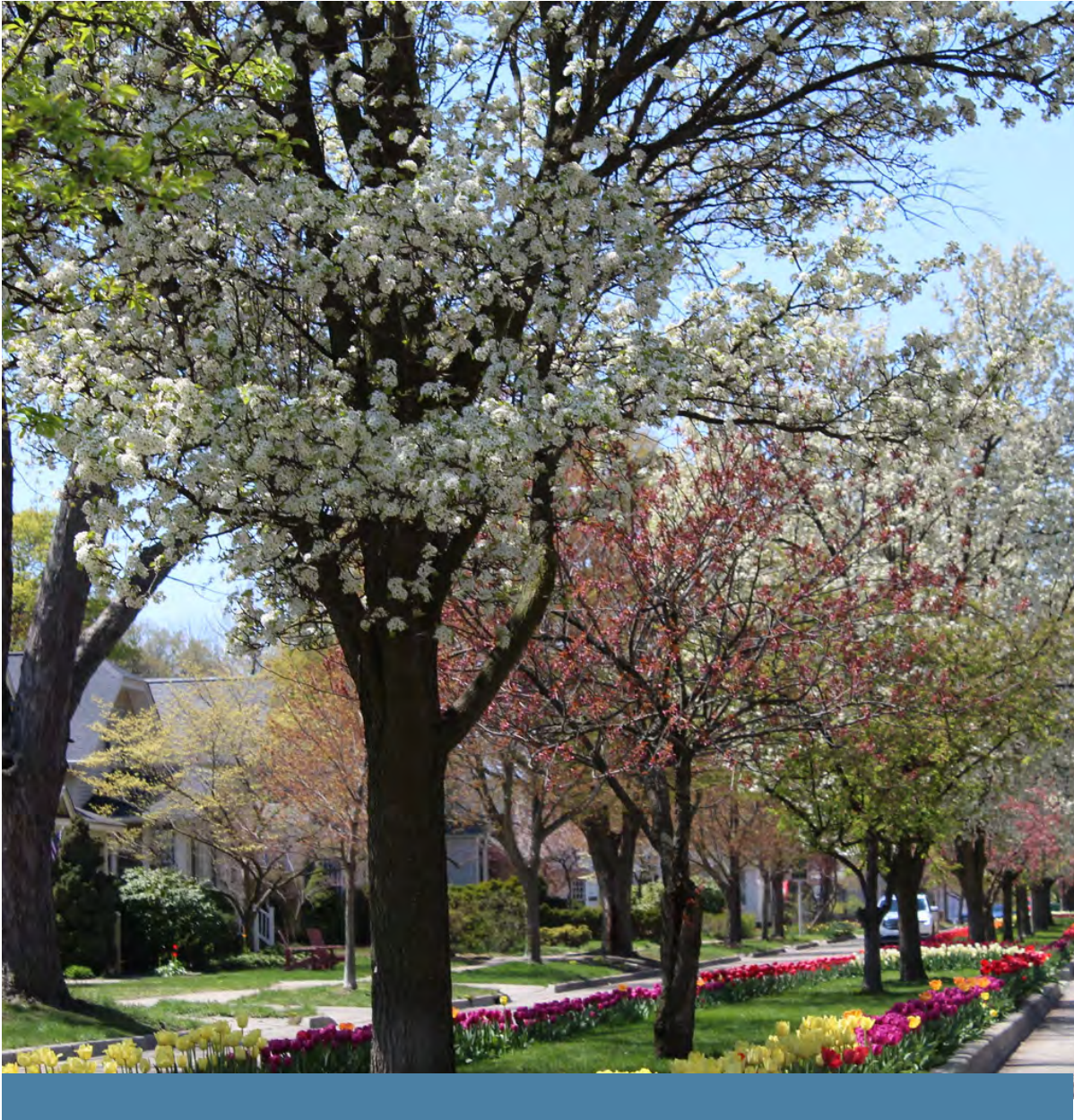
- Ozone
- Particulate matter (particulate sizes 2.5 and 10)
- Nitrogen dioxide
- Carbon monoxide

