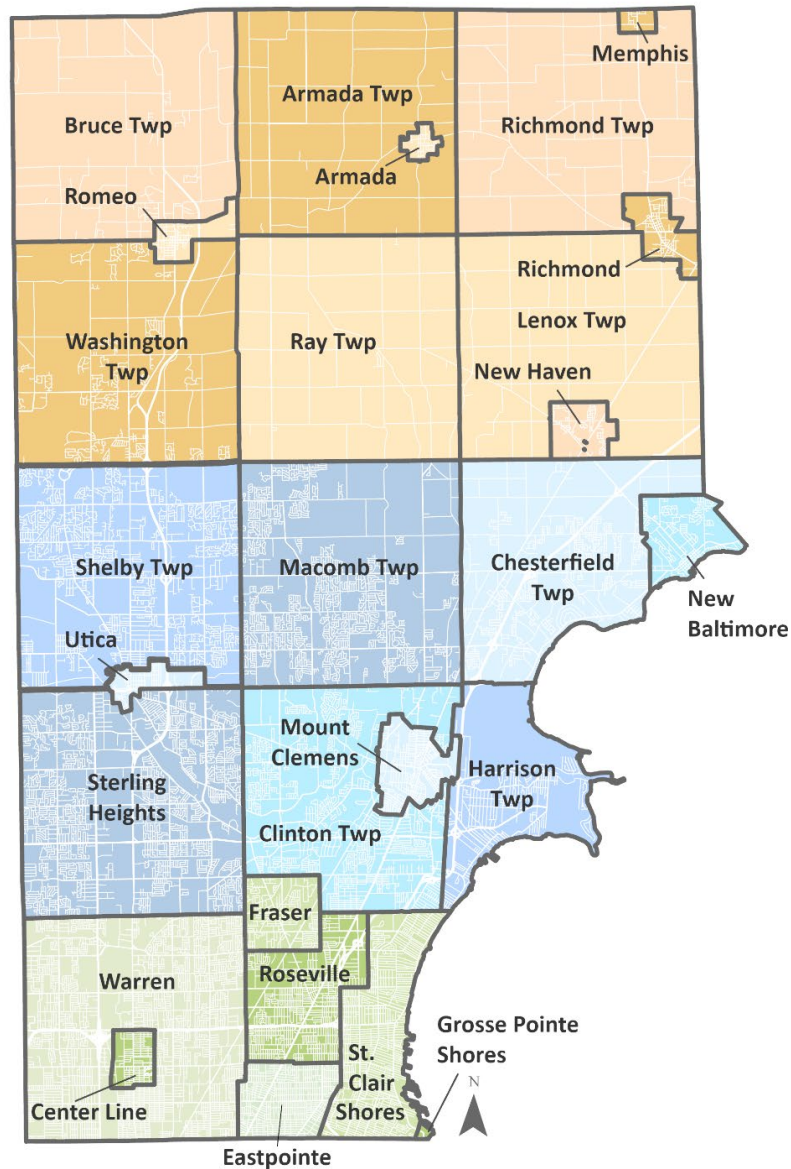


Countywide Corridors of Significance Study

Macomb County Federal Aid Committee



Prepared by:

HNTB

December 2022

TABLE OF CONTENTS

1	BACKGROUND, PURPOSE, AND SCOPE.....	1
2	A BRIEF HISTORY OF MACOMB COUNTY’S ROAD SYSTEM.....	4
2.1	Roadway System Classifications	4
2.1.1	Federal Classifications	4
2.1.2	State and Local Classifications	5
2.1.3	Federal Aid Network.....	6
3	SEMCOG MODEL.....	6
3.1	Assumptions and Inputs	6
3.2	Methodology	7
3.3	Outputs and Summary.....	7
3.3.1	Level of Service (2020 and 2045).....	7
3.3.2	Population Change (2020-2045)	8
3.3.3	Employment Change (2020-2045).....	8
4	SYSTEM INVESTMENT NEEDS	8
4.1	Preservation/Modernization	10
4.2	Current Funding and System Conditions	10
4.3	Network Preservation Investment Needs	13
4.4	Gap Analysis.....	13
4.5	Safety and Operations	14
4.5.1	Safety	14
4.5.2	Crashes and Countermeasures	17
4.5.3	Operations	18
5	CORRIDORS OF SIGNIFICANCE	19
5.1	Criteria	20
5.2	Outcome of Analysis.....	21
5.3	Stakeholder Feedback	24
5.3.1	Stakeholder Engagement Survey	24
5.3.2	North Region Stakeholder Meeting	26
5.3.3	Central Region Stakeholder Meeting	27
5.3.4	South Region Stakeholder Meeting	27
5.4	Multimodal Considerations.....	28
5.4.1	Public Transit.....	28
5.4.2	Bicycling and Walking.....	30
5.5	System Investment Prioritization.....	33
5.5.1	Prioritization Approach.....	33
5.5.2	Prioritization Factors.....	33
6	OBSERVATIONS AND NEXT STEPS.....	34
7	REFERENCE LIST	36

TABLES

Table 1-1 Macomb County Jurisdictions by Region..... 2
Table 4-1 Change in Roadway Condition Following Investment..... 13
Table 4-2 Macomb County High-Frequency Crash Segments 17
Table 4-3 Macomb County High-Frequency Crash Intersections 17
Table 4-4 2020 Corridor Ranking 19
Table 5-1 Macomb County Corridors of Significance..... 23
Table 5-2 Stakeholder Engagement Meetings 24

FIGURES

Figure 1-1 Macomb County Jurisdictions by Region 3
Figure 2-1 Functional Classification Relationship..... 4
Figure 2-2 MCDR-Jurisdiction Federal Aid Road Miles by NFC Type..... 5
Figure 4-1 Relationship Between Pavement Age and Condition..... 9
Figure 4-2 Federal Aid Roadway Conditions 11
Figure 4-3 NHS Federal Aid Roadway Conditions 11
Figure 4-4 MCDR-Owned Bridge Conditions..... 12
Figure 4-5 Southeast Michigan Crash Severity 15
Figure 4-6 Macomb County Crash Severity 15
Figure 4-7 Southeast Michigan Crash Type 16
Figure 4-8 Macomb County Crash Type 16
Figure 5-1 Macomb County Corridors of Significance 22
Figure 5-2 Image from North Region Stakeholder Meeting..... 26
Figure 5-3 Image from Central Region Stakeholder Meeting 27
Figure 5-4 Image from South Region Stakeholder Meeting..... 28
Figure 5-5 Transit Services in Macomb County 29
Figure 5-6 Bicycle and Pedestrian Facilities in Macomb County..... 31

APPENDICES

Appendix A: System Condition Data.....A-1
Appendix B: Network Classification Data.....B-1
Appendix C: SEMCOG Travel Demand Model Data.....C-1
Appendix D: System Safety and Congestion Data.....D-1
Appendix E: Stakeholder Engagement Survey.....E-1
Appendix F: Stakeholder Engagement Meetings.....F-1

1 BACKGROUND, PURPOSE, AND SCOPE

The *Macomb Countywide Corridors of Significance Study* was initiated in the spring of 2021 by the Macomb County Federal Aid Committee (FAC), in collaboration with the Macomb County Department of Roads (MCDR), to facilitate the planning of major federal aid investments on MCDR's roadway corridors. The policy context of the Study is the update of the four-year Transportation Improvement Program (TIP) for fiscal years (FYs) 2020-2023, which is an undertaking coordinated by the Macomb FAC. Under the provisions of federal and State law, the Michigan Department of Transportation (MDOT), in partnership with local units of government, takes necessary actions to develop and implement the Statewide Transportation Improvement Program (STIP) and Regional TIPs.

The Southeast Michigan Council of Governments (SEMCOG) enables County-level FACs to coordinate these activities on behalf of local road and transit agencies in the region. FACs in Southeast Michigan work within the established local federal aid budget targets, timelines, and processes to identify and prioritize candidate projects for submittal to SEMCOG. The purpose of the Macomb FAC is to facilitate SEMCOG's responsibility in Macomb County; it is authorized by SEMCOG to perform transportation planning activities under mutual agreement, as provided for in a Memorandum of Understanding (MOU). The Macomb FAC meets at least three times per year. Chaired by MCDR, its members consist of representatives of the 27 local units of government in Macomb County, along with a representative of the public transit agencies active in the County. As various public transit agencies are active in Macomb County, there is also an overall representative from the Suburban Mobility Authority for Regional Transportation (SMART) on the FAC.

In June 2021, the Macomb FAC initiated the TIP Update by reforming an FAC TIP Subcommittee to begin collecting and analyzing relevant data. The primary driver of this effort was a Call for Projects (CFP) initiated in the fall of 2021 to request that FAC Members submit candidate projects for review, evaluation, and prioritization under guidelines approved by the FAC. A total of 63 candidate projects were submitted, including five projects requesting widening along segments of three MCDR roadways. Due to the relative potential impacts of these projects and the unknowns surrounding the amount of federal aid available for the TIP Update, the TIP Subcommittee recommended a phased approach (Phases I and II):

- Evaluating and scoring all eligible preservation projects submitted,
- Deferring evaluation of widening projects submitted,
- Recommending projects for initial addition to the TIP (Phase I projects), and
- Deferring recommendations for Phase II preservation and widening projects, pending the completion of this Study and a clearer determination of available federal funding.

The overall purpose of the Study is to identify a planning framework for long-term federal aid investments on MCDR-owned roads. Both the Federal Highway Administration (FHWA) and MDOT have recommended taking a longer-term investment approach based on established federal planning and environmental policy best practices. This Study is intended to affirm this approach by facilitating a broader and longer-term view of MCDR's priority countywide needs and identifying how best to address those needs with the limited funds available.

The Study does not recommend specific projects to be undertaken. Rather, it provides a more systematic and data-driven approach for identifying and prioritizing such investments. The Study is also focused on roadway corridors under the jurisdiction of MCDR and not roadways owned by municipalities.

MCDR, as the principal sponsor of the Study, is seeking to continue to align its role as chairing the Macomb FAC with its overall mission as a local road agency and to implement its federal aid program consistent with the principles of sound asset management.¹

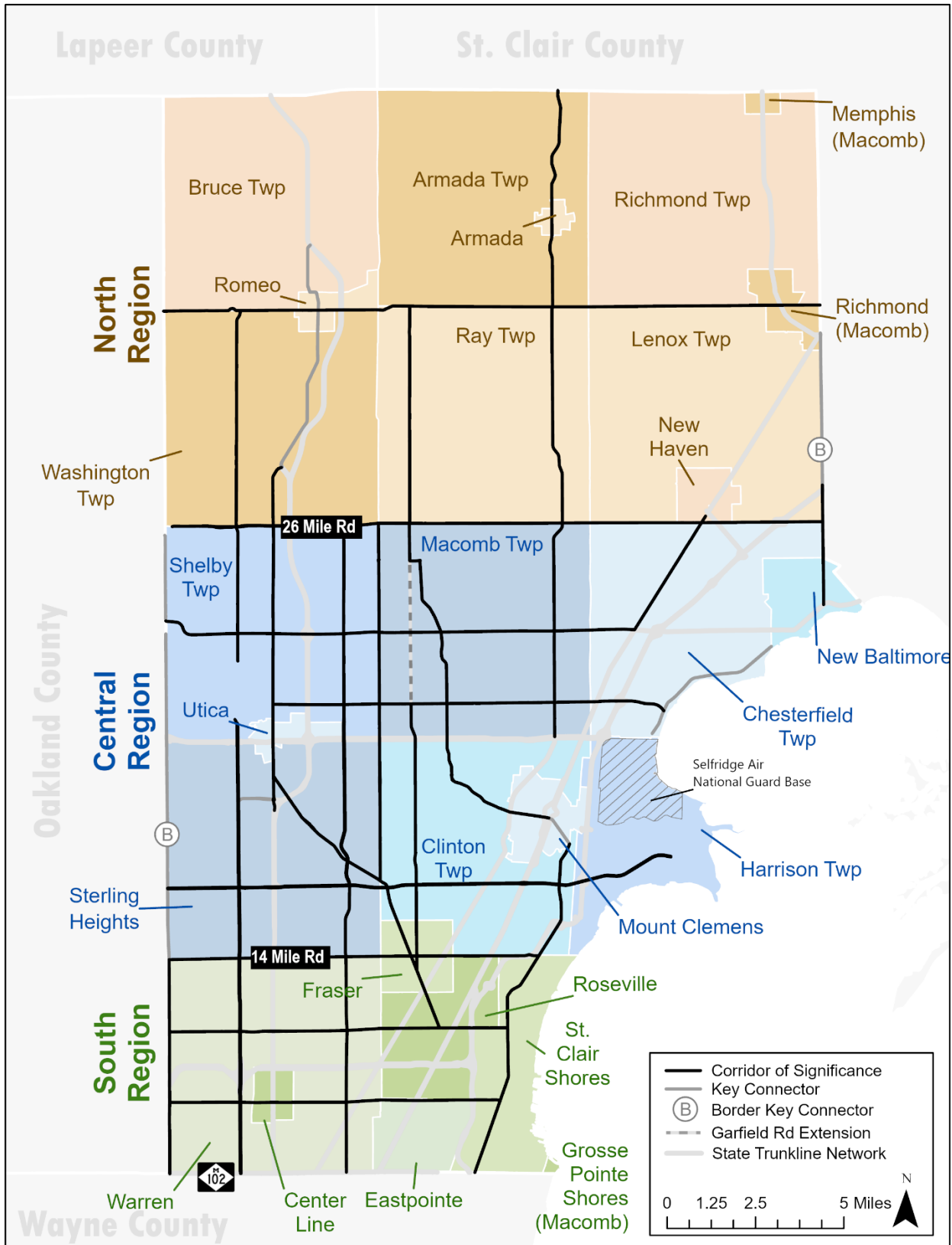
For the purposes of this Study, the County has been organized into three major geographic regions: South, Central, and North. See Table 1-1 for a list of Macomb County’s 27 local units of government (12 cities, 11 townships, and four villages) by region. The South Region includes communities south of 14 Mile Road, the Central includes communities between 14 Mile and 26 Mile roads, and the North includes communities north of 26 Mile Road. Figure 1-1 depicts this information visually.

Table 1-1 Macomb County Jurisdictions by Region

South <i>8 Mile Road-14 Mile Road</i>	Central <i>14 Mile Road-26 Mile Road</i>	North <i>26 Mile Road-Bordman Road</i>
City of Warren	City of Sterling Heights	Washington Township
City of Eastpointe	Clinton Township	Ray Township
City of St. Clair Shores	Harrison Township	Lenox Township
Village of Grosse Pointe Shores	City of Mount Clemens	Village of New Haven
City of Center Line	City of Utica	Village of Romeo
City of Roseville	Shelby Township	City of Richmond
City of Fraser	Macomb Township	Bruce Township
	Chesterfield Township	Armada Township
	City of New Baltimore	Richmond Township
		Village of Armada
		City of Memphis

¹ From MCDR’s 2020 *Transportation Asset Management Plan (TAMP)*: “MCDR is dedicated to providing the public with a quality county road system, with a focus on safety and convenience for motorists and the community, environmental responsibility, and financial accountability.” In regard to asset management, “A fundamental strategy in addressing the road and bridge needs in this TAMP is the establishment of a formal Capital Preventive Maintenance program for roads and bridges – ‘preserve first’ – dedicating funding to keep good and fair assets from deteriorating into more costly condition states.” HNTB Michigan, Inc., *Macomb County Department of Roads Transportation Asset Management Plan* (September 2020).

Figure 1-1 Macomb County Jurisdictions by Region



2 A BRIEF HISTORY OF MACOMB COUNTY'S ROAD SYSTEM

Founded in 1818, Macomb County was the third county established in the Michigan Territory. The County today comprises 483.7 square miles.

The County's road system was first instituted in 1893, and the Macomb County Road Commission was established in 1912. In 2011, the Road Commission was reorganized under County government as the Department of Roads (MCDR). Macomb County today contains over 4,400 miles of public roads (State-, County-, and locally-owned) and 155 miles of paths and trails. MCDR manages and maintains more than 1,700 miles of primary roads, 138.2 miles of roads on the National Highway System (NHS), and 225 bridges. In addition, MCDR maintains over 60,000 signs, 740 traffic signals, and 350 traffic cameras managed as part of an integrated system from a countywide Traffic Operations Center (TOC).

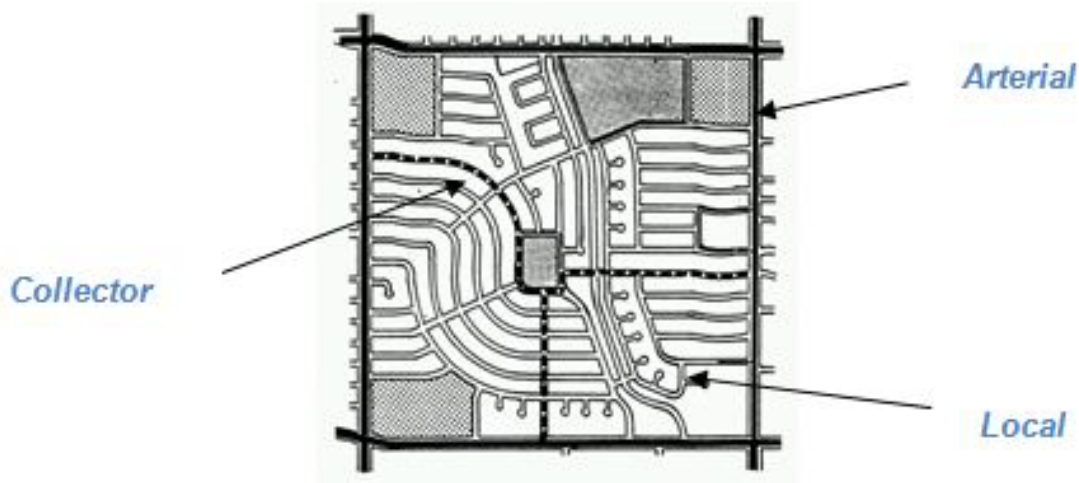
2.1 Roadway System Classifications

The public road network in Michigan is classified in various ways under federal and State law and common planning and operating systems. These classifications are helpful to consider when developing a framework for long-term system investments. Since the scope of the *Countywide Corridors of Significance Study* focuses on MCDR-owned roads, the metrics discussed in this section relate to that portion of the public road network which is under MCDR's jurisdiction only.

2.1.1 Federal Classifications

The core federal classification system is the National Functional Classification (NFC), which organizes the network in terms of its high-level surface transportation purposes: mobility and access. The network is divided into roadways designated as arterials, collectors, and local access roadways, as illustrated in Figure 2-1. In general, arterials have fewer access points (i.e., driveways and other roads) but can carry more traffic at higher speeds. Collectors serve as a middle ground between arterials and local access roadways. Local access roadways have many points and less overall capacity, causing lower speeds.

Figure 2-1 Functional Classification Relationship

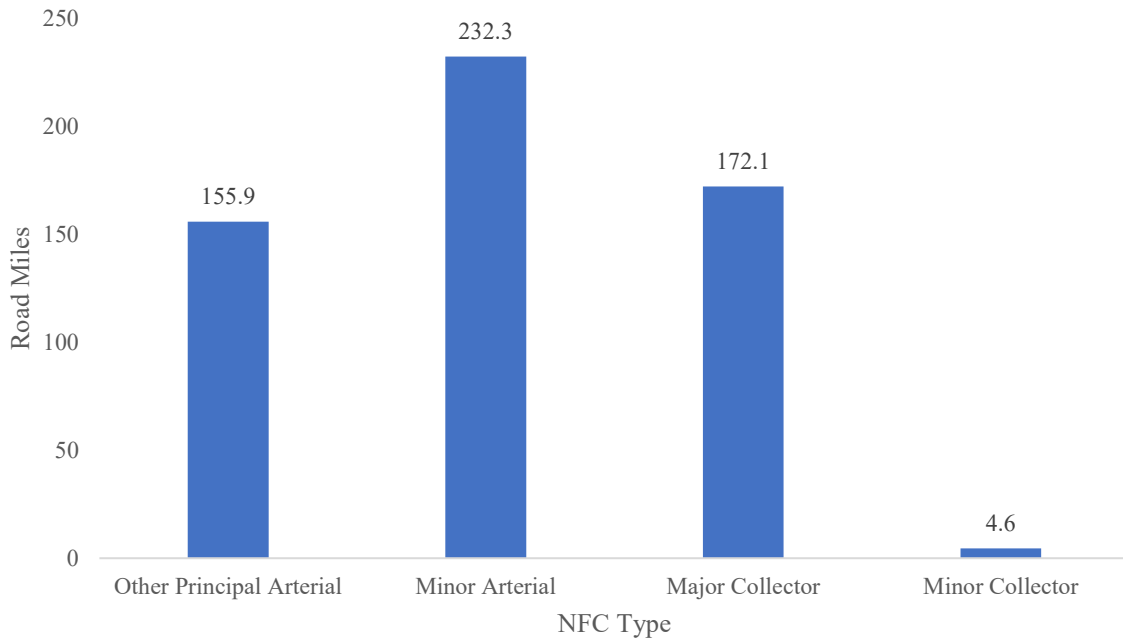


2

² Detmer, Chris, "Functional Classification," Virginia Department of Transportation [VDOT], November 1, 2019, https://www.virginiadot.org/projects/fxn_class/home.asp.

The NFC of MCDR-jurisdiction road miles is shown mathematically in Figure 2-2 and geographically in Figure A-1 in Appendix A.

Figure 2-2 MCDR-Jurisdiction Federal Aid Road Miles by NFC Type



NHS and Strategic Highway Network (STRAHNET) routes are deemed indispensable to the country’s economy and defense. In Macomb County, 159 centerline miles of MCDR-jurisdiction roads, such as Mound Road from 11 Mile Road to M-59 (Hall Road), are NHS roads. NHS and STRAHNET routes in Macomb County are identified in Figures B-1 and B-2 in Appendix B.

2.1.2 State and Local Classifications

In addition to federal classifications, there are also state and local roadway system classifications. MDOT oversees state trunkline highways in Michigan, commonly designated as “M-,” “US-,” or “I-.” County roads have been classified under State law as either primary or local in nature. City and village streets are classified as either major or minor. Primary, local, major, and minor classifications come from applicable State law (Act 51 of 1951, as amended).³ While primary roads are crucial to the entire traffic network, local roads enhance access to the network. MCDR is guided by State law to focus investments on its county primary road network when prioritizing expenditures for maintaining and improving County-owned road assets.

Most county local roads in Macomb County have been developed as subdivision streets and function exclusively as part of the local access network. On these roads, residential driveways line the sides of streets. As subdivision streets constitute an entirely different type of road, MCDR has a specific

³ State of Michigan, “State Trunk Line Highway System: Act 51 of the Public Acts of 1951,” Michigan Legislature, [http://www.legislature.mi.gov/\(S\(nanccnzhx4eyn4y5atdh3nam\)\)/mileg.aspx?page=GetObject&objectname=mcl-Act-51-of-1951](http://www.legislature.mi.gov/(S(nanccnzhx4eyn4y5atdh3nam))/mileg.aspx?page=GetObject&objectname=mcl-Act-51-of-1951).

Subdivision Reconstruction Program for townships throughout Macomb County, wherein townships apply to MCDR for assistance in rehabilitating residential subdivision streets.

2.1.3 Federal Aid Network

Of particular interest for the *Countywide Corridors of Significance Study* are federal aid-eligible roadways, as the FAC’s primary purpose is to recommend improvements to the County- and locally-owned federal aid system. Federal aid-eligible roads can receive federal funding for construction and preventive maintenance purposes. MCDR owns 564.8 miles of county local and county primary roads that are federal aid-eligible. An estimated 98% of MCDR’s primary roads and 6% of its local roads are federal aid-eligible. In contrast, over two-thirds of MCDR-jurisdiction roads (1,200.5 miles of local roads and 16.8 miles of minor collector roads) are ineligible for federal aid. Therefore, MCDR must be selective in prioritizing the needs of the federal aid network.

MCDR’s federal aid system is also the focus of its roadway condition data collection program. The Michigan Transportation Asset Management Council (TAMC) requires all road agencies to collect condition data on the federal aid network using the Pavement Surface Evaluation and Rating (PASER) system. MCDR typically obtains PASER data on half of the system’s roads annually. See Section 4.2 Current Funding and System Conditions for a review of current and trending federal aid and NHS pavement conditions.

3 SEMCOG MODEL

As part of the *Countywide Corridors of Significance Study*, the Macomb FAC, in its overall partnership with SEMCOG, collected and analyzed travel demand data to provide operational context. The SEMCOG Travel Demand Forecast Model was used to determine the current and future states of corridor capacities, as well as other factors that may affect future demand on the County’s roadway network.

3.1 Assumptions and Inputs

The model used for this analysis was version E7 of the SEMCOG Travel Demand Forecast Model. This model and its data and inputs were provided directly by SEMCOG.⁴ Of the various potential outputs from the model, it was determined that volume-to-capacity (V/C) ratio, population, and employment statistics would be analyzed to determine trends that affect operations and transportation demand in Macomb County. For this analysis, the V/C ratio was converted to level of service (LOS), which is a simplified method of describing how a roadway segment or intersection performs from an operational perspective. The conversion from V/C ratio to LOS thresholds is based on concepts in the Transportation Research Board’s (TRB’s) *Highway Capacity Manual: Special Report 209*. Due to the varying speeds and segment types in Macomb County, the following thresholds were applied: Segments with a V/C ratio of 0.7 or lower are assumed to operate at LOS A to B, while segments with a V/C ratio of greater than 0.9 are assumed to operate at LOS E to F. MDOT considers LOS D or above to be desirable or acceptable for

⁴ Southeast Michigan Council of Governments [SEMCOG], “Travel Forecast,” SEMCOG, February 2019, <https://semcog.org/travel-forecast>.

Michigan roadways.⁵ MCDR strives for an overall LOS of C when contemplating improvements to corridor or intersection traffic operations.

3.2 Methodology

In order to determine the V/C ratio and LOS of the roadway network, the model was set up and run per SEMCOG guidance to provide forecasted volume assignment for the AM and PM peak periods for the years 2020 and 2045. The assigned volume for the network segments was then compared to the capacity of the segments in order to determine each segment's V/C ratio. This ratio was converted to an LOS designation and mapped based on the LOS thresholds.

In addition, changes in population and employment between 2020 and 2045 were analyzed to determine potential areas of Macomb County that could experience a shift in the number of trips to or from a particular area. These trends were determined by comparing and mapping the traffic analysis zone (TAZ) data that is included in the model.

3.3 Outputs and Summary

TransCAD maps were produced and analyzed in terms of AM and PM peak LOS in 2020 and 2045 and population and employment changes between 2020 and 2045. The outputs of the SEMCOG Travel Demand Model suggest the lack of a compelling need to add capacity to the overall county road system network in Macomb County. While some localized capacity improvements might be warranted, it is likely that an entire corridor widening plan for 26 Mile Road, for example, may not be warranted. This is consistent with the findings in SEMCOG's *2045 Regional Transportation Plan for Southeast Michigan* and MCDR's preserve-first approach to system investment. In fact, the first regional transportation policy identified by SEMCOG is to "Preserve Infrastructure through fiscally-responsible, data-driven asset management practices."⁶ In terms of pavement priorities, specifically, SEMCOG recommends, "Implement road projects that make the most cost-effective use of resources while focusing on maintenance to maximize the life of existing roads."⁷

3.3.1 Level of Service (2020 and 2045)

LOS identifies which corridors are currently a concern in regard to capacity, as well as which ones will improve or degrade by 2045, allowing insight into where to focus potential improvements. The 2020 and 2045 AM models are very similar and show predominantly LOS A to B, with some sections, primarily on state trunklines like I-94 and M-53, operating at LOS E to F. The 2020 and 2045 PM models also exhibit similar trends to one another, with some sections of I-94 and M-53 showing LOS E to F. When compared to the AM peak, the PM peak identifies a reduction of LOS at isolated locations on several other major roads, such as 16 Mile Road (Metropolitan Parkway), M-59, and Mound Road. The limited number of roadway segments operating at LOS E to F shows that traffic flows well and operates under capacity on

⁵ Transportation Research Board [TRB], *Highway Capacity Manual: Special Report 209* (1985), <https://onlinepubs.trb.org/Onlinepubs/sr/sr209/209.pdf>.

⁶ SEMCOG, *2045 Regional Transportation Plan for Southeast Michigan* (March 2019), <https://semcog.org/desktopmodules/SEMCOG.Publications/GetFile.ashx?filename=2045RegionalTransportationPlanForSoutheastMichiganMarch2019.pdf>.

⁷ SEMCOG, March 2019.

most roadways in Macomb County. Figures C-1 through C-8 in Appendix C display the Macomb County road LOS for the AM and PM peak periods of the years 2020 and 2045 based on V/C ratio.

This analysis was conducted using a planning-level tool looking solely at V/C ratios and, therefore, does not provide a complete view of operations. A refined data set can be found in MCDR's *Corridor Ranking Reports*, which utilize probe data to provide a more complete view of the corridors. See Section 4.5.3 Operations for more information about these reports.

3.3.2 Population Change (2020-2045)

Population change can drive a shift in the numbers of trips originating from or going to a specific TAZ. The SEMCOG model shows that Macomb County had an approximate total population of 883,950 in 2020 and has a predicted population of approximately 924,950 in 2045, an increase of 4.6%. Population changes in the County's TAZs are anticipated to be relatively minimal between 2020 and 2045. The model identifies multiple locations where population numbers are projected to increase or decrease. Figure C-9 in Appendix C displays the changes in population from 2020 to 2045 in Macomb County.

3.3.3 Employment Change (2020-2045)

Employment change can drive a shift in the numbers of trips originating from or going to a specific TAZ as people travel to and from their workplaces. The SEMCOG model shows that Macomb County had a total employment population of approximately 440,950 in 2020 and predicts an employment population of approximately 444,450 in 2045, an increase of 0.8%. The model identifies multiple locations where employment numbers are projected to increase or decrease. Figure C-10 in Appendix C displays the changes in employment from 2020 to 2045 in Macomb County.

4 SYSTEM INVESTMENT NEEDS

The necessity of additional system investments across the entire public road network in Michigan has been documented extensively over the past decade. In particular, the needs of the county-owned road systems have been described more recently by the County Road Association (CRA) of Michigan in its series of reports based on data collected at the individual county level. The CRA calculates that, in order to achieve a state of 90% of county federal aid-eligible roads in good or fair condition (having a PASER rating of at least five) by 2031, \$1.8 billion every year should be spent on Michigan's county road and bridge system.⁸ In FY 2020, Macomb County's share of the total distribution of road funds to Michigan counties under Act 51 represented 6.5% of the money from the Michigan Transportation Fund (MTF) and 6.5% of the money from the Local Program Fund.⁹

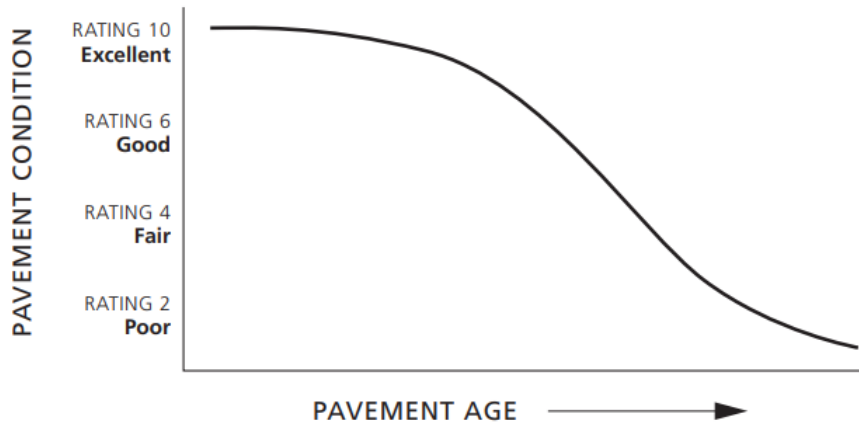
The root cause of the overall decline in roadway conditions in Michigan can be attributed to a systematic lack of investment. For example, many existing local road pavement structures in the South Region of

⁸ L.W. Brown Consulting, LLC, *2021 Michigan County Road Investment Plan: A comprehensive 83-county overview of investment requirements to restore Michigan's county road system* (June 2021), <https://micountyroads.org/wp-content/uploads/The-Michigan-County-Road-Investment-Plan-of-2021.pdf>.

⁹ State of Michigan, "Act 51 Distribution and Reporting System: Schedule B," MDOT, November 17, 2021, <https://www.michigan.gov/mdot/-/media/Project/Websites/MDOT/Business/Local-Government/Act-51/MTF-Reports/Annual-Reports/2021/MTF-Annual-Report-Schedule-B-FY2021.pdf?rev=76bf81145ed24f218c63345fd0f6dcb0&hash=EBBEFDEDC869B9A7023CA568477F4D5>.

Macomb County are 60-70 years old and cannot be resurfaced or rehabilitated indefinitely. The right approach for many of these roadways is total reconstruction, yet treatments of this kind continue to be deferred due to constrained resources.¹⁰ Figure 4-1 illustrates the relationship between pavement age and condition. As a road’s condition worsens, the required fix becomes more expensive, highlighting the critical importance of preventive maintenance.

Figure 4-1 Relationship Between Pavement Age and Condition



In addition to indicating the surface condition of a road, a given rating also includes a recommendation for needed maintenance or repair. This feature of the rating system facilitates its use and enhances its value as a tool in ongoing road maintenance.

RATINGS ARE RELATED TO NEEDED MAINTENANCE OR REPAIR

Rating 9 & 10	No maintenance required
Rating 8	Little or no maintenance
Rating 7	Routine maintenance, cracksealing and minor patching
Rating 5 & 6	Preservative treatments (sealcoating)
Rating 3 & 4	Structural improvement and leveling (overlay or recycling)
Rating 1 & 2	Reconstruction

11

An increase in road funding in 2015 at the State level, 2018 General Fund dollars, an inflation index measure as of January 1, 2022, and some additional federal funding have helped local road agencies stem the decline, but the conversation about the importance of infrastructure investment must continue.¹² While

¹⁰ 21st Century Infrastructure Commission, *21st Century Infrastructure Commission Report*, https://www.michigan.gov/-/media/Project/Websites/formergovernors/Folder10/21st_Century_Infrastructure_Commission_Final_Report_1.pdf?rev=67a4572f5a96407cb335382479ad43b9.

¹¹ Walker, Donald, *Pavement Surface Evaluation and Rating PASER Asphalt Roads Manual* (2002), <https://www.apa-mi.org/docs/Asphalt-PASERManual.pdf>.

¹² 21st Century Infrastructure Commission.

one-time infusions of dollars are put into transportation, what is most needed is a sustained increase in funding in order to allow for more predictability in the road infrastructure construction market. The Macomb FAC is working with SEMCOG to identify and prioritize investment needs (preservation, safety, and operations) for the county federal aid system. This Study is part of the effort to provide a framework for such investment prioritization.

4.1 Preservation/Modernization

The preservation of the existing roadway infrastructure is the top priority for the Macomb FAC. Every road agency is required to develop and implement a plan to preserve road and bridge assets, including articulating goals, a financial plan, and an optimized strategy of mix-of-fixes (reconstruction, rehabilitation, and preventive maintenance) tied to a specific, rolling Capital Investment Plan (CIP) to address needs. MCDR's *Transportation Asset Management Plan (TAMP)* identifies which project investments should utilize federal aid through the Macomb FAC process.

Modernization includes investments needed to make essential upgrades to the system design and technology requirements in order to improve efficiency, safety, and effectiveness. Examples of these investments include upgrading design standards, integrating modes, installing smart roadway technologies (like those being deployed along Mound Road as part of the Innovate Mound project, as discussed in Section 4.2 Current Funding and System Conditions), using high-reflective sign-sheeting technologies, reinforcing bridge decks with carbon fiber, and utilizing similar proven technologies. This Study and the long-term investment plan framework it will produce are intended to provide input on MCDR's system preservation and modernization investment decisions and priorities as MCDR develops and implements its rolling CIP.

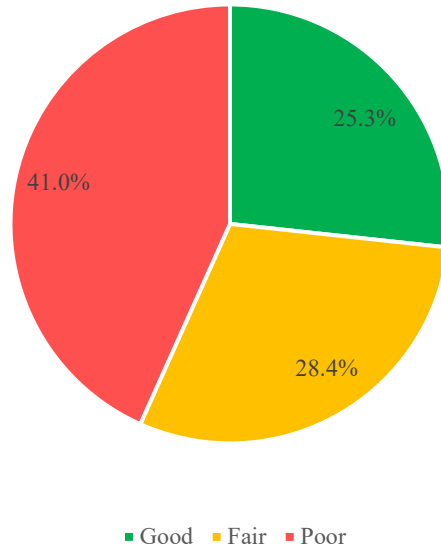
4.2 Current Funding and System Conditions

Funding for MCDR road and bridge infrastructure investments comes from federal, State, and local sources. Formula federal transportation fund reimbursements for eligible project expenses equal about \$12 million per year, assuming 50% of the allocation to Macomb County is used on MCDR projects. The MTF is the State source, projected to provide approximately \$80 million per year in direct payments to MCDR for FY 2023, 50% of which is normally planned for capital improvements. Federal and State earmarks and competitive grant awards vary, but MCDR budgets these at approximately \$10 million per year, along with \$13 million in local matching funds from townships, for a total average annual capital program investment of \$75 million. MCDR budgets contributions from local matching funds each year but closely coordinates those contributions to help support the needs of local agency budgets. Strained revenue streams at the local level over the next few years may also impact the ability of MCDR to pursue specific improvements.

Revenues from these sources for all local road agencies have grown gradually over the past few years, with a slight reduction during 2020 due to COVID-19 travel impacts, which has helped reduce road and bridge system deterioration. The core challenge now is the rising cost of construction materials, equipment, and labor, particularly for bridge condition projects. Road widening requires the most budget in terms of project type. In the mix-of-fixes for network preservation, road reconstruction (repair and replacement) might be the most expensive solution.

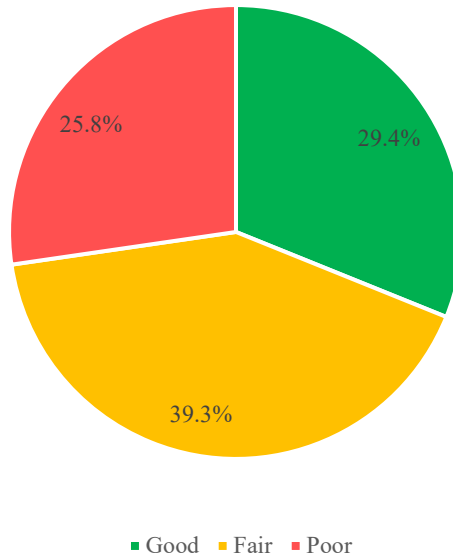
As indicated earlier, MCDR collects condition data on its pavement and bridges on a regular basis as part of its *TAMP*. Based on the latest PASER data, 25.3% of Macomb County’s federal aid roadways are rated in good condition, 28.4% in fair condition, and 41% in poor condition, as shown in Figure 4-2.

Figure 4-2 Federal Aid Roadway Conditions



As illustrated in Figure 4-3, in terms of NHS federal aid roads in the County, 29.4% are rated good; 39.3%, fair; and 25.8%, poor.

Figure 4-3 NHS Federal Aid Roadway Conditions

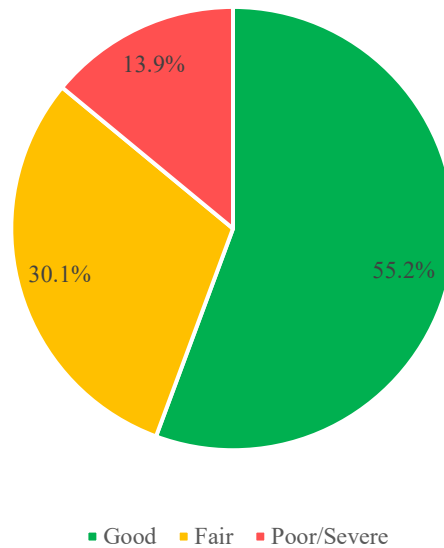


PASER conditions of Macomb County roads are depicted geographically in Figures A-2 and A-3 in Appendix A.