The MACC MPO is part of three conformity areas, two in Allegan County and the Grand Rapids Limited Orphan Maintenance Area consisting of Ottawa and Kent counties. Each conformity area has different requirements. Allegan County is a maintenance area for the 1997 Ozone NAAQS (designated attainment/ maintenance in September 2010) and part of the county is a nonattainment area for the 2015 Ozone NAAQS (designated August 3, 2018). These designations require that LRTP projects conform to the SIP. The Air Quality Conformity Analysis document for Allegan County is in the appendix. The conformity analysis demonstrates that the LRTP and associated documents conform to the SIP.

The MACC is also partly in Ottawa County, which is a part of the Grand Rapids Limited Orphan Maintenance Area, designated attainment/maintenance for the 1997 ozone NAAQS in May 2007. The Grand Rapids conformity area must also demonstrate that the MACC 2050 LRTP and associated documents conform to the SIP, the air quality conformity determination report is included in the appendix.



Image courtesy of MDOT Photo and Video Services



CHAPTER THIRTEEN

Public Involvement

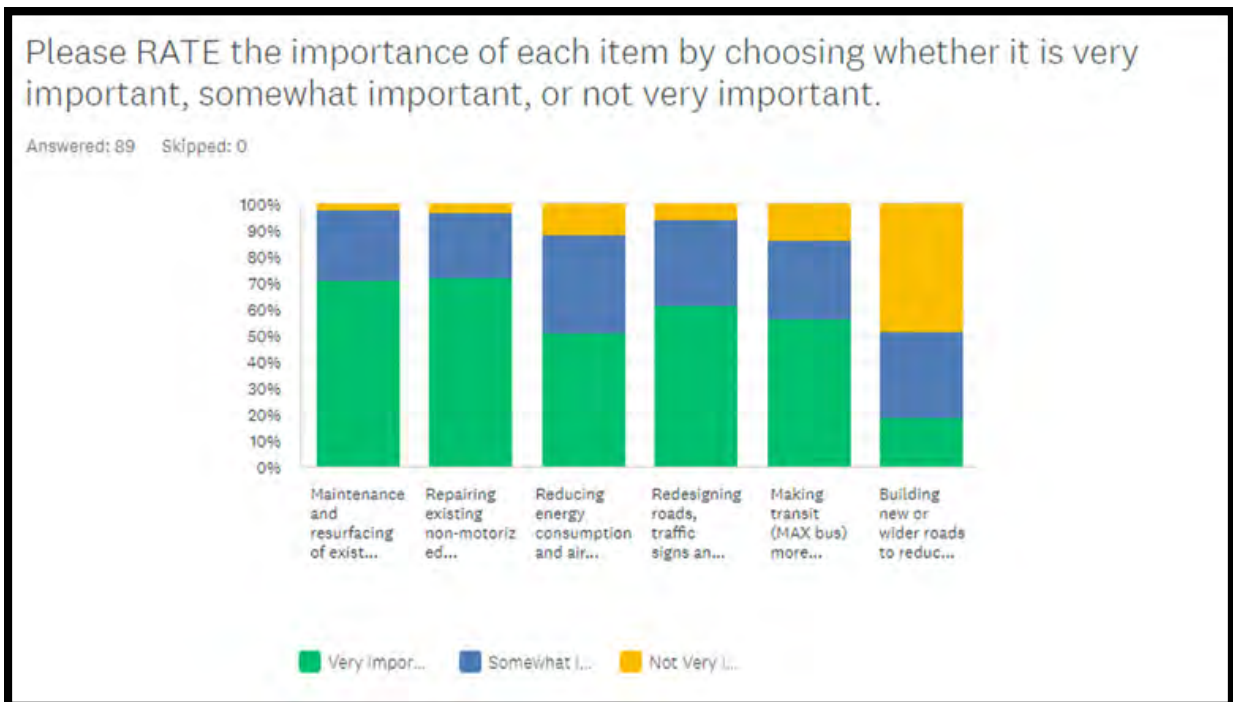
PUBLIC INVOLVEMENT ACTIVITIES

From the beginning of the 2050 LRTP process, regular updates on the plan were given at monthly MACC Technical Advisory Committee (TAC) and Policy Board meetings. MACC Policy meetings are recorded and uploaded to the MACC’s YouTube web page so that they can be viewed by the public at any time. The draft LRTP document was released for public review on December 29, 2023.