The overall trend of pavement conditions on MCDR’s federal aid system over the past eight years has been mixed. The percentages of both good and poor pavements have increased, and the percentage of fair pavement conditions has declined. However, over the past four years, the trend has been more positive, with the percentage of good pavement conditions increasing and that of poor pavement conditions decreasing. A graph of MCDR federal aid road pavement condition trends from 2013-2021 is shown in Figure A-4 in Appendix A.

In terms of overall National Bridge Inventory (NBI) bridge conditions, 55.2% of MCDR-owned bridges are in good condition, 30.1% are in fair condition, and 13.9% are in poor or severe condition, illustrated in Figure 4-4.

Figure 4-4 MCDR-Owned Bridge Conditions



The trend of bridge conditions has remained fairly stable, but MCDR is focused on improving conditions through targeted investments and anticipated help from the State’s Local Agency Bridge Bundle Program.¹³ Macomb County bridge conditions are illustrated geographically in Figure A-5 in Appendix A.

Regarding key corridor investments, an example of a major current project is Innovate Mound, the reconstruction of Mound Road from I-696 to M-59. The 80-year-old corridor traverses the Cities of Warren and Sterling Heights and other jurisdictions; the project area within Warren and Sterling Heights encompasses approximately nine miles of the corridor. Funding came from a United States Department of Transportation (USDOT) Nationally Significant Multimodal Freight & Highway Projects Infrastructure

¹³ Ellens, Steve, “Local Agency Bridge Bundle Program,” Michigan Department of Transportation [MDOT], April 6, 2022, <https://experience.arcgis.com/experience/4c3beb0ed01042a8b6df3623b987eae9>.

for Rebuilding America (INFRA) Grant of approximately \$97.9 million, with MCDR and the Cities of Warren and Sterling Heights providing local matching funds, bolstered by a recent \$32 million State earmark. The project consists of improving traffic flow, pedestrian access, and transit stops; adding new pavement, drainage, Intelligent Transportation Systems (ITS), emerging mobility, and connected vehicle technology, traffic signals and signs, and a nonmotorized multi-use path; optimizing signals; enhancing the corridor’s landscaping; and adding energy-efficient lighting. The reconstructed Mound Road, anticipated to be completed in 2024, will be a showcase technology corridor, allowing for multiple modes of transportation, supporting economic growth and development, and providing beautification to the area.

4.3 Network Preservation Investment Needs

An assessment of future investment needs is performed periodically by MCDR to help guide future investment planning for the federal aid road system. MCDR’s long-term goal is to improve the condition of its federal aid pavement network to 90% in good or fair condition, consistent with the goals MDOT has adopted for its non-freeway network. As of the last rating in 2021, 51% of MCDR’s federal aid network is in poor condition. To meet MCDR’s goal over the next ten years, a 40% reduction in the amount of poor pavement is needed, which will require significant additional investment. To determine that amount, a gap analysis was performed using the Roadsoft modeling tool, which compares the forecasted results of the current investment level against a theoretical future level of investment that will meet the goal.

MCDR’s current investment plan, with a routine mix of fixes, over the next five years increases each year and averages approximately \$45 million per year in road preservation work. This is an aggressive approach aimed at prioritizing overall system preservation on both the federal aid and non-federal aid networks. This plan was simulated in the Roadsoft model by starting with an annual budget of \$35 million and ramping up to \$50 million in the fifth year. Even if 100% of these funds – aggressively allocated – were utilized on the federal aid system, the result would be a decline in the percentage of roadways in good or fair condition of 4% and a corresponding increase in the percentage of federal aid roadways in poor condition, as shown in Table 4-1. The current investment level would result in the future percentage of roads in good or fair condition being 45% overall. This modeled result assumed a 5% inflationary factor, which is relatively optimistic given current trends in industry bids overall. It cannot be overstated that there is a compelling need for a sustained increase in revenue to support additional investment in system preservation in order to reverse this trend. This trend and need clearly call for a prioritization framework for major investments with a primary focus on preserving and optimizing the existing roadway network condition and capacity.

Table 4-1 Change in Roadway Condition Following Investment

	Initial (2023)	Future (2032)
Good	23%	18%
Fair	26%	27%
Poor	51%	55%

4.4 Gap Analysis

A gap analysis was conducted based on a scenario of \$95 million per year over ten years being invested in the County’s federal aid roads. This decreases the percentage of roadways in poor condition by an

average of 4% per year, achieving the 10% goal in approximately ten years. Taking into account the fact that roads will continue to deteriorate over that time, the percentage of federal aid roadways in poor condition drops from 51% to 11%, and there is a gap of \$50 million per year (\$95 million minus \$45 million), or a total of \$500 million of additional investment needed over the ten-year period. With this investment over ten years, 89% of roadways could be in good or fair condition.

This analysis again validates the core challenge for MCDR and every other local road agency in Michigan of how to keep the existing pavement system in a state of good repair (SGR) despite rising costs and steadily deteriorating conditions.

4.5 Safety and Operations

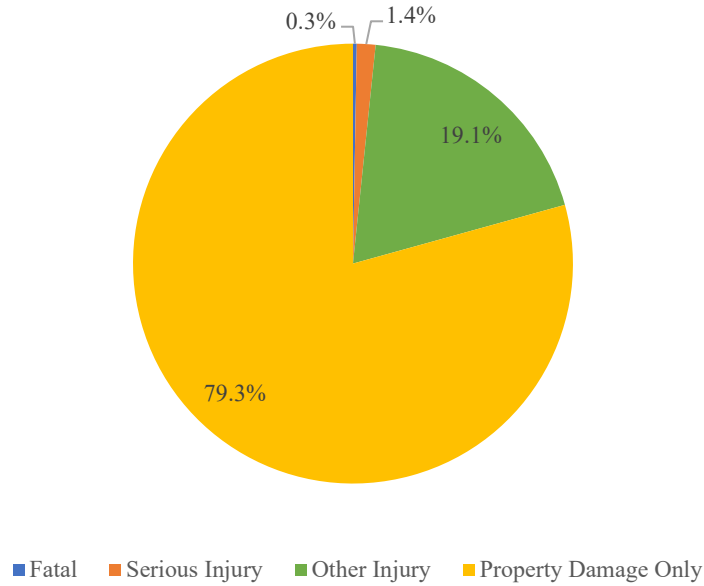
The following section provides details on safety, crashes, countermeasures, and operations in Macomb County.

4.5.1 Safety

SEMCOG's transportation data was used to compare the crash patterns in Macomb County to those in the larger Southeast Michigan region. The first analysis is of crash severity, as shown in Figure 4-5 and Figure 4-6. This data indicates that Macomb County follows similar crash severity trends as in the greater Southeast Michigan region.¹⁴

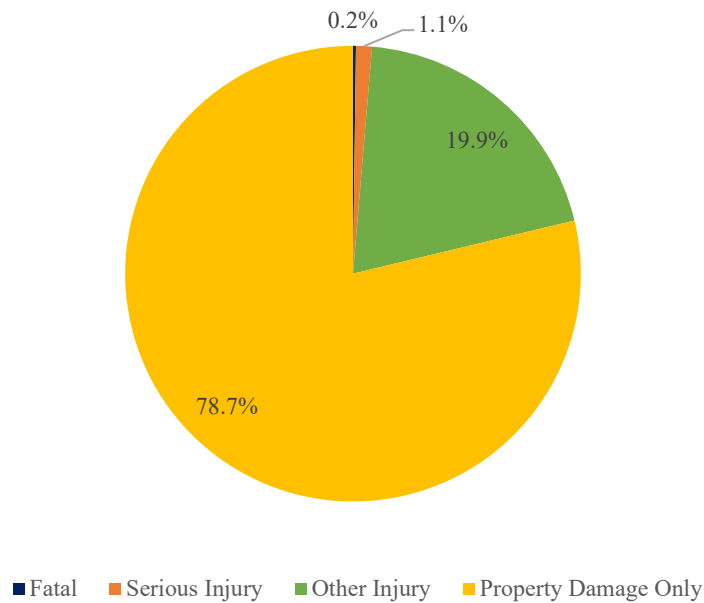
¹⁴ SEMCOG, "Community Profiles: Transportation," SEMCOG, 2022, <https://semcog.org/data-and-maps/community-profiles/communities=3999#Transportation>.

Figure 4-5 Southeast Michigan Crash Severity



15

Figure 4-6 Macomb County Crash Severity



16

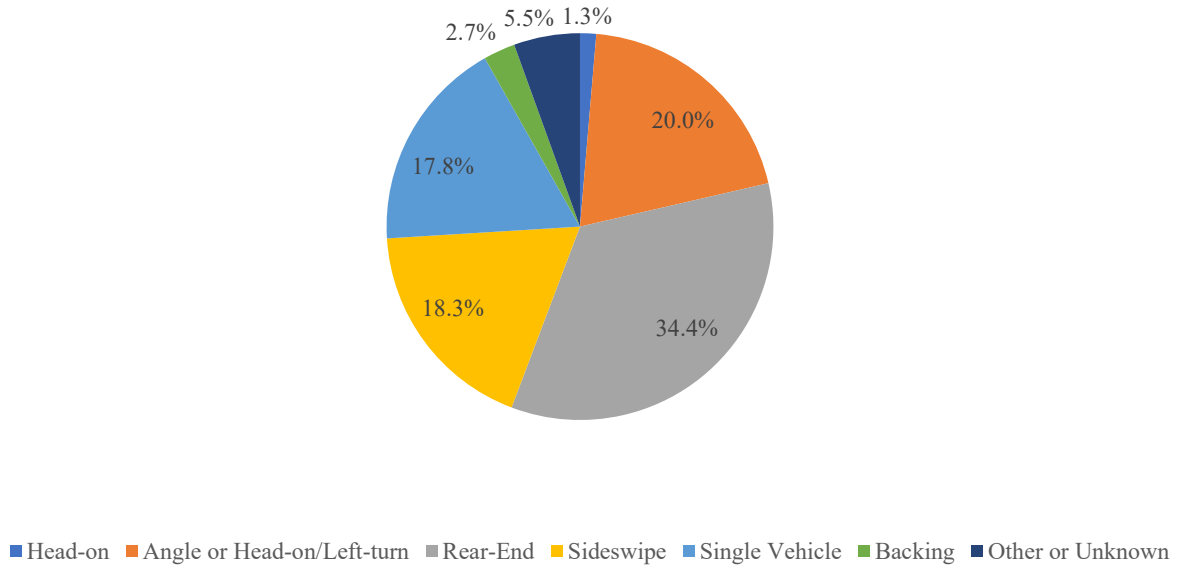
Crash type data from SEMCOG was also analyzed. Figure 4-7 and Figure 4-8 show the distribution of crash types for Southeast Michigan and Macomb County, respectively. Macomb County closely follows

¹⁵ SEMCOG, “Community Profiles: Transportation,” 2022.

¹⁶ SEMCOG, “Community Profiles: Transportation,” 2022.

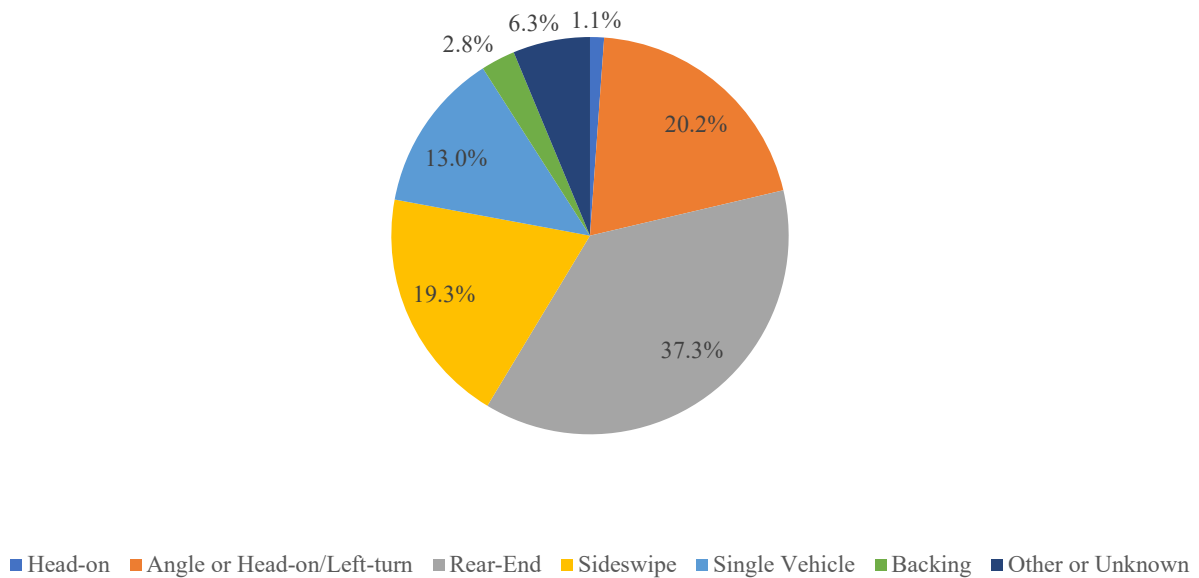
the trends of crash severity of the greater Southeast Michigan region, with rear-end crashes making up the largest portion of crashes in both analyses.¹⁷

Figure 4-7 Southeast Michigan Crash Type



18

Figure 4-8 Macomb County Crash Type



19

¹⁷ SEMCOG, “Community Profiles: Transportation,” 2022.

¹⁸ SEMCOG, “Community Profiles: Transportation,” 2022.

¹⁹ SEMCOG, “Community Profiles: Transportation,” 2022.

4.5.2 Crashes and Countermeasures

SEMCOG high-frequency crash location data was used to determine locations with high numbers of crashes. For this analysis, the top 20 segments with the highest crash volumes in Southeast Michigan from 2017 to 2021 were identified. Of these 20 segments, seven are located in Macomb County, and five of those are on roads under MCDR’s jurisdiction. A list of these segments and the average number of annual crashes on them between 2017 and 2021 can be found in Table 4-2. Crash density is illustrated in Figure D-1 in Appendix D.

Table 4-2 Macomb County High-Frequency Crash Segments

Regional Crash Ranking	Road Name	Origin	Terminus	Average Annual Crashes (2017-2021) ²⁰	Segment Length (Miles)
3	Hayes Road	19 Mile Road	M-59	101.4	1.022
4	23 Mile Road	Northbound M-53 Ramp/ 23 Mile Road	Schoenherr Road	99	0.886
6	Gratiot Avenue	23 Mile Road	26 Mile Road	92.4	3.575
7	Dequindre Road	11 Mile Road	12 Mile Road	87.6	0.997
19	23 Mile Road	Hayes Road	Romeo Plank Road	78	1.757

In addition to the high-frequency crash segments, the top 20 intersections with the highest crash frequency in Southeast Michigan were also identified. Of these 20 intersections, six are located in Macomb County, and four of those are on roads under MCDR’s jurisdiction. A list of these intersections and the average annual number of crashes at them between 2017 and 2021 can be found in Table 4-3.

Table 4-3 Macomb County High-Frequency Crash Intersections

Regional Crash Ranking	Road Name	Average Annual Crashes (2017-2021)
12	N M-53/Van Dyke Avenue Ramp/Van Dyke Avenue/ N M-53 Ramp*	47.8
16	12 Mile Road/Dequindre Road	44.4
18	23 Mile Road/Schoenherr Road	43.8
20	14 Mile Road/Dequindre Road	43

*MCDR has jurisdiction over the Van Dyke Avenue approaches, the roundabout itself and M-53 approaches are State-owned, and the 18½ Mile Road approaches fall under the jurisdiction of the City of Sterling Heights.²¹

Potential crash mitigation measures for these locations can be determined following the methodology in SEMCOG’s Traffic Safety Manual. The resource provides a procedure for analyzing crash data,

²⁰ SEMCOG, “High-Frequency Crash Locations,” SEMCOG, <https://semcog.org/high-frequency-crash-locations>.

²¹ SEMCOG, “Road Jurisdiction,” SEMCOG, <https://maps.semco.org/roadjurisdiction/>.

determining the possible causes of crashes, and identifying effective countermeasures to mitigate potential problems.²²

4.5.3 Operations

The SEMCOG Travel Demand Forecast Model was used from a planning-level perspective to identify roadways in Macomb County that operated from LOS A to F in the year 2020 and will operate as such in future year 2045. V/C ratio thresholds were established to identify corridors that will have sufficient capacity in 2045 (LOS A to B), as well as corridors that are projected to have poor LOS in 2045 (LOS E to F). The average annual daily traffic (AADT) on roadways in Macomb County in 2020 is illustrated in Figure D-2 in Appendix D.

MCDR completes a *Corridor Ranking Report* yearly, identifying arterial corridors in the County that experience recurring congestion, as well as recommendations for signal timing mitigation strategies (i.e., signal network optimization, signal offset adjustments, split adjustments, etc.). The reports use probe data from the Regional Integrated Transportation Information System (RITIS) and provide corridor rankings based on travel time, interquartile range (IQR), and a composite index combining the two. The probe vehicle data used from RITIS is collected anonymously from Global Positioning System (GPS)-enabled and in-vehicle devices and provides real-time speeds on frequently traveled roadways. The corridors included in the *Corridor Ranking Reports* are limited to roadways with traffic volumes greater than 20,000 vehicles per day. The reports also include a section on Micro-Level Corridor Results with a more focused look at specific segments within congested corridors and mitigation recommendations for them. The 2020 corridor ranking based on the composite index is shown in Table 4-4.

²² SEMCOG, “Safety and Security,” SEMCOG, 2022, <https://semcog.org/safety#70260-traffic-safety-manual>.

Table 4-4 2020 Corridor Ranking

2020 Rank	Road Name	2020 Composite Index	2019 Composite Index	Rank Change 2020-2019
1	10 Mile Road	54%	63%	+1
2	12 Mile Road	50%	73%	-1
3	21 Mile Road	48%	60%	+2
4	Utica Road	46%	53%	+2
5	Romeo Plank Road/Cass Avenue	45%	61%	-1
6	Garfield Road	41%	50%	+4
7	13 Mile Road	40%	53%	0
8	Little Mack Avenue	39%	43%	+7
9	Dequindre Road	39%	61%	-6
10	15 Mile Road	36%	52%	-1
11	Hoover Road	35%	53%	-3
12	14 Mile Road	32%	50%	-1
13	26 Mile Road	31%	31%	+10
14	Harper Avenue	31%	35%	+5
15	23 Mile Road	29%	40%	+3
16	9 Mile Road	28%	33%	+6
17	16 Mile Road	28%	45%	-4
18	Mound Road	26%	46%	-6
19	M-97/North Avenue	26%	35%	+1
20	M-53	26%	45%	-6
21	Hayes Road	25%	42%	-5
22	Schoenherr Road	24%	41%	-5
23	Ryan Road	21%	34%	-2
24	M-3	18%	23%	+1
25	M-59	16%	25%	-1
26	Jefferson Avenue	8%	8%	0

The *Corridor Ranking Reports* provide annual operational frameworks for arterial corridors with greater than 20,000 vehicles per day. In contrast, this document, the *Countywide Corridors of Significance Study*, evaluates Macomb County’s corridors at a planning-level based on SEMCOG’s Travel Demand Forecast Model. However, for consistency, the *Corridor Ranking Reports* were referenced when identifying congestion-related causes, as well as potential mitigation measures. Ultimately, MCDR’s plan is to integrate the two frameworks into a seamless approach for prioritizing recommended investment strategies on County-owned roadway corridors.

5 CORRIDORS OF SIGNIFICANCE

When developing criteria for identifying Corridors of Significance in the context of the scope of this Study, the TIP Subcommittee considered and identified core factors, such as jurisdiction, ownership, roadway classification, funding eligibility, overall network connectivity, strategic connectivity, and countywide significance. There was also a commonsense consideration to ensure that the resulting network would be meaningful (i.e., inclusive but not including every corridor in Macomb County) and relevant (i.e., benefitting multiple communities countywide).

Initial criteria were developed and then tested for consistency and relevance. Refinements were made to meet the core factors, and a list of criteria was shared and discussed with the TIP Subcommittee for consensus and approval. Final refinements were made, and once consensus on the criteria was reached, feedback was sought from municipal stakeholders in order to confirm and validate assumptions and the overall approach. See Section 5.3 Stakeholder Feedback for more information on stakeholder engagement.

5.1 Criteria

The following criteria determine if a certain corridor is a Corridor of Significance:

- It is under MCDR’s jurisdiction;
- It is federal aid-eligible;
- At least 75% of the corridor is designated as a county primary road in terms of Act 51;
- It is an arterial or collector road in terms of its NFC;
- It connects to a state trunkline;
- It has an origin and a terminus at either:
 - A state trunkline,
 - Another Corridor of Significance,
 - A County border, or
 - A significant regional public or strategic point of interest; and
- It extends through or provides strategic access to at least three municipalities within the County.

Continuity within the county system is also important. In cases where roads switch between being county primary roads and state trunklines, only those segments which are designated as county primary roads are considered. The segments themselves extend through or provide strategic access to at least three municipalities within the County.

The first key criterion for a Countywide Corridor of Significance is that it is under MCDR’s jurisdiction, since the purpose and scope of the *Countywide Corridors of Significance Study* are to establish a long-term planning framework for major investments of federal aid in MCDR-owned Corridors of Significance. Roads under the legal jurisdiction of MCDR have been established under State law, principally Act 51 of 1951, as amended.²³ Jurisdiction, as used here, is the legal responsibility to operate and maintain the right-of-way (ROW), pavement, pavement markings, signs, signals, and appurtenances and to keep the roadway safe for public travel.

The second criterion is that a Corridor of Significance is federal aid-eligible. Federal aid highways are “[d]efined in Title 23 CFR [Code of Federal Regulations] 470.101(5)...as public roads ‘other than a highway classified as a local road or rural minor collector.’”²⁴ MDOT defines federal aid-eligible roads as being “fully eligible for federal Surface Transportation Program (STP) road funds.”²⁵ Since the purpose

²³ State of Michigan, “State Trunk Line Highway System: Act 51 of the Public Acts of 1951.”

²⁴ State of Michigan, “Definitions: Federal-aid Highways, Federal-aid Systems and Federal aid-Eligible,” Michigan Department of Transportation [MDOT], 2022, <https://www.michigan.gov/mdot/programs/highway-programs/nfc/definitions>.

²⁵ State of Michigan, 2022.

of this Study is to guide future use of federal aid funding for major investments through the Macomb FAC, this criterion was also deemed essential.

The third criterion for a Corridor of Significance is that at least 75% of its centerline length is designated as a county primary road in terms of Act 51 of 1951, as amended. This legislation provides for the jurisdictional designation of roads based on certain criteria and creates road funding mechanisms like the MTF.²⁶ County primary roads are designated as such because of their countywide significance.

Fourth, a Corridor of Significance is an arterial or collector road in terms of its NFC. Interstates are a type of arterial and have the highest level of mobility of all roads in the U.S. They allow for the longest distances at uninterrupted travel speeds. Other Arterials are freeways, highways, and limited-access roadways allowing for speeds of 50-70 miles per hour. Collectors are major or minor connecting roads that permit speeds of 35-55 miles per hour and access to more land than do higher road classifications.²⁷ Arterial roads are a higher priority in terms of their significance than are collector roads. The NFC of roadways in Macomb County is shown in Figure A-1 in Appendix A.

The fifth key criterion is that a Corridor of Significance connects directly to a state trunkline. A state trunkline is an Act 51 classification of road systems that are State Transportation Commission-designated.²⁸

Sixth, a Corridor of Significance has an origin and a terminus at either a state trunkline, another Corridor of Significance, a County border, or a significant regional public or strategic point of interest. Macomb County borders Wayne, Oakland, Lapeer, and St. Clair counties. A point of interest must be regional in scale, strategic in nature, or otherwise significant. For example, Selfridge Air National Guard Base and Lake St. Clair Metropark are considered significant regional public or strategic points of interest in Macomb County; 21 Mile and 16 Mile roads, respectively, provide primary access to them.

The last criterion is that a Corridor of Significance extends through or provides strategic access to at least three Macomb County municipalities. To be considered a countywide Corridor of Significance, multiple communities must be interconnected. A minimum of three and as many as eight communities are joined together by such corridors.

5.2 Outcome of Analysis

Figure 5-1 reflects the results of applying the criteria to the roads in Macomb County. Key Connectors link Corridors of Significance within the network and to significant regional public or strategic points of interest.

²⁶ State of Michigan, “State Trunk Line Highway System: Act 51 of the Public Acts of 1951.”

²⁷ USDOT, “Road Function Classifications,” FHWA, November 2000, https://safety.fhwa.dot.gov/speedmgt/data_facts/docs/rd_func_class_1_42.pdf.

²⁸ State of Michigan, “State Trunk Line Highway System: Act 51 of the Public Acts of 1951.”

Figure 5-1 Macomb County Corridors of Significance

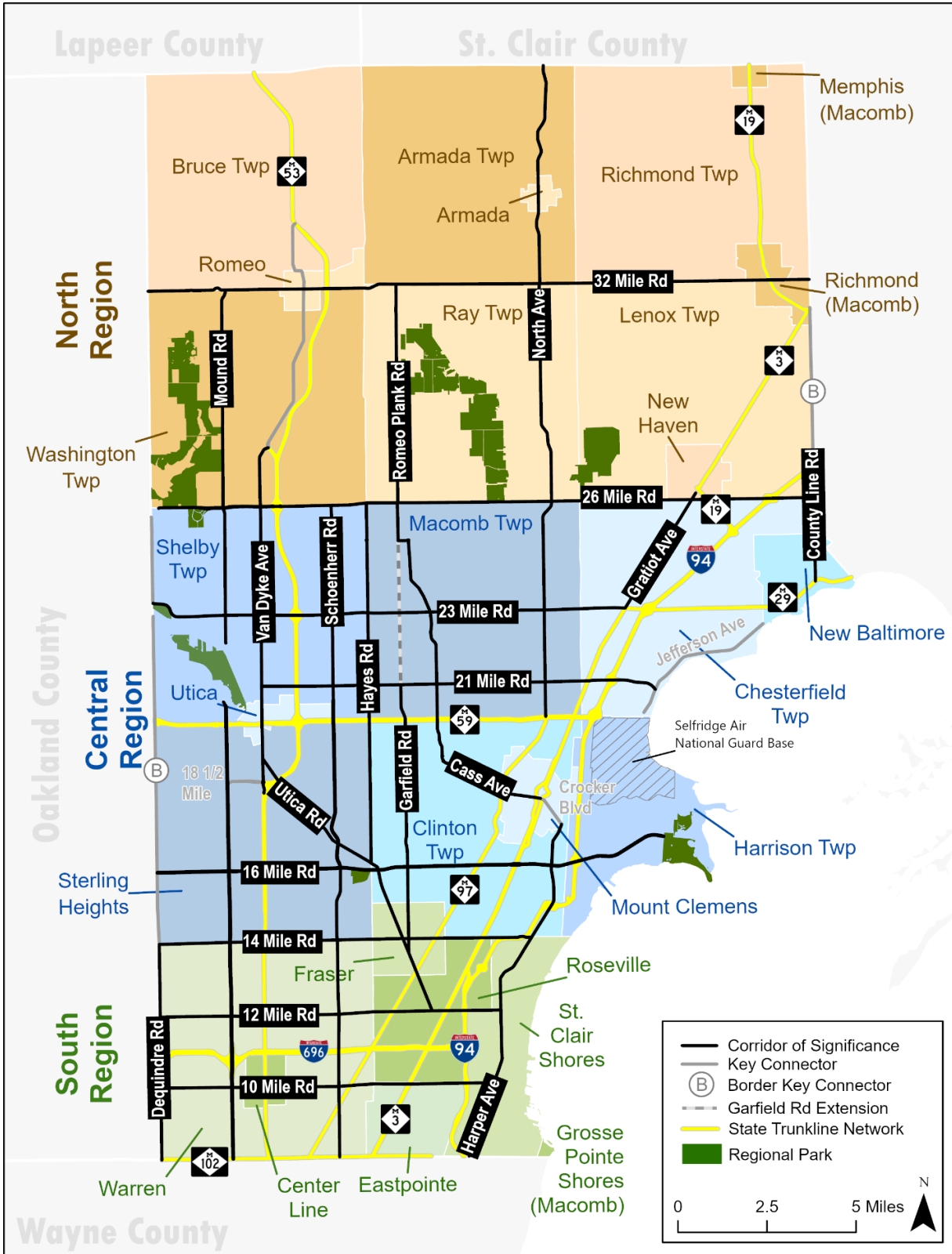


Table 5-1 lists the Corridors of Significance (they are not ranked). Average PASER ratings are indicated for each corridor in the table and illustrated in Figure A-3 in Appendix A. The Corridors of Significance and state trunklines that are and are not on the NHS system are shown in Figure B-1 in Appendix B. There are 105.5 miles (43.4%) of Corridors of Significance on the NHS system and 137.4 miles (56.6%) that are not. The total mileage of the Corridors of Significance is 242.9 miles. Of the 242.9 miles of Corridors of Significance, 104.1 miles (42.9%) are Other Principal Arterials, 117.9 miles (48.6%) are Minor Arterials, and 20.9 miles (8.6%) are Major Collectors. The lane capacity of the Corridors of Significance is illustrated in Figure D-3 in Appendix D.

Table 5-1 Macomb County Corridors of Significance

Corridor Name	Origin	Terminus	Average PASER Rating
10 Mile Road	Dequindre Road	Harper Avenue	4.8
12 Mile Road	Dequindre Road	Harper Avenue	4.6
14 Mile Road	Dequindre Road	Harper Avenue	4.5
16 Mile Road	Dequindre Road	Lake St. Clair Metropark	5.4
21 Mile Road	Van Dyke Avenue	Jefferson Avenue	5.5
23 Mile Road	Dequindre Road	Gratiot Avenue	5.9
26 Mile Road	Dequindre Road	County Line Road	4.5
32 Mile Road	Dequindre Road	County Line Road	4.9
County Line Road	M-29	27 Mile Road	3.6
Dequindre Road	M-102 (8 Mile Road, Wayne County border)	14 Mile Road	2.6
Garfield Road/Extension	Utica Road	21 Mile Road	6.6
Gratiot Avenue	23 Mile Road	M-19	5.5
Harper Avenue	M-102 (Wayne County border)	Crocker Boulevard	4.2
Hayes Road	Utica Road	26 Mile Road	5.0
Mound Road	M-102 (Wayne County border)	32 Mile Road	5.3
North Avenue	M-59	32 Mile Road	4.3
Romeo Plank Road/ Cass Avenue	M-3	32 Mile Road	4.5
Schoenherr Road	M-102 (Wayne County border)	26 Mile Road	5.7
Utica Road	12 Mile Road	Van Dyke Avenue	6.3
Van Dyke Avenue	M-53	M-53	6.6

The important role of the vast majority of these corridors within their respective municipalities is supported by the communities' master plans. Shelby, Washington, and Macomb Townships are among the fastest growing municipalities in Macomb County. For example, priority corridors in Shelby Township include 23 Mile, Mound, Schoenherr, and Hayes roads and Van Dyke Avenue. In Washington Township, 26 Mile Road, Mound Road, and Van Dyke Avenue are considered major corridors. In Macomb Township, 23 Mile Road is a key corridor. 23 Mile Road, for example, connects seven

communities and is a significant connection to M-53 and I-94. After 2023, when widening of one more mile will be complete, 23 Mile Road will constitute a five-lane roadway.

5.3 Stakeholder Feedback

Stakeholder feedback on the Corridors of Significance was collected primarily in August 2022 during three stakeholder engagement meetings and through an online survey, which was open between August 4 and September 2, 2022. The intended audience for both the meetings and the survey was the management of each Macomb County jurisdiction. Information on the meetings is shown in Table 5-2. Representatives from 17 of the County’s 27 local units of government attended the meetings.

Table 5-2 Stakeholder Engagement Meetings

Region	Attending Communities	Meeting Date	Meeting Location
North	Washington Township Ray Township Lenox Township Village of Romeo City of Richmond Armada Township	August 23, 2022	Washington Township Municipal Building 57900 Van Dyke Avenue Washington, MI 48094
Central	City of Sterling Heights Clinton Township City of Mount Clemens Shelby Township Macomb Township Chesterfield Township City of New Baltimore	August 29, 2022	MCDR 117 South Groesbeck Highway Mount Clemens, MI 48043
South	City of Warren City of Center Line City of St. Clair Shores City of Fraser	August 31, 2022	Warren City Hall 1 City Square Warren, MI 48093

5.3.1 Stakeholder Engagement Survey

The Countywide Stakeholder Engagement Survey was created using the ArcGIS Survey123 platform and is included in Appendix E.²⁹ As indicated in Appendix F, which contains additional stakeholder meeting details, the survey link was attached to the meeting invitations, which were first emailed to representatives of the jurisdictions in each region (including mayors, city managers, village presidents, township supervisors, and representing engineering firms) on August 4, 2022. The survey requested that respondents answer the questions on behalf of the community represented.

Of the 16 surveys completed by respondents, seven are from the North Region, six from the Central, and three from the South. The quality of the existing County-owned road system is rated an average of 5.3 out of ten, with answers ranging from three to eight. The quality of the existing County-owned bridges is considered better, as it is rated an average of 5.9, with answers ranging from four to eight. One comment

²⁹ Esri, “ArcGIS Survey123,” ArcGIS Survey123, <https://survey123.arcgis.com/>.

explained that roads that are dangerous and should be structurally improved instead often receive preservation treatments.

In response to a question asking respondents to rate the conditions of the County-owned roads in their own communities compared to the overall conditions of the County-owned road system, 56.3% of respondents rate the conditions in their own communities as worse. Comments reference both the North and South Regions' roads as being worse. While no respondents rate the conditions of County-owned bridges in their own communities as worse than the overall conditions of County-owned bridges, 81.3% rate them as about the same.

The importance of interagency coordination in the successful planning and delivery of a major road or bridge project is considered an average of 4.4 out of five, with answers ranging from three to five. One comment on that question attested to a current lack of coordination.

The biggest concern (respondents could select multiple concerns) about the current state of countywide Corridors of Significance, garnering 68.8% of responses, is considered insufficient infrastructure for bicyclists, pedestrians, and transit. Also of note are declining road and bridge conditions and safety issues, both of which received 56.3% of responses. Comments on that question described a current lack of safe multimodal options and the overwhelming nature of commuter congestion and traffic.

Respondents were asked to rate five possible road investment priorities on the County-owned system. This produced the following results:

1. Preservation of the existing road and bridge infrastructure (an average score of 4.1 out of five),
2. Routine maintenance (an average of 3.4),
2. Safety and mobility (an average of 3.4),
3. Capacity improvement/expansion (an average of 3.1), and
4. Other (an average of one).

The top priority, with 37.5% of responses, is preservation of the existing road and bridge infrastructure. "Other" was selected as the last priority by all respondents. One comment on that question attested to decades-old infrastructure not offering multimodal options.

Respondents were also asked to rate the importance out of five of countywide Corridors of Significance being useable by different modes of transportation. This produced the following results:

1. Automobile drivers (an average score of 4.4, with answers ranging from three to five);
2. Truck drivers (an average of 4.1, with answers ranging from two to five);
3. Pedestrians (an average of 3.6); and
4. Bicyclists (an average of 3.1).

Multimodal considerations are very important in regard to countywide Corridors of Significance to 43.8% of respondents, while 31.3% consider them to be somewhat important.

Specific comments were provided by respondents about 10 Mile, 14 Mile, 16 Mile, 21 Mile, 26 Mile, and 32 Mile roads, County Line Road, Garfield Road, Hayes Road, North Avenue, and Romeo Plank Road. Portions of 14 Mile and 16 Mile roads were indicated as being in poor condition, though it was recognized that improvements had been made to 16 Mile Road. 21 Mile Road was recommended for widening, and Hayes Road, for reconstruction. 26 Mile and County Line roads were cited for their traffic conditions. 32 Mile Road and North Avenue were recommended to receive four- to eight-foot-wide shoulders to enhance nonmotorized connectivity. While County Line Road south of 26 Mile Road was described as being in poor condition, a County-owned bridge on the road was considered to be in good condition. North Avenue and Romeo Plank Road were identified as becoming congested during the morning commute time.

5.3.2 North Region Stakeholder Meeting

The first stakeholder engagement meeting took place in the North Region on Tuesday, August 23, 2022. It was held at the Washington Township Municipal Building. The MCDR and HNTB project team presented an overview of the *Countywide Corridors of Significance Study*; FAC Summer Meeting; TIP Update; survey feedback obtained to that point; traffic, safety, and operations; FAC CFP; and importance of coordinating local planning efforts. The meeting featured a segment for stakeholder and public comment, and attendees were encouraged to complete the survey if they had not already done so. While comments were provided by attendees on 23 Mile, 26 Mile, and 32 Mile roads, Mound Road, North Avenue, Romeo Plank Road, Schoenherr Road, and Van Dyke Avenue, much of the discussion following the presentation focused on concerns about speed limits and traffic signals.

A total of 14 people, including staff from Washington Township, Ray Township, Lenox Township, the Village of Romeo, the City of Richmond, and Armada Township, attended the meeting, as shown in Figure 5-2. Additional meeting details are provided in Appendix F.

Figure 5-2 Image from North Region Stakeholder Meeting



5.3.3 Central Region Stakeholder Meeting

The second stakeholder meeting took place in the Central Region on Monday, August 29, 2022. It was held at MCDR's main offices. The MCDR and HNTB project team presented similar content as at the North Region meeting. The meeting featured a segment for stakeholder and public comment, and attendees were encouraged to complete the survey. Comments were provided by attendees on Harper Avenue and Hayes Road, and much of the discussion following the presentation focused on the Corridors of Significance map and table and clarifications about Phase II of the TIP Update.

A total of ten people, including staff from the City of Sterling Heights, Clinton Township, the City of Mount Clemens, Shelby Township, Macomb Township, Chesterfield Township, and the City of New Baltimore, attended the meeting, as shown in Figure 5-3. Additional meeting details are provided in Appendix F.

Figure 5-3 Image from Central Region Stakeholder Meeting



5.3.4 South Region Stakeholder Meeting

The last stakeholder engagement meeting took place in the South Region on Wednesday, August 31, 2022. It was held at Warren City Hall, and the format resembled that of the North and Central Region meetings. A total of seven people, including staff from the Cities of Warren, St. Clair Shores, Center Line, and Fraser, attended the South Region meeting, as shown in Figure 5-4. Comments were provided by attendees on 10 Mile Road and Van Dyke Avenue (jurisdiction of MDOT). The discussion following the presentation included the state of roads and land use in the South Region and the utilization of TIP funds. MCDR clarified that the pavement preservation program is typically most relevant in the Central and North Regions. As the South Region is built out, and many roads are at least 60 years old and have been rehabilitated, South Region roads are more likely to need to be reconstructed. This is in contrast to

the Central Region, which continues to develop and has more need for widening projects. Additional meeting details are provided in Appendix F.