PUBLIC SURVEY

During the development of the LRTP, public surveys were developed in English and Spanish and were made available online or in hard copy upon request. Notice of the survey was distributed throughout the community by the MACC and local units of government and community organizations. Examples of survey outreach can be found in the appendix.

The 2050 LRTP survey received 90 responses. Survey results highlighted the importance of maintaining the existing roadway system, repairing existing nonmotorized facilities, and reducing energy consumption and air pollution from motor vehicles.



Other questions in the survey indicate that around 70% of respondents would prefer to encourage carpooling, bus service, and cycling to relieve congestion over widening roads. 66% of people who responded also want to encourage high-tech improvements to traffic signal systems instead of widening roads or adding turn lanes. When asked about road funding, 64% of respondents indicated that they believe more money for improvements to the transportation system should come from increased user fees or taxes versus 36% of respondents who said our region should accept fewer transportation improvements as a result of limited dollars. Full survey results and written responses to open-ended questions can be found in the appendix of this plan.

2050 LRTP PUBLIC OPEN HOUSE

Community outreach, education, and public feedback were the main goals of the open house. 30 individuals attended the open house that was hosted at the MACC office on January 17, 2024. The open house was set up to guide the public around the room to explore various elements of the plan such as future road and non-motorized projects and environmental justice regions.

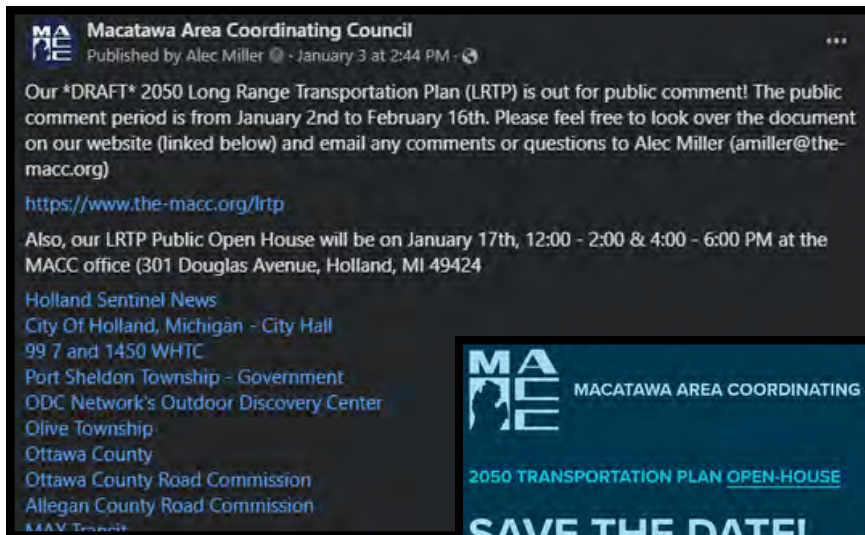
In addition to the educational information presented, attendees were given the opportunity to participate in a hands-on activity that asked about what their thoughts were on the topics of non-motorized paths, pavement conditions, transit, and anything else. Attendees could write down anything they wanted to under the four categories. Comments regarding the plan that were submitted have been documented in the appendix and were shared with the MACC's Technical Committee and Policy Board in February 2024. The meeting was also a way for the public to review major highway/freight-related projects planned through 2026, as well as illustrative projects through 2050, and to further educate on the MACC as a whole.



In advertising for the open house, each notice gave the option to send comments to the MACC directly via mail or email to help with conflicting schedules. Examples of open house outreach and photos from the event can be found in the appendix.

2050 LRTP OPEN HOUSE - ADVERTISING

- MACC website homepage
- December 2023 Monthly Newsletter (1,360 electronic newsletters mailed)
- January 2024 Monthly Newsletter (1,357 electronic newsletters mailed)
- Specific open house notification via Constant Contact (1,353 notifications sent)
- Holland Sentinel (January 6, 2024 – Area-wide distribution)
- Community stakeholder consultation packets (155 packets e-mailed)
- January 16, 2024 Nextdoor posting (1,548 impressions)
- WTHC Talk of the Town (10/31/23 & gave an update on 1/29/24)
- MACC Facebook Page (57 followers + shared by Holland Mayor Bocks)
- Emailed to all TAC and Policy Members



MACC Facebook Post



Graphic used to promote the open house

PUBLIC HEARING

The official public hearing to approve the 2050 LRTP took place at the MACC's Policy Board meeting on February 26, 2024, at the Riley Street Fire Station in Holland Charter Township at noon.

SOLICITATION AND RESPONSES TO COMMENTS

MACC Staff has encouraged public input throughout the development of the 2050 Long Range Transportation Plan. The MACC Public Participation Plan was updated in January 2023, recognizing the need to seek new methods to communicate and solicit comments from the community. Chapter 14 lists stakeholder organizations that have either received email notifications, digital newsletters or have been invited to provide input as a community stakeholder. The chapter also includes a summary of comments from stakeholders, as well as actions to be taken in response to those comments.





CHAPTER FOURTEEN

Consultation

PUBLIC AND STAKEHOLDER INVOLVEMENT

As the planning for the 2050 Long Range Transportation Plan began in January of 2022, the MACC staff looked at ways to improve public outreach and education. A database of local officials and transportation stakeholders was reviewed and updated. We also expanded the consultation list of individuals, employers, and community organizations to invite a larger audience to participate in the transportation planning process.

Recognizing the importance of social media and online news sources, the MACC Public Participation Plan was updated (January 2023). While we continued to publish public notices and advertisements in the local newspapers, we also used social media sites such as Facebook and Nextdoor to reach new audiences. An online transportation survey was developed to encourage people to share their views. The MACC-sponsored Green Commute Week program also helped to educate people about the planning process and encouraged them to offer public input.

MACC staff then began a series of meetings to hear from specific groups such as freight shippers/providers of freight transportation services and cycling advocacy groups. These meetings provided the opportunity to communicate regional planning goals and receive feedback on community priorities.

In addition to these efforts to increase public and stakeholder involvement, we emphasized reaching individuals and groups unaware of the MACC or who did not recognize how they could be involved in the planning process. Public input surveys and notices were published in Spanish and were also distributed throughout the community. More information on public involvement can be found in Chapter 13.

FREIGHT CONSULTATION

In June and July of 2023, in-person meetings were set up with freight providers to discuss inbound and outbound freight movements in West Michigan. Understanding freight movement in West Michigan and identifying freight routes is a helpful step in determining future investments that may be needed to support regional economic development. Concerns expressed by local freight carriers have been shared with road agencies and local units of government. Many of the comments revolved around issues of congestion and safety.



Meeting with Teddy's Transport - June 15, 2023

- They have around 90 employees and 50-60 trucks.
- They mainly haul goods for Gentex, Magna, and JR Automation.
- They offer daily less-than-truckload services to Chicago.

Meeting with Tyson Foods - June 19, 2023

- They employ almost 1,200 people in Olive Township. They have a tough time finding employees due to transportation.
- Almost 30 employees use Wheels to Work.
- Their facility handles 30-40 trucks daily, carrying raw meat, packaging supplies, and finished goods components.

Meeting with Inontime - June 20, 2023

- They have around 180 trucks and 300-400 employees.
- They primarily transport furniture, automotive components, retail goods, and foodstuffs.

Meeting with Haworth - June 21, 2023

- They have several plants and their national distribution center in Holland.
- They average around 200 inbound trucks and 300 outbound trucks per week.
- They made note of the congested nature of the I-196 and M-40 interchange.