Figure 5-4 Image from South Region Stakeholder Meeting



5.4 Multimodal Considerations

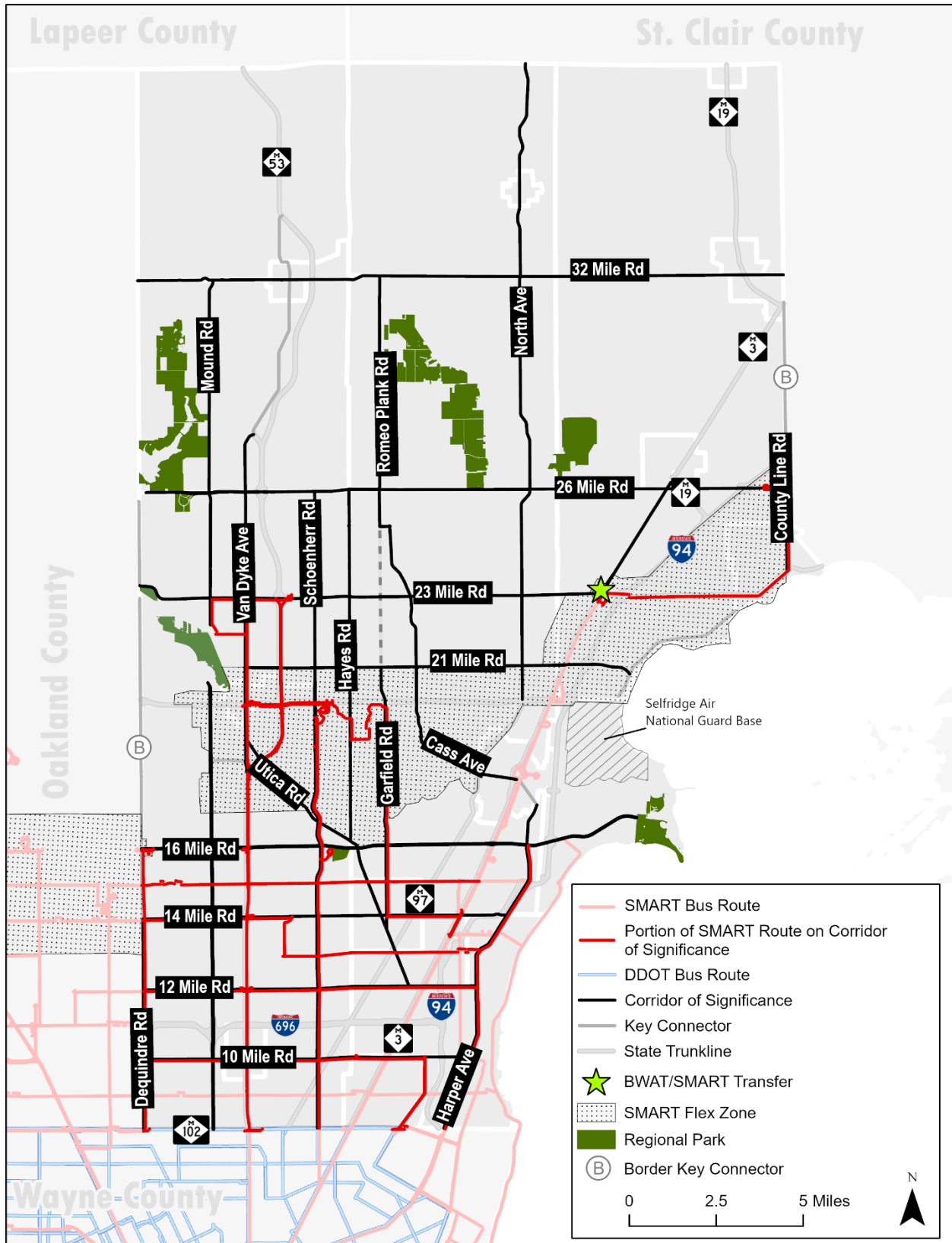
Multimodal considerations in Macomb County include public transit, bicycling, and walking. Major investments in the Corridors of Significance should consider multimodal needs, uses, and operations.

5.4.1 Public Transit

All of Macomb County is within the SMART service area. SMART operates fixed-route bus, demand-response, and microtransit service. Fixed-route bus service operates on some of the Corridors of Significance, as shown in Figure 5-5, while additional routes intersect with but do not operate along the Corridors of Significance. SMART's routes can also connect riders to other transit systems, including the Detroit Department of Transportation (DDOT) and Blue Water Area Transit (BWAT). DDOT transfers occur for routes that meet at 8 Mile Road.³⁰

³⁰ Suburban Mobility Authority for Regional Transportation [SMART], Ride SMART, 2022, <https://www.smartbus.org/>.

Figure 5-5 Transit Services in Macomb County



SMART provides Americans with Disabilities Act (ADA) paratransit service to people who are unable to ride fixed-route buses due to disabilities. ADA paratransit service is a curb-to-curb service that allows eligible riders to travel to and from areas within up to three-quarters of a mile from a bus stop. SMART’s Connector provides demand-response service to people who live more than one-third of a mile from a fixed-route stop and allows riders to travel up to ten miles.³¹

SMART Flex is a microtransit service where users request rides in dedicated zones by telephone or through a smartphone application. The SMART Flex Hall Road zone includes 16 Mile, 21 Mile, 23 Mile, and 26 Mile roads, County Line Road, Garfield Road/Extension, Romeo Plank Road/Cass Avenue, and Utica Road, as shown in Figure 5-5. Additionally, the Troy-Clawson zone provides service to Dequindre Road between 13 Mile and 17 Mile roads (the latter is referred to as East Wattles in Oakland County).³²

SMART partners with Macomb County communities to provide local transit service throughout the County. Community Transit services are generally demand-response services. Some are open to the general public, while others cater to or prioritize seniors and people with disabilities. Communities have different definitions of “seniors,” ranging from adults aged 50, 55, or 60 and over.³³ Services provided include trips to medical appointments, recreational destinations, governmental facilities, and family members and friends. General service hours are weekdays from 6 a.m. – 6 p.m.; some communities offer reduced hours on Saturdays. Advance reservations are generally required.³⁴

5.4.2 Bicycling and Walking

Bicycle and pedestrian facilities exist in Macomb County, as shown in Figure 5-6. Major systems include the Metro Parkway/Freedom Trail, a paved greenway that extends over ten miles, parallelling 16 Mile Road from Schoenherr Road to the Lake St. Clair Metropark. It connects to the Clinton River Park Trail at Utica Road and the Clinton River Spillway Bike Path near I-94. Numerous at-grade, signalized street crossings provide access to the Metro Parkway/Freedom Trail.³⁵

³¹ SMART, 2022.

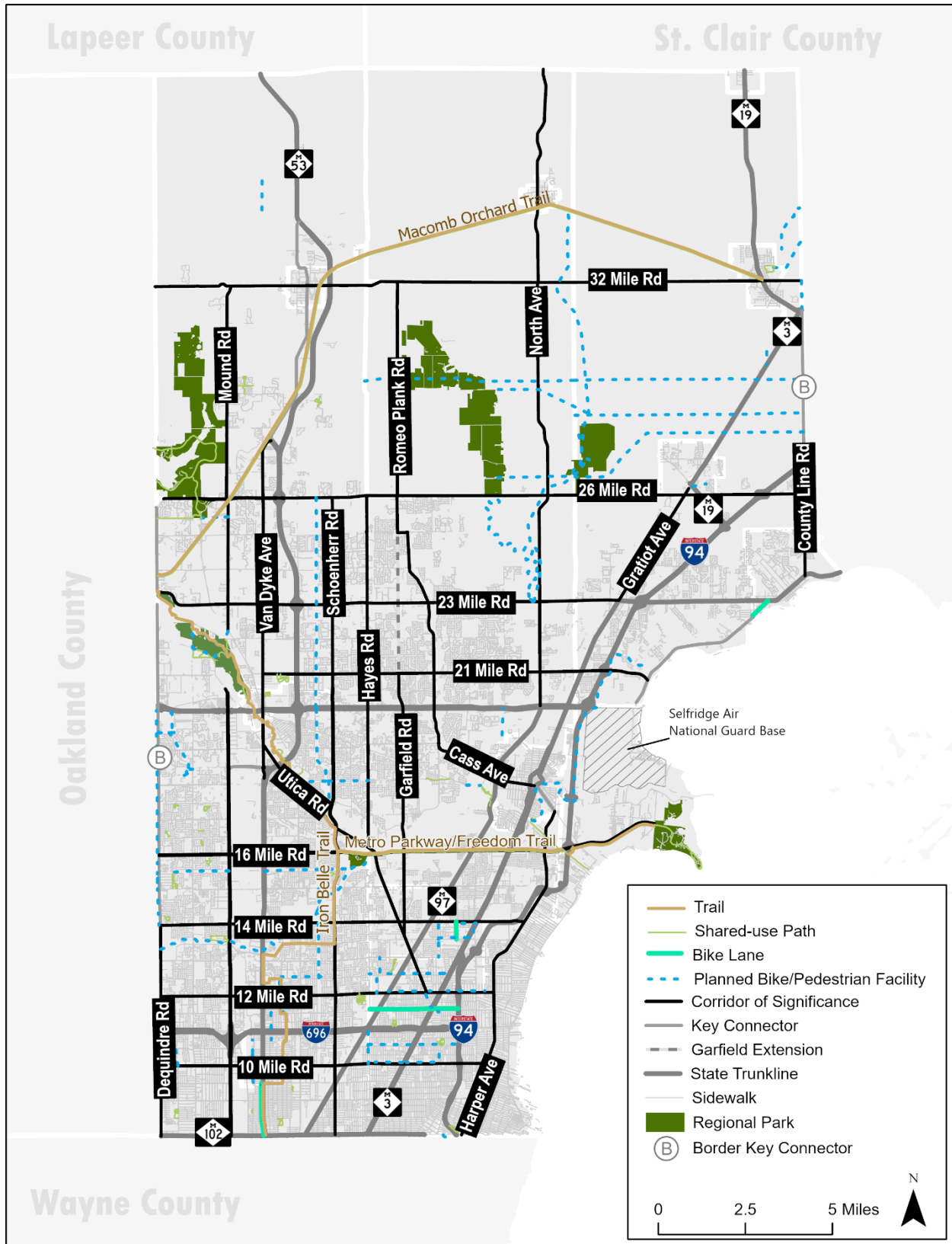
³² SMART, 2022.

³³ SMART, 2022.

³⁴ SMART, 2022.

³⁵ Rails-to-Trails Conservancy, “Metro Parkway Trail, Michigan,” TrailLink, <https://www.traillink.com/trail/metro-parkway-trail/>.

Figure 5-6 Bicycle and Pedestrian Facilities in Macomb County



SEMCOG undertook a comprehensive study, last updated on August 30, 2021, of the nonmotorized transportation network in Southeast Michigan. The study included an assessment of the network in terms of sidewalk availability and “Bicycling Comfort Level.”³⁶ What follows is a summary of that effort for the Macomb County nonmotorized network as it relates to the Corridors of Significance.

- The paved Macomb Orchard Trail is a ten-foot-wide shared-use bike path that extends for more than 23 miles, beginning at Dequindre Road, crossing 26 Mile and 32 Mile roads, and ending in the City of Richmond.
- The existing multimodal network includes eight- and ten-foot-wide Tier 1 shared-use paths along portions of 16 Mile, County Line, Dequindre, Romeo Plank, Schoenherr, and Utica roads, all of which are Corridors of Significance in whole or in part. Bicycle and pedestrian infrastructure is planned along portions of 10 Mile, 12 Mile, 14 Mile, 16 Mile, 21 Mile, 23 Mile, 26 Mile, and 32 Mile, Hayes, Romeo Plank, and Utica roads. Bike lanes, however, are not present on the Corridors of Significance, as MCDR’s policy and preference are for nonmotorized travel to occur on independent alignments to enhance both safety and mobility.
- Additional pedestrian infrastructure in the County consists of sidewalks, crosswalks with signalized crossings, and curb ramps. The availability and condition of these amenities vary both between and along the Corridors of Significance. For example, at 10 Mile Road/Schoenherr Road in the South Region, sidewalks are 5-6.6 feet in width, separated from the roadway by a landscape strip. There are marked crosswalks at the intersection, signalized crossings, and curb ramps, though they do not conform to ADA accessibility standards. On other portions of 10 Mile Road, crosswalks are unmarked.
- Moving north, at 21 Mile Road/Schoenherr Road in the Central Region, the sidewalk network is incomplete, with large gaps along Schoenherr Road. Where existent, the sidewalk is separated from the roadway by a landscape strip and varies from 5.8-7.9 feet in width. There are marked crosswalks, signalized crossings, and curb ramps, though they also do not conform to ADA accessibility standards. Portions of 21 Mile Road have unmarked crosswalks as well. Some intersections, including 21 Mile Road/Van Dyke Avenue, appear to adhere to ADA accessibility standards, but further assessment would be required to determine accessibility on the Corridors of Significance.
- At 32 Mile Road/Romeo Plank Road in the North Region, there is little to no pedestrian network.³⁷

Thus, Macomb County’s sidewalk network changes moving south to north from being quite dense to exhibiting gaps to being mostly nonexistent. While bicycle and pedestrian infrastructure is planned throughout the County, particularly on the Corridors of Significance, the Macomb FAC should continue

³⁶ SEMCOG, “Bicycle and Pedestrian Mobility Network,” SEMCOG, August 30, 2021, <https://maps.semco.org/bikepednetwork/>.

³⁷ SEMCOG, August 30, 2021.

to consider multimodal infrastructure needs when prioritizing investments along the Corridors of Significance.³⁸

5.5 System Investment Prioritization

With costs of major road reconstruction in excess of \$1.5 million per lane mile in urbanized areas, upwards of \$1 billion would be needed to rebuild all of the roads on the federal aid system in Macomb County that are currently in poor condition. Assuming MCDR is able to budget approximately \$50 million per year for its roadway CIP, even if 100% of the budget were to be spent on reconstruction fixes, which would be neither prudent nor cost-effective, it would take 20 years to rebuild the federal aid system alone, without addressing any local road needs. Clearly, a process for prioritizing major investments (longer-term preservation and capacity improvements) on the MCDR federal aid system is essential. The *Countywide Corridors of Significance Study* can be used as a framework for doing so. Following is a discussion of some options for the Macomb FAC to consider in using this framework.

5.5.1 Prioritization Approach

To guide major MCDR and federal aid investment, this Study honors the federal aid process in Southeast Michigan while simultaneously recognizing MCDR's responsibility for maintaining and operating its road network. It is MCDR's intention to be transparent and inclusive in its approach and, thus, MCDR endeavors to maintain an ongoing process of stakeholder engagement. MCDR's core process has been a continuing effort to collaborate with municipal and township partners in order to identify local priorities and communicate countywide strategies and partnership opportunities. Communications with County Congressional and State elected officials will help leverage and identify opportunities to capture additional federal and State aid through grant applications and budget earmarks. Having a *Countywide Corridors of Significance Study* identifying priority corridors and networks will be valuable in justifying funding requests and help ensure that MCDR's investment decisions balance the countywide system and operational needs with those of local stakeholders and users.

5.5.2 Prioritization Factors

The following MCDR corridor prioritization factors are ordered in terms of suggested importance of investments in the federal aid network owned by MCDR:

1. Represent a priority for MCDR;
2. Are justified for such improvements by pre-National Environmental Policy Act (NEPA) studies;
3. Have the highest functional classification (e.g., freeways, principal arterials, etc.);
4. Consist of limited or controlled-access ROW;
5. Carry the most traffic and freight;
6. Include major underground utilities requiring longer-term upgrades/maintenance;
7. Are gateways to key recreational, economic development, or public safety assets;
8. Are older in age and, therefore, require more modernization;
9. Provide robust access to interstate or state freeway facilities; and
10. Meet current USDOT discretionary grant priorities for selection.

³⁸ SEMCOG, August 30, 2021.

The current federal funding authorization, the Infrastructure Investment and Jobs Act (IIJA), provides a significantly greater amount of federal aid in the form of discretionary grants. Grants for major long-term projects addressing factors such as environmental justice, sustainability, equity, promotion of vehicle electrification, etc., can be applied for and leveraged without sacrificing any federal funds coming to Macomb County through regular formula allocation.

Two Corridors of Significance meeting many of the suggested priorities are Mound and 16 Mile (Metropolitan Parkway) roads, which have countywide importance in moving people and freight and providing access to current and future economic development opportunities. The Macomb FAC has approved funding to perform early preliminary engineering (EPE) of key sections of these two corridors in order to determine their long-term needs.

Location on County or township borders constitutes an additional consideration for corridor prioritization. Such investments would have the advantages of multiple potential funding partnership opportunities and providing benefits to a broader set of users. Examples include 14 Mile and 26 Mile, Dequindre, Hayes, and County Line roads.

Safety and operational investments are currently approached in a similar manner by MCDR's Traffic and Safety Division. The Division prioritizes countermeasure treatments designed to achieve the greatest benefits at the lowest costs along selected corridors. MCDR considers the roadway network as one system, regardless of local jurisdictional boundaries. Its objective is to analyze data and perform engineering studies in order to identify defects and deficiencies regularly. Based on the data, countermeasures are determined and projects are developed to help mitigate operational and safety issues. A systematic approach is carried out when implementing projects and seeking funding. Current funding sources include MCDR, the federal Congestion Mitigation and Air Quality (CMAQ) Improvement Program, Highway Safety Improvement Program (HSIP), High-Risk Rural Road (HRRR) projects, Transportation Alternatives Program (TAP), and others.

6 OBSERVATIONS AND NEXT STEPS

The *Macomb Countywide Corridors of Significance Study* identifies a planning framework for long-term investments on MCDR-owned roads and helps guide the process for recommending federal aid TIP investments. The Study is intended to facilitate a longer-term view of MCDR's countywide preservation, operations, and congestion improvement needs and identify how best to address those needs with limited funds. The Study does not recommend specific projects to be undertaken but provides a more systematic and data-driven approach for identifying and prioritizing investments.

A major consideration is the policy difference between using federal funds for network preservation or operational improvements and using such funds to add network capacity. This difference can be expressed in terms of the environmental clearance process required to approve projects for construction. Preserving the network can often be achieved through a categorical exclusion (CE), which is normally readily available for projects which aim to renew or replace existing infrastructure. This is a fairly routine process, where the responsible agency proposes such a classification at the initiation of programming, and the metropolitan planning organization (MPO) confirms it when approving a project for inclusion in the TIP.

In contrast, adding capacity to the existing network requires a clear purpose and need. These types of projects normally require additional ROW, which typically triggers the need for an environmental assessment (EA) or an environmental impact statement (EIS). This requires a more detailed analysis and comparative evaluation of the social, environmental, and economic impacts of the project. The Macomb FAC has received feedback from FHWA and MDOT that certain capacity improvements have been pursued without a clear and compelling long-term strategy and justification. Thus, the purpose of this Study is to provide a framework for the development of such an approach.

Federal and State policies recommend pre-NEPA studies as a best practice to help align the development of projects with federal policy. For example, safety and mobility studies can identify operational improvements that could alleviate immediate conditions with shorter-term fixes of less impact. Examples of these improvements include four-to-three-lane conversions, traffic signal optimization, center left-turn lane additions, and access management strategies. These improvements should be identified in the context of network-level studies showing how parallel corridors work together to meet south-north and west-east travel demands.

Historically, to satisfy local capacity improvement needs, MCDR has pursued a project-specific strategy of directly expanding a two-lane section to five lanes in a single corridor and identifying, clearing, and mitigating the resultant impacts of such expansion. The time required to perform the planning and obtain the necessary environmental clearances for this type of project and the impacts of and rising local costs of land acquisition and relocation may suggest consideration of a more incremental countywide corridor-based strategy that would leverage limited federal aid while maximizing the use of the available ROW and examine needs at a network level.

The outputs of the SEMCOG Travel Demand Model discussed in Section 3.3 Outputs and Summary suggest the lack of a compelling need to add capacity to the overall system in Macomb County. This provides additional justification for consideration of a more incremental and strategic approach to addressing local capacity needs.

In conclusion, an assessment of the need for widening specific sections of the Corridors of Significance could begin with a pre-NEPA evaluation of available and more cost-effective and incremental operational improvements, assuming such a study would be prioritized and sponsored by MCDR.