Meeting with Herman Miller - June 22, 2023

- Midwest Distribution and the Greenhouse Seating Plant ship out around 100 trailers per day on average. They also have approximately 120 trailers per day going to/from their operations in Zeeland, Spring Lake, and Holland.
- Getting out of the Distribution Center can be a headache with the increased traffic on Adams Street. It is easier to get out on 104th Avenue, but that entrance is closed during the evening and early morning.

Meeting with Padnos - June 22, 2023

- Padnos' national distribution center and several plants are located in Holland.
- They ship freight by rail, ship, and road from Holland to the U.S., Canadian, and world markets.

Meeting with JR Automation - June 23, 2023

- They average 10 inbound trucks and 4-5 outbound trucks per day.
 - They have over 1,000 employees in the area.
 - While some view non-motorized paths as leisure, JR Automation believes the paths are safe and viable transportation options for their employees.
-

Meeting with Art Mulder and Sons Trucking (AMST) - June 23, 2023

- Parking for semi-trucks was noted as being of major concern. Many truckers resort to parking on highway ramps, which is a safety concern.
- It was noted that it was hard to get additional truck stops approved.
- There is an aging workforce in the trucking industry, being replaced with recent immigrants.
- The lack of affordable housing is hurting the local trucking industry.

Meeting with Perrigo - June 28, 2023

- Perrigo has four sites in the greater Holland area. They have over 1.2 million square feet of warehouse space near the I-196 and M-40 interchange. They may be looking at expanding their Interchange
- M-40 is their main artery. They noted the light at Interchange Drive and M-40 is not sufficient for them and leads to semi-trucks backing up, especially the left turn from Interchange to go north.
- They handle approximately 80-100 loads per day on average at their Holland-area warehouses.
- They noted some of their employees use public transportation to get to/from work.

CYCLING ADVOCATES CONSULTATION

On August 3, 2023, local citizens, cycling advocates, and bike shop owners met at the MACC office to discuss issues around the connectivity and safety of our area's non-motorized infrastructure.

CONCERNS EXPRESSED BY CYCLING ADVOCATES

Attendance: Brad White (Velo City Cycles), Laura Harris (Cross Country Cycle), Meika Weiss (Pedal Holland), Mark Kornelis (City of Holland Resident), and Josh Wall (Zeeland Charter Township Resident).

General Comments:

- More dedicated, on-street bicycle lanes are needed throughout the region.
- Crossing Interstate 196 around the Byron Road interchange is a challenge, and can be very dangerous. They expressed a desire for a safe east/west connector between Zeeland and Zeeland Charter Township.
- Getting kids to/from school safely on bicycles is a common concern.
- The increasing usage of e-bikes is resulting in more miles and faster speeds on shared-use paths.

General Comments Continued:

- Many paths around our region are outdated, overcapacity, and need to be widened, as well as have routine maintenance conducted.
- Bike path surface pavement should take precedence over driveway pavement (fewer bumps if consistent pavement).
- One eastbound bike lane on 17th Street and one westbound bike lane on 16th Street would be a preferred route for bike lanes, instead of both directions on 17th Street.
- It was suggested that the MACC count bicycles to determine where people are using the system most.
- We need to address bicycle parking in our Non-Motorized Plan (2024)—many bike racks are obsolete. Many tires are taller and wider and will not fit in outdated bike racks.
- There are more children on shared use paths—they need to be involved in the process.
- A better crossing was needed at 96th Avenue and Woodbridge Street for kids to get to school safely.



ADDITIONAL STAKEHOLDER CONSULTATION

Emails were sent out to 119 individuals and community stakeholder organizations to request feedback on projects proposed for the 2050 Long Range Transportation Plan (LRTP). Stakeholders were given the opportunity to respond by mail, email, phone, or attend an open house on January 17, 2024 and offer comments at that time. The consultation packet that was emailed can be found in the appendix of this plan.

List of Stakeholders:

42 North Bike Shop
AECOM
Allegan County Board of Commissioners
Allegan County Drain Commission
Allegan County Emergency Management
Allegan County Road Commission
Allegan County Sheriff's Department
Black River Public School
Calvary Schools of Holland
Charter House Innovations
City of Holland
City of Zeeland
City on a Hill Ministries
Community Action House
Community Foundation of Holland/Zeeland
Corewell Health
Cross Country Cycle
Disability Network – Lakeshore
Dutch Village
Evergreen Commons
Federal Highway Administration – Michigan Division
Fillmore Township
Freedom Village
Grand Rapids Community College
Grand Valley State University
Hamilton Public Schools
Holland Area Convention and Visitors Bureau
Holland Board of Public Works
Holland Charter Township
Holland Civic Center Place
Holland Civic Theater
Holland Christian Schools
Holland Farmers Market
Holland Hospital
Holland Historical Trust
Holland Museum
Holland Police Department
Holland Public Schools
Holland Rescue Mission
Home Builders Association - Lakeshore
Hope College
Intercare Community Health Care

List of Stakeholders Continued:

K-Line Industries
Lakeshore Advantage
Laketown Township
Land Conservancy of West Michigan
Latin Americans United for Progress
League of Michigan Bicyclists
League of Women Voters
Macatawa Area Express
Macatawa River Greenway
Main Street Bicycle Company
Michigan Department of Agriculture
Michigan Department of Environment, Great Lakes, and Energy: Transportation Division
Michigan Department of Environment, Great Lakes, and Energy: Water Division
Michigan Department of Natural Resources
Michigan Department of Transportation: Grand Region
Michigan Department of Transportation: State Office
Michigan House of Representatives District 43 – Rachele Smit
Michigan House of Representatives District 85 – Bradley Slagh
Michigan House of Representatives District 86 – Nancy DeBoer
Michigan House of Representatives District 88 – Greg VanWoerkum
Michigan Senate – Senator Roger Victory
Michigan State Historic Preservation
Michigan State Housing Development
Michigan West Coast Chamber of Commerce
NAACP – Grand Rapids Office
National Heritage Academies
Olive Township
Ottawa County Board of Commissioners
Ottawa County Department of Planning and Performance Improvement
Ottawa County Parks and Recreation
Ottawa County Road Commission
Ottawa County Sheriff’s Department
Ottawa County Water Resources Commissioner
Outdoor Discovery Center Network
Out On The Lakeshore
Padnos
Park Township
Park Theater
Pedal Holland
Perrigo
Plascore

List of Stakeholders Continued:

Port Sheldon Township
Prein & Newhof
Reckitt Benkheiser
Request Foods
Resthaven
Rock 'n' Road Cycle
Stow Company
Teddy's Transport
Tennant
Thermotron
Tiara Yachts
Tommy's Carwash Systems
Trendway Corporation
Tulip Time Festival Inc.
Tyson Foods
U. S. Army – Corps of Engineering, Detroit District
U. S. Department of Agriculture-Natural Resource of Conservation Service
U. S. Department of Housing & Urban Development
U. S. Department of the Interior-Fish and Wildlife Service
U.S. Coast Guard – 9th District
U.S. Environmental Protection Agency
U.S. House of Representatives: Transportation and Infrastructure Committee
Velo City Cycles
Verplank Dock Co.
Volta Power Systems
West Michigan Bike & Fitness
West Michigan Regional Airport Authority
West Michigan Uniform
West Ottawa Public Schools
Zeeland Board of Public Works
Zeeland Charter Township
Zeeland Christian Schools
Zeeland Farm Services
Zeeland Lumber and Supply
Zeeland Police Department
Zeeland Public Schools

119 Organizations

SOLICITATION AND RESPONSE TO COMMENTS

Community stakeholders were asked to provide feedback on proposed projects or communicate other transportation-related concerns to be addressed by the MACC 2050 LRTP.

Responses Received and Treatment of Comments

The MACC received responses from the following organizations and individuals:

- Adventure Cycling Association
- City of Holland Department of Community and Neighborhood Services
- West Michigan Express

A summary of comments is noted below along with the MACC's response. A copy of the comments received can be found in the appendix.