7 REFERENCE LIST

- 21st Century Infrastructure Commission. *21st Century Infrastructure Commission Report*.
https://www.michigan.gov/-/media/Project/Websites/formergovernors/Folder10/21st_Century_Infrastructure_Commission_Final_Report_1.pdf?rev=67a4572f5a96407cb335382479ad43b9.
- Appendix B: Traffic Level of Service Calculation Methods*. https://ccag.ca.gov/wp-content/uploads/2014/07/cmp_2005_Appendix_B.pdf.
- Congress.gov. (November 15, 2021). “H.R.3684 – Infrastructure Investment and Jobs Act.” Congress.gov. <https://www.congress.gov/bill/117th-congress/house-bill/3684/text>.
- Detmer, Chris. (November 1, 2019). “Functional Classification.” VDOT. https://www.viriniadot.org/projects/fxn_class/home.asp.
- Ellens, Steve. (April 6, 2022). “Local Agency Bridge Bundle Program.” MDOT. <https://experience.arcgis.com/experience/4c3beb0ed01042a8b6df3623b987eae9>.
- Esri. “ArcGIS Survey123.” ArcGIS Survey123. <https://survey123.arcgis.com/>.
- HNTB Michigan, Inc. *Macomb County Department of Roads Transportation Asset Management Plan* (September 2020).
- L.W. Brown Consulting, LLC. *2021 Michigan County Road Investment Plan: A comprehensive 83-county overview of investment requirements to restore Michigan’s county road system* (June 2021). <https://micountyroads.org/wp-content/uploads/The-Michigan-County-Road-Investment-Plan-of-2021.pdf>.
- Rails-to-Trails Conservancy. “Metro Parkway Trail, Michigan.” TrailLink. <https://www.traillink.com/trail/metro-parkway-trail/>.
- SEMCOG. (2022). “Community Profiles: Transportation.” SEMCOG. <https://semcog.org/data-and-maps/community-profiles/communities=3999#Transportation>.
- SEMCOG. (2022). “Safety and Security.” SEMCOG. <https://semcog.org/safety#70260-traffic-safety-manual>.
- SEMCOG. *2045 Regional Transportation Plan for Southeast Michigan* (March 2019). <https://semcog.org/desktopmodules/SEMCOG.Publications/GetFile.ashx?filename=2045RegionalTransportationPlanForSoutheastMichiganMarch2019.pdf>.
- SEMCOG. (August 30, 2021). “Bicycle and Pedestrian Mobility Network.” SEMCOG. <https://maps.semcoog.org/bikepednetwork/>.
- SEMCOG. (February 2019). “Travel Forecast.” SEMCOG. <https://semcog.org/travel-forecast>.
- SEMCOG. “High-Frequency Crash Locations.” SEMCOG. <https://semcog.org/high-frequency-crash-locations>.

- SEMCOG. “Road Jurisdiction.” SEMCOG. <https://maps.semcog.org/roadjurisdiction/>.
- SMART. (2022). Ride SMART. <https://www.smartbus.org/>.
- State of Michigan. (2022). “Definitions: Federal-aid Highways, Federal-aid Systems and Federal-aid Eligible.” MDOT. <https://www.michigan.gov/mdot/programs/highway-programs/nfc/definitions>.
- State of Michigan. (November 17, 2021). “Act 51 Distribution and Reporting System: Schedule B.” MDOT. <https://www.michigan.gov/mdot/-/media/Project/Websites/MDOT/Business/Local-Government/Act-51/MTF-Reports/Annual-Reports/2021/MTF-Annual-Report-Schedule-B-FY2021.pdf?>
- State of Michigan. “State Trunk Line Highway System: Act 51 of 1951.” Michigan Legislature. [http://www.legislature.mi.gov/\(S\(nanccnzhx4eyn4y5atdh3nam\)\)/mileg.aspx?page=GetObject&objectname=mcl-Act-51-of-1951](http://www.legislature.mi.gov/(S(nanccnzhx4eyn4y5atdh3nam))/mileg.aspx?page=GetObject&objectname=mcl-Act-51-of-1951).
- State of Michigan. “TAMC Dashboards: Trend Analysis.” Michigan.gov. <https://www.mcgi.state.mi.us/mitrp/tamcDashboards/reports/pavement/trends?areaType=County&area=Macomb&jurisdictionType=County%20Road%20Commission&reportType=laneMiles>.
- TRB. *Highway Capacity Manual: Special Report 209* (1985). <https://onlinepubs.trb.org/Onlinepubs/sr/sr209/209.pdf>.
- USDOT. (November 2000). “Road Function Classifications.” FHWA. https://safety.fhwa.dot.gov/speedmgt/data_facts/docs/rd_func_class_1_42.pdf.
- Walker, Donald. *Pavement Surface Evaluation and Rating PASER Asphalt Roads Manual* (2002). <https://www.apa-mi.org/docs/Asphalt-PASERManual.pdf>.

Appendix A

System Condition Data

Figure A-1 NFC of Macomb County Roads

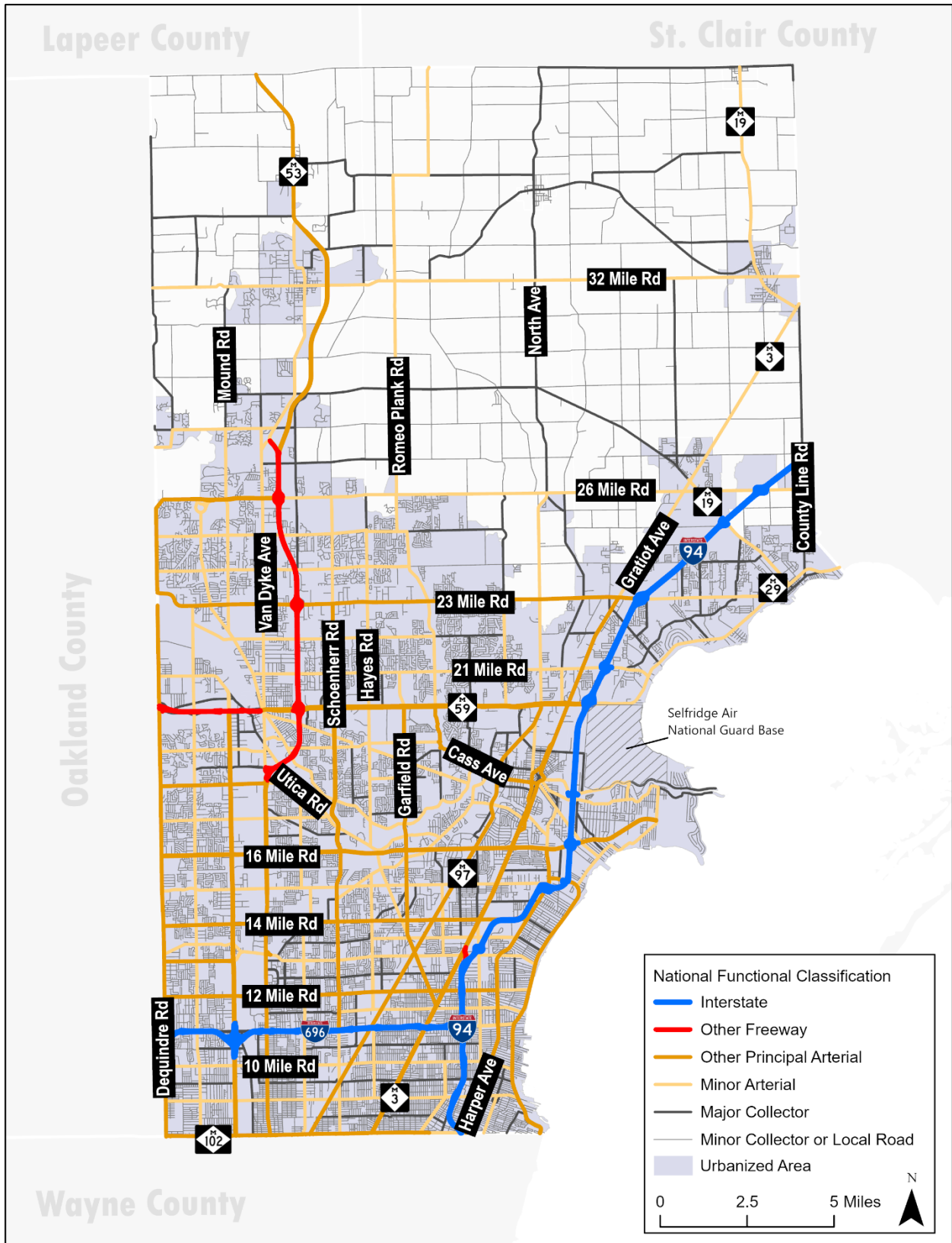


Figure A-2 PASER Conditions of Macomb County Roads

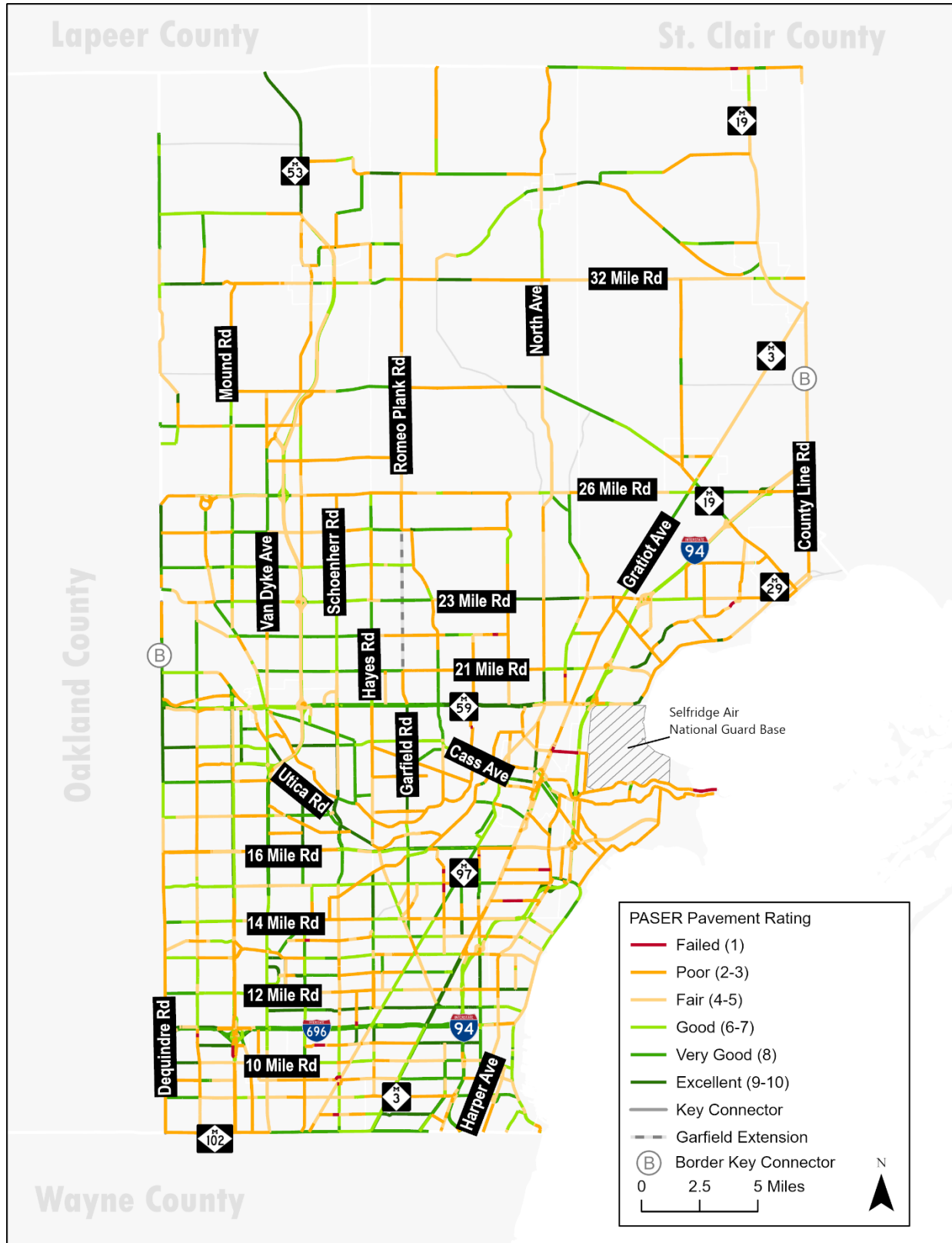


Figure A-3 PASER Conditions of Macomb County Corridors of Significance

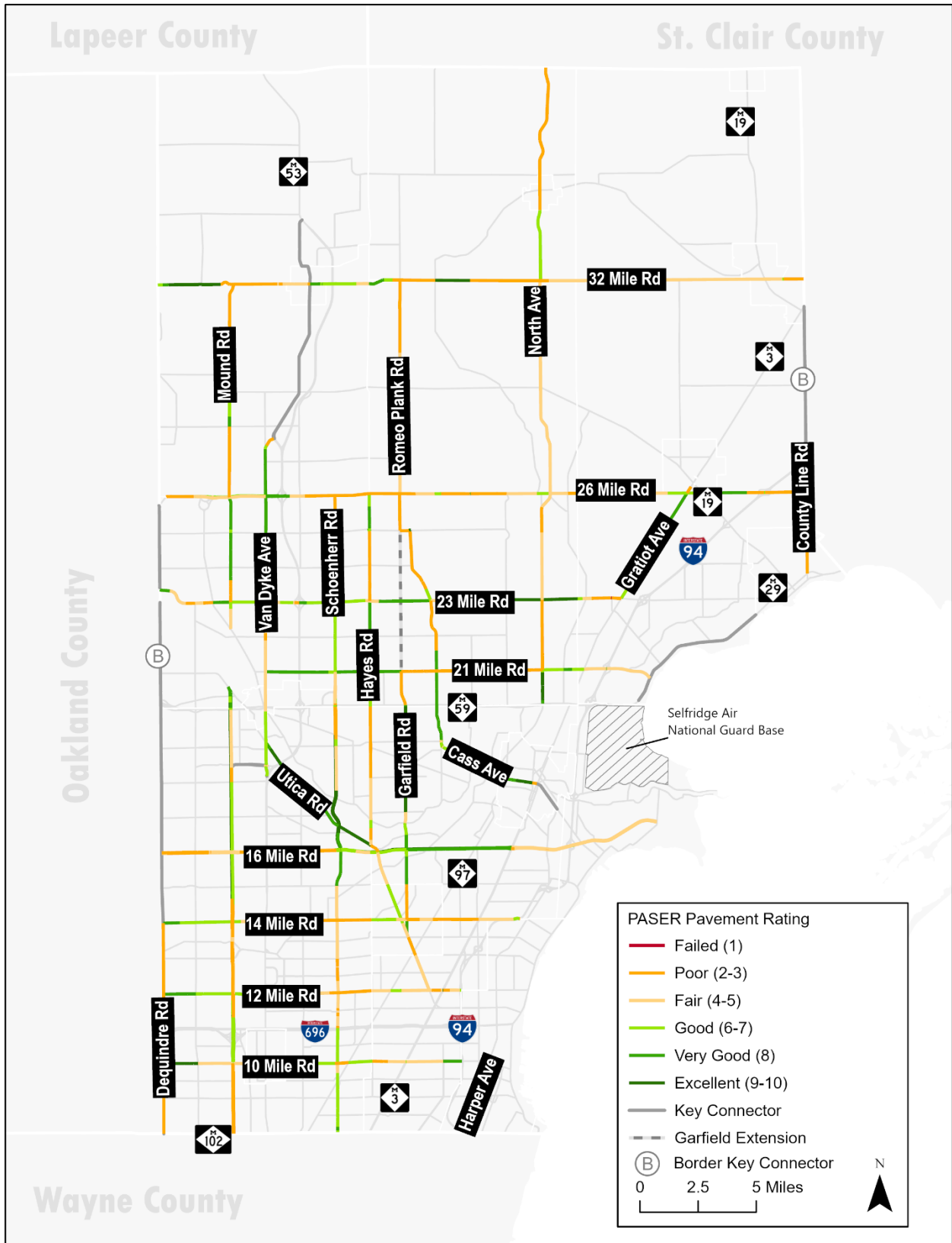
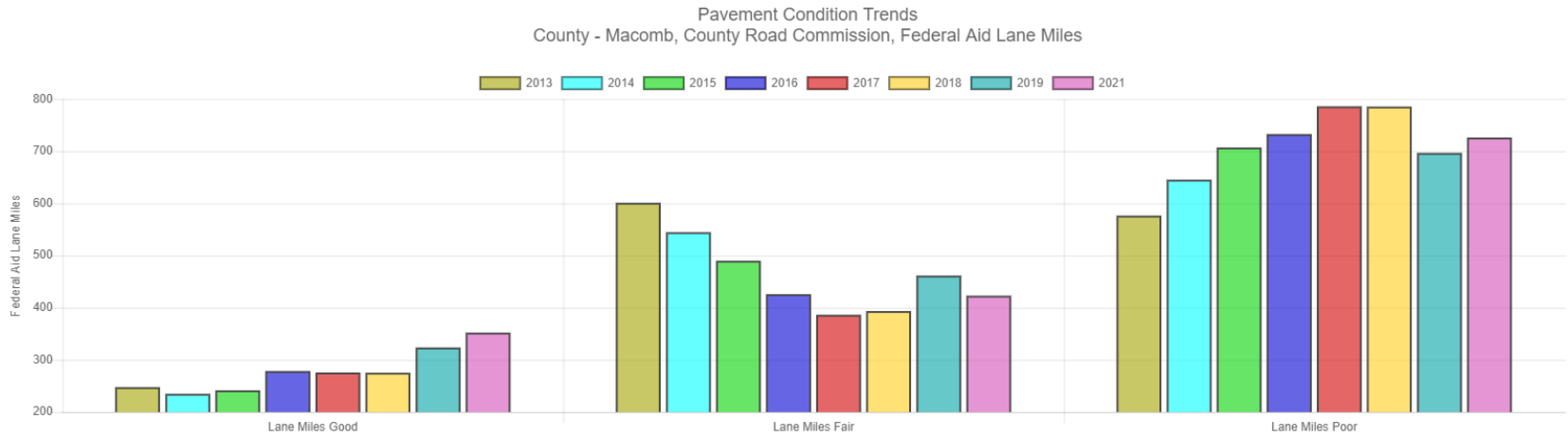
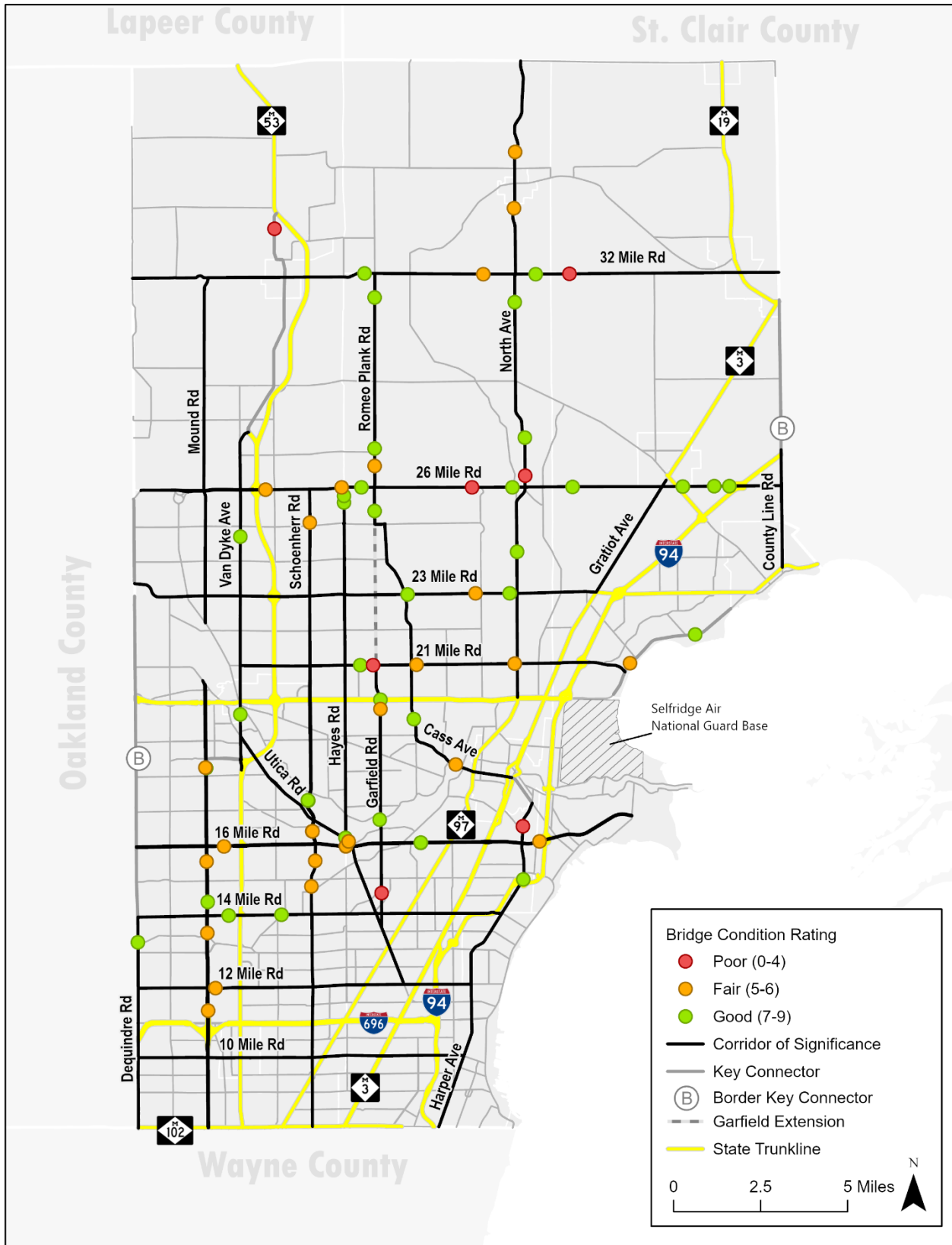


Figure A-4 MCDR Federal Aid Road Pavement Condition Trends 2013-2021



³⁹ State of Michigan, “TAMC Dashboards: Trend Analysis,” Michigan.gov, <https://www.mcgi.state.mi.us/mitrp/tamcDashboards/reports/pavement/trends?areaType=County&area=Macomb&jurisdictionType=County%20Road%20Commission&reportType=laneMiles>.