ADVENTURE CYCLING ASSOCIATION: KERRY IRONS

Comments: "I have completed the survey. Regards comments on the LRTP, there really is not a lot of bicycle content, and essentially it is all a discussion of current facilities and data rather than plans for future improvements/expansions. I didn't find anything in the traffic modeling that suggested actions relating to bicycling. It seems like with the net-zero 2050 efforts and the rapid increase in eBike sales, that would factor in more obviously."

Response: Comments forwarded to MACC Transportation Technical Advisory Committee and project sponsors.

CITY OF HOLLAND DEPARTMENT COMMUNITY AND NEIGHBORHOOD SERVICES: STEVE PETERSON

Comments:

- In regards to the first paragraph on page 6: "The document did not include any reference to complete streets. Is there a place to endorse/promote Safe Route to Schools?"

Comments:

- In regards to intercity bus service connection to Allegan on page 40: “Perhaps a need to elaborate that a sizable number of residents living in the Allegan County portion of the City of Holland must travel to Allegan (either downtown or to the Allegan County Services Center on Dumont Road) for many basic human services (mental health services, health department services, food assistance, Medicaid, court services, etc.), and that many of the users of such services are substantially income-constrained.”
- In regards to the last paragraph on page 42: “Perhaps a mention of the importance of bicycle parking; 2) with increased use of electric bikes, perhaps need for a comment on the need for more paved shoulders or bike lanes to safely separate electric bikes from other non-motorized users on side paths; 3) perhaps mention of the growing need for bike charging stations at workplaces, commercial centers, parks, etc.”
- In regards to the second paragraph on page 45: “Although outside of the MACC area the Ford Airport is located 30 miles to the east and is the second busiest airport in Michigan. It provides passenger air services to several cities as well as connections to international locations. Providing a connection to the Ford Airport should be a priority for the MACC.”
- In regards to the fourth paragraph on page 48: “Special consideration should be given to providing transit services on this corridor to connect the residential land uses in the north with the industrial jobs in the south that will provide timely service to serve the employment in the area.”
- In regards to the fourth paragraph on page 49: “While at the same time, it will be important to provide safe pedestrian crossings and improvements into any new improvements.”
- In regards to the second paragraph on page 50: “This may also require evaluation of a traffic signal at US-31/Chicago Drive to make connections to Chicago Drive safe.”
- In regards to the fourth paragraph on page 50: “Not exactly clear where US31/BL196 between 196 at the south end to the intersection at Chicago Drive is addressed. It seems like it warrants comments regarding pedestrian safety at most crossings if not other things.”
- In regards to the last paragraph on page 56: “Comment could be included to show that MACC will use the local plans as guidance for improvements.”
- In regards to the first paragraph on page 75: “Is there additional data to explain/is this Jenison people commuting into GR. This also provides some justification for providing cross-county transit.”
- In regards to the first paragraph on page 79: “Does the model provide connection to outside of the MACC? What about Ford Airport?”

Response: Comments forwarded to MACC Transportation Technical Advisory Committee and project sponsors.

WEST MICHIGAN EXPRESS: GREG HOLCOMBE

Comments: The words we would recommend to add to your LRTP, page 102, to describe the WMX Pilot are as follows: “In early 2024, a WMX Pilot plan is being considered which would use 1 or 2 coaches to serve the Holland-Zeeland-Hudsonville-Grand Rapids route with at least 5 daily round trips.”

Personal Note: Beyond WMX, and thinking about the current MAX study, I do wonder if a “larger aspirational” statement in your LRP would be worthwhile. And you might already have such a statement in the draft report..

Perhaps something like “In all of our work together, we encourage transportation/transit planners to seek to coordinate and integrate the various modes we are supporting. So that, for example, as MAX services are possibly revised, they would be coordinated with new (private?) micro-transit services, key non-motorized nodes (such as the Macatawa River Greenway), and West Michigan Express stations (if the WMX pilot is initiated) ... This integration would provide more frictionless connections across the MACC area and between communities.”

Response: Comments forwarded to MACC Transportation Technical Advisory Committee and project sponsors.