Figure A-5 MCDR-Owned Bridge Conditions



Appendix B

Network Classification Data

Figure B-1 NHS and Non-NHS Macomb County Corridors of Significance and State Trunklines

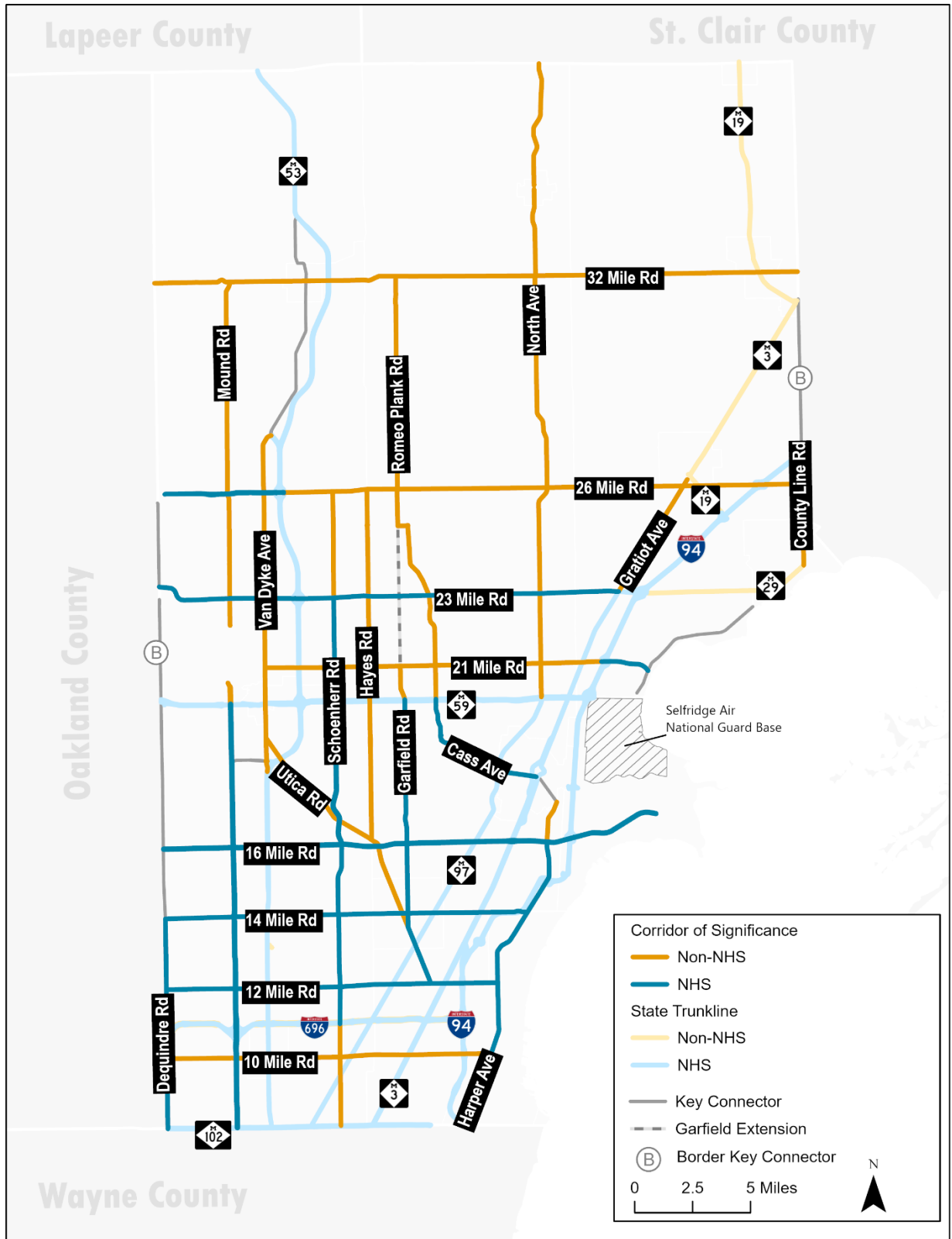
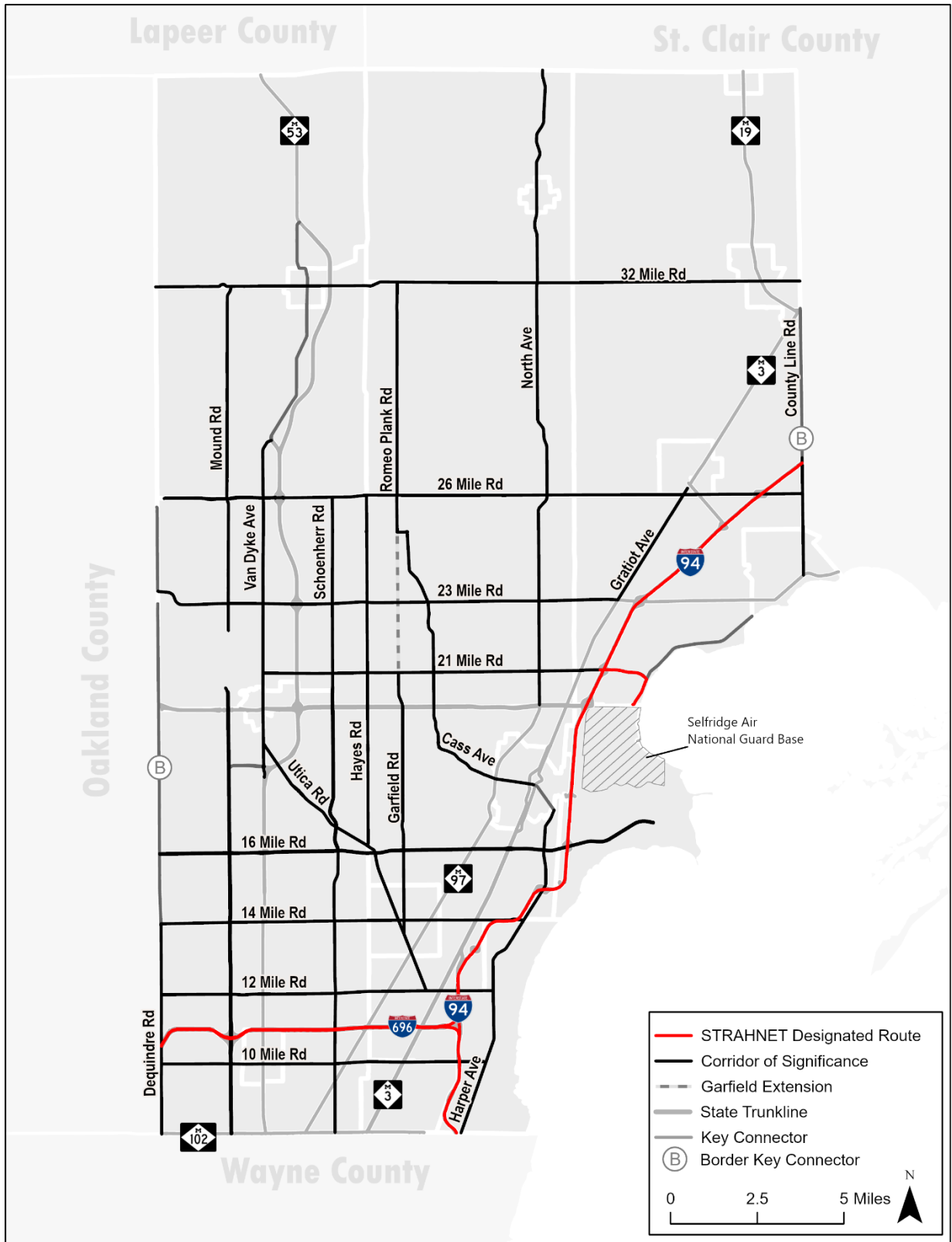


Figure B-2 Macomb County Corridors of Significance on STRAHNET Routes



Appendix C

SEMCOG Travel Demand Model Data

Figure C-1 2020 AM Macomb County Road LOS

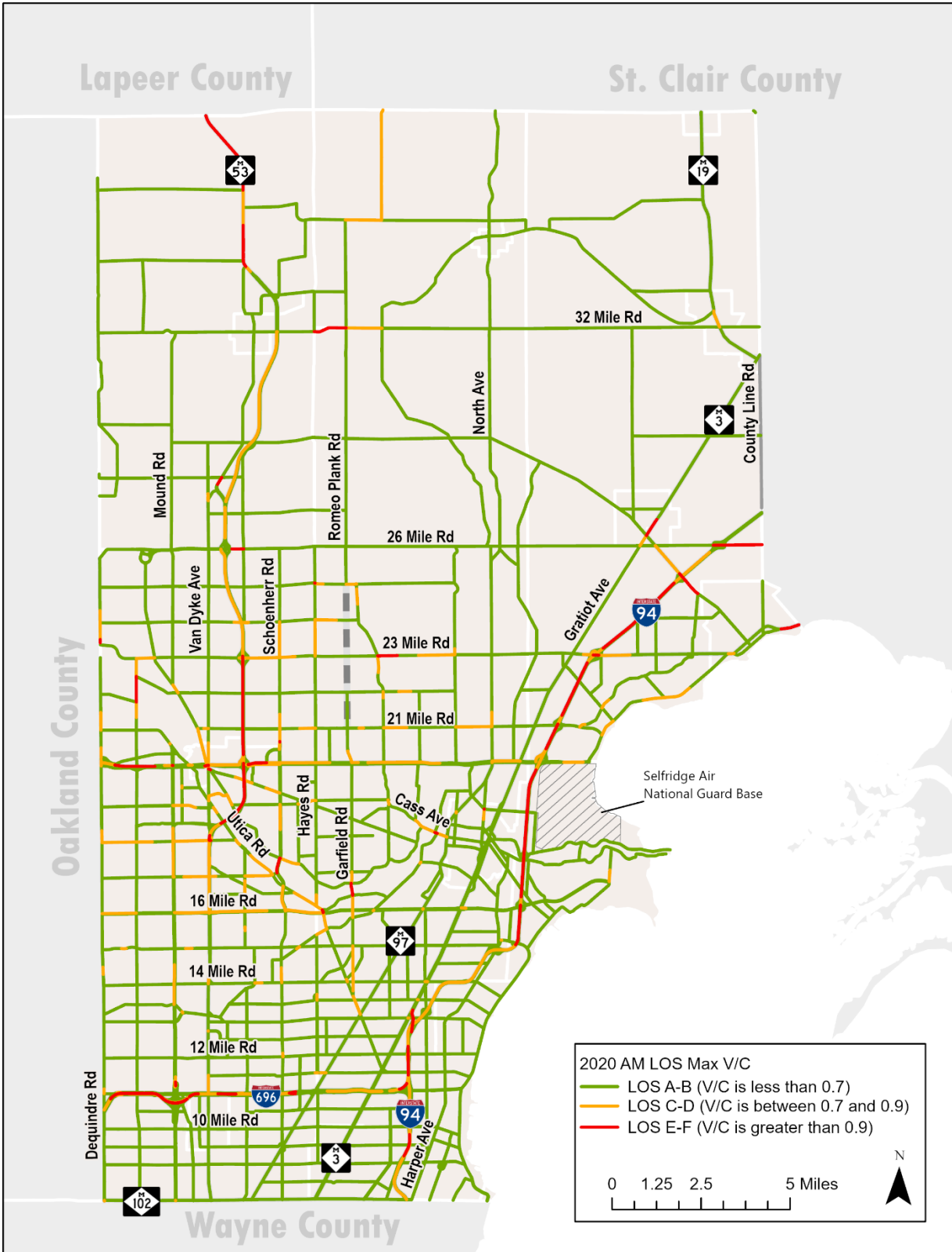


Figure C-2 2020 AM Macomb County Corridor of Significance LOS

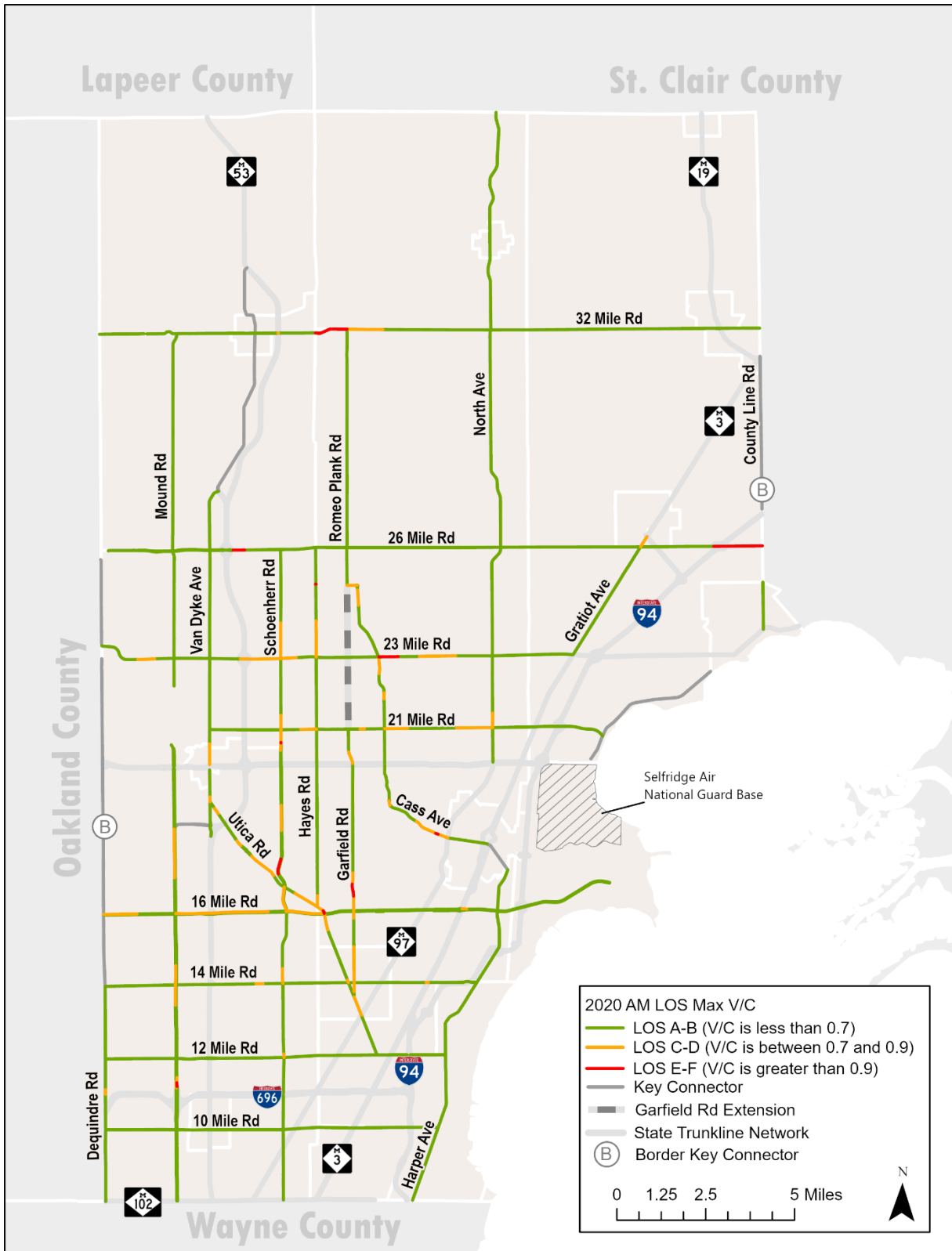


Figure C-3 2020 PM Macomb County Road LOS

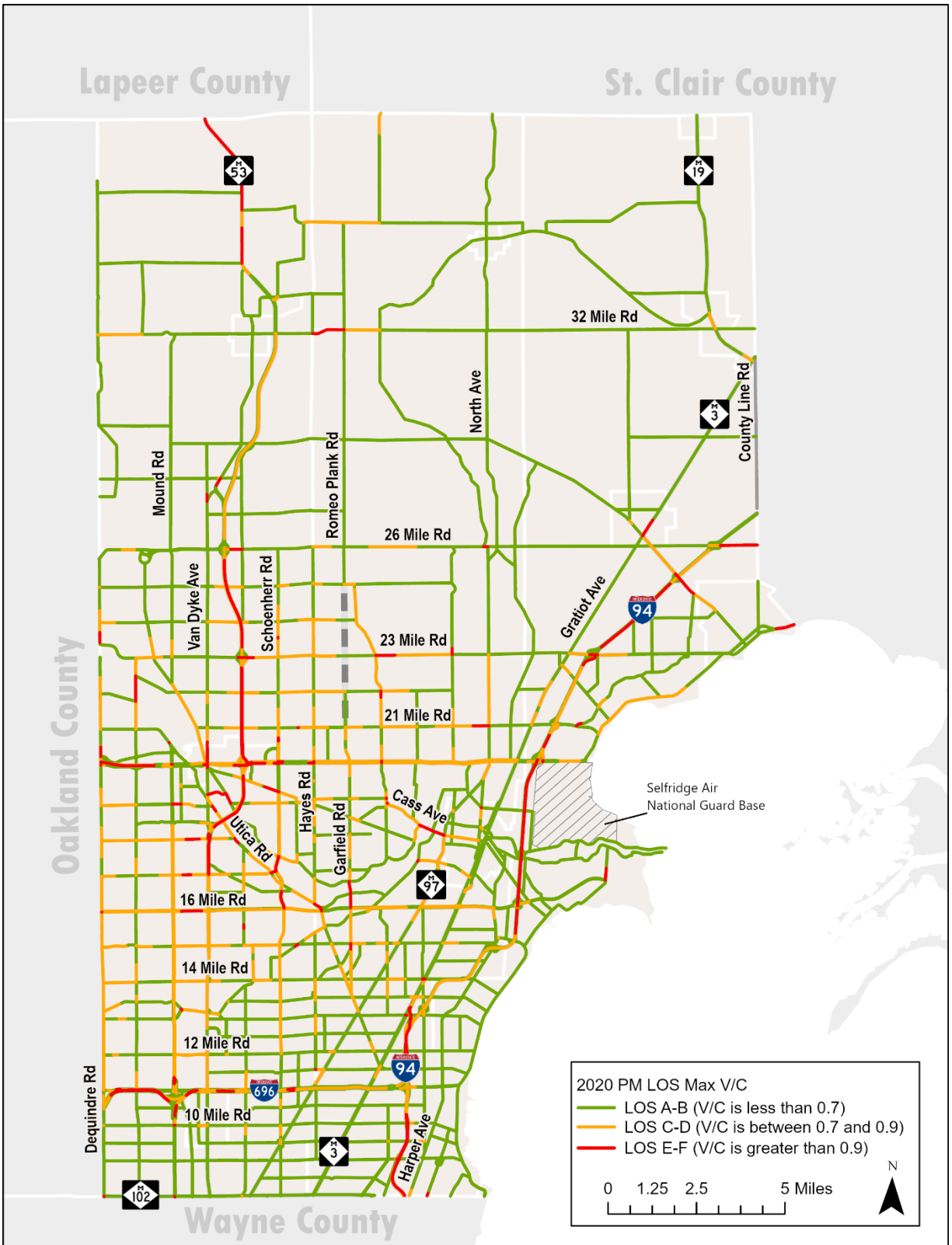


Figure C-4 2020 PM Macomb County Corridor of Significance LOS

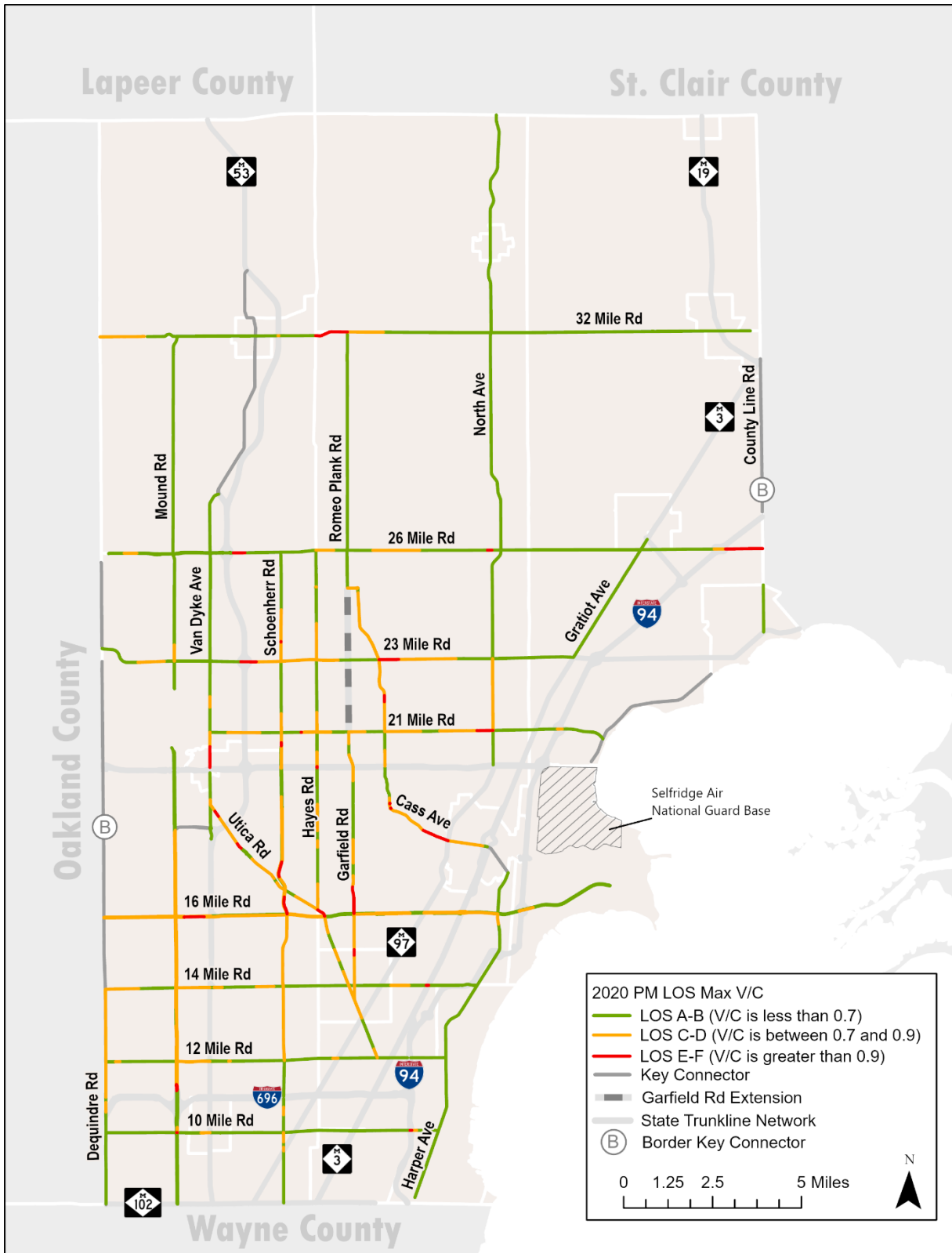


Figure C-5 2045 AM Macomb County Road LOS

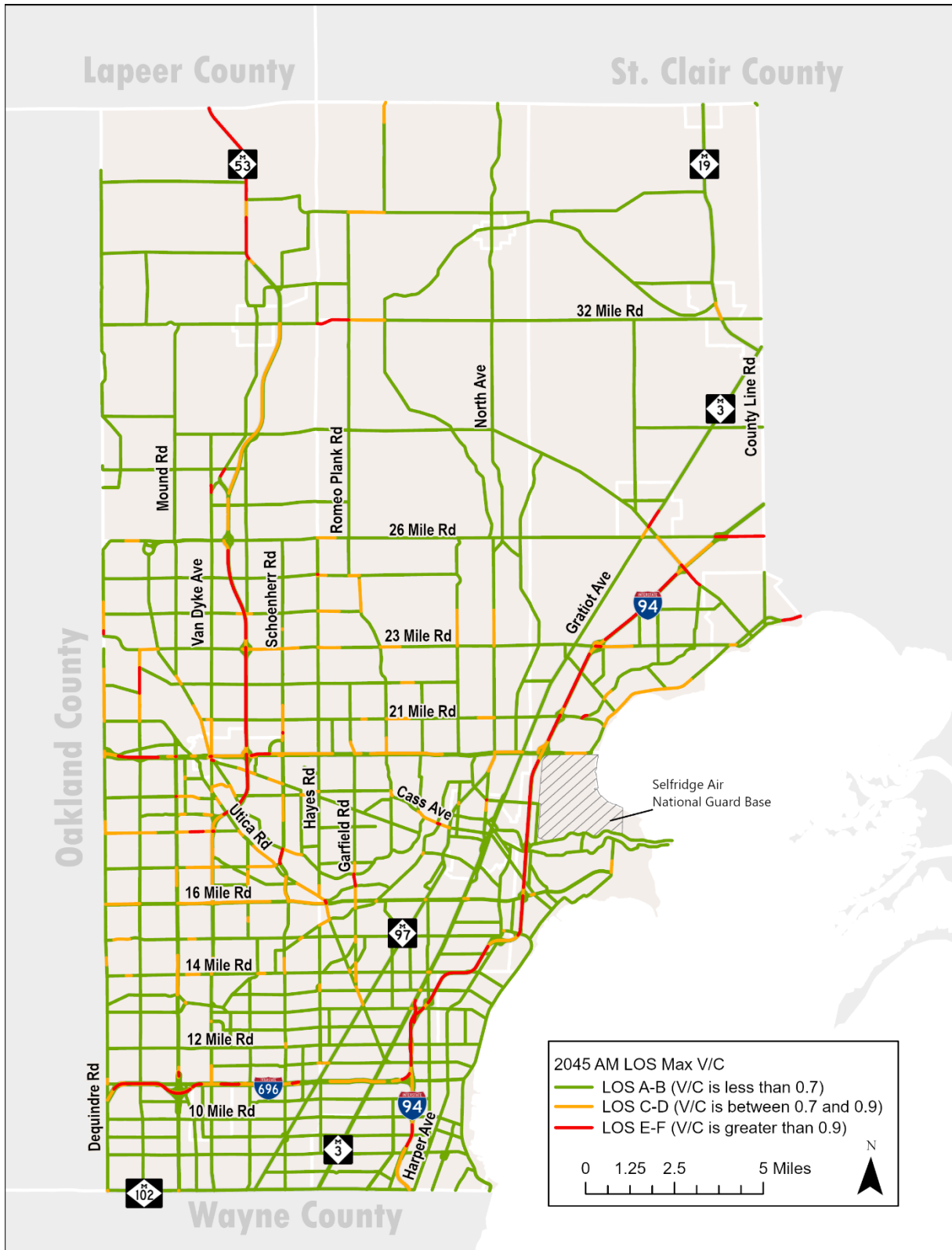


Figure C-6 2045 AM Macomb County Corridor of Significance LOS

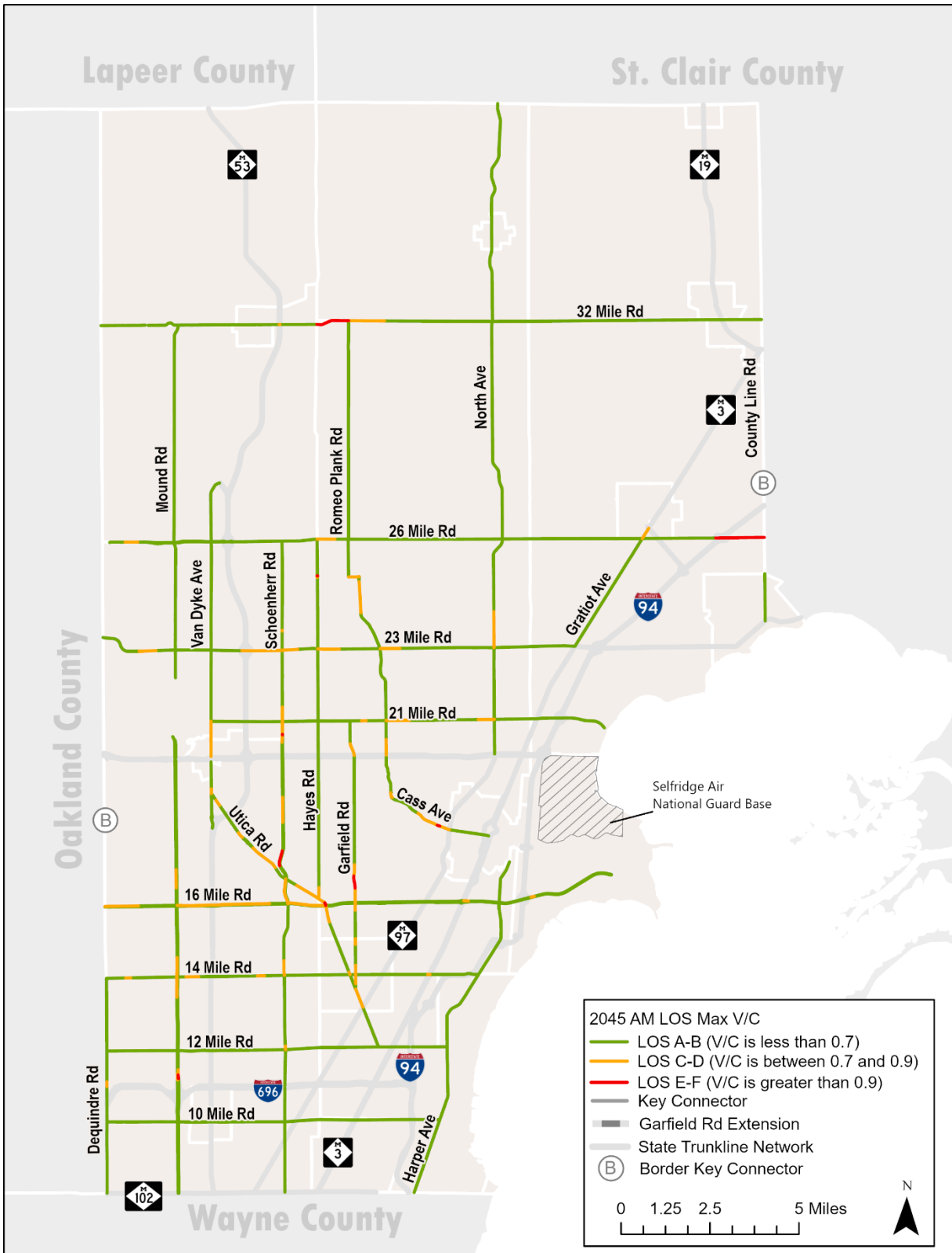


Figure C-7 2045 PM Macomb County Road LOS

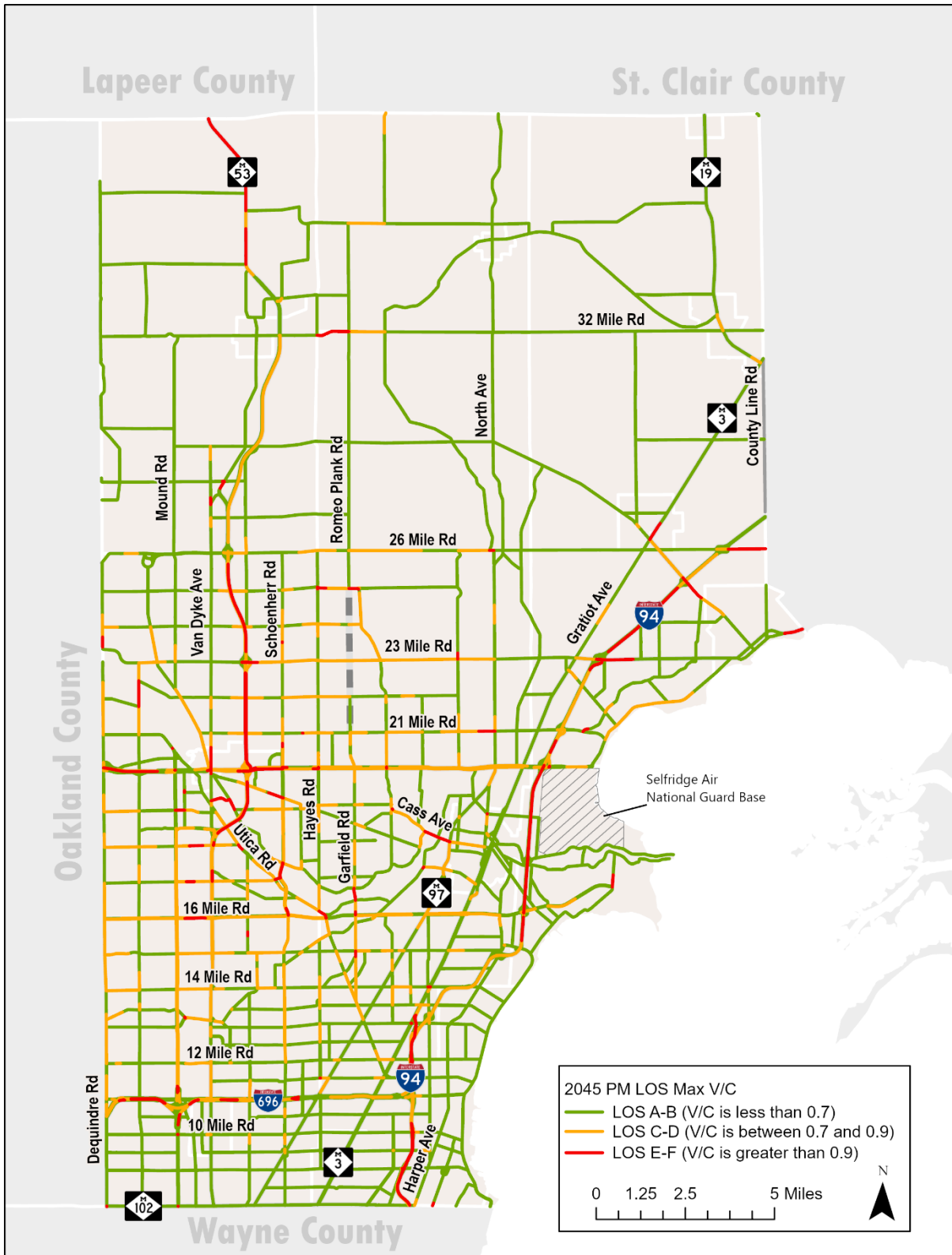


Figure C-8 2045 PM Macomb County Corridor of Significance LOS

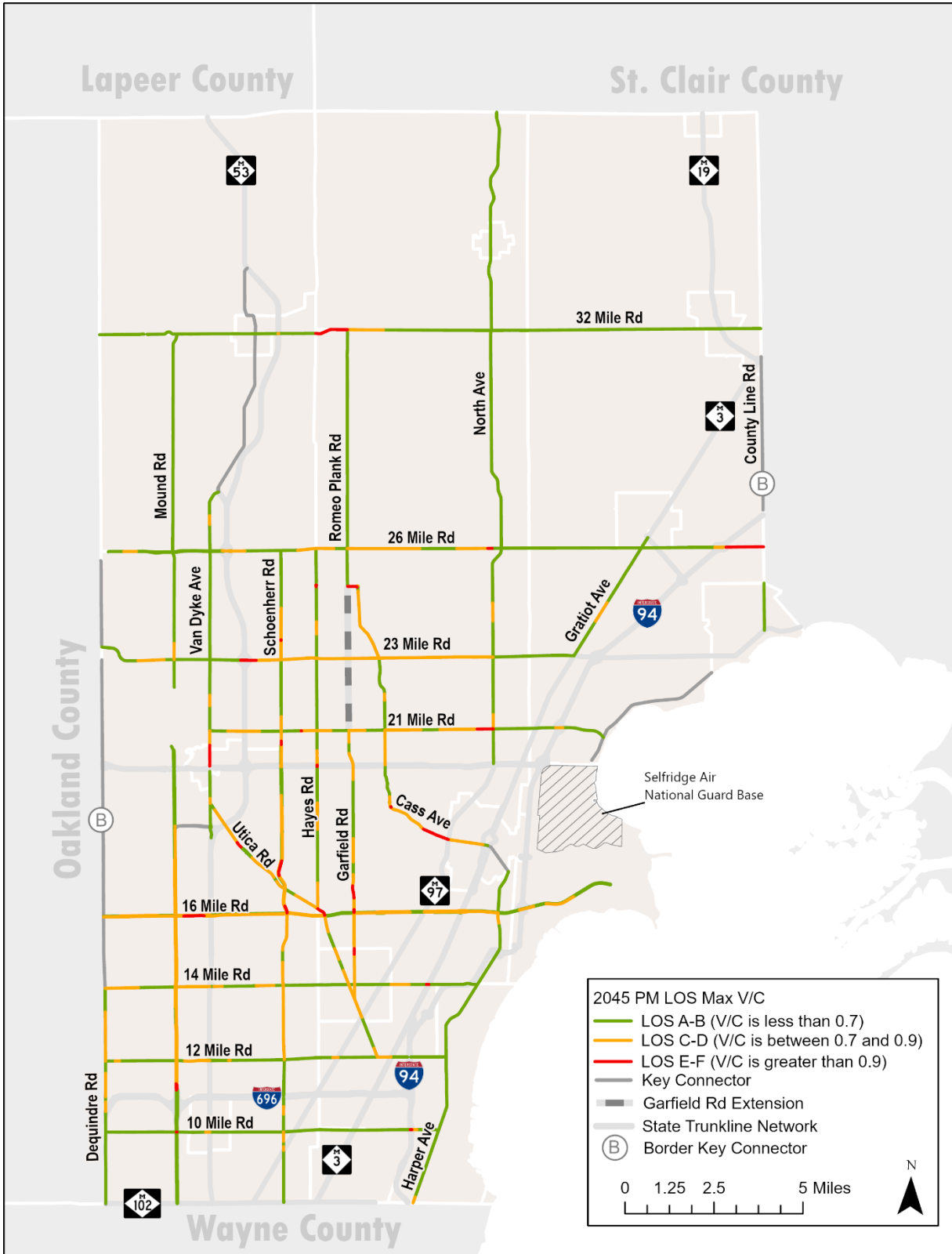


Figure C-9 Macomb County Population Change 2020-2045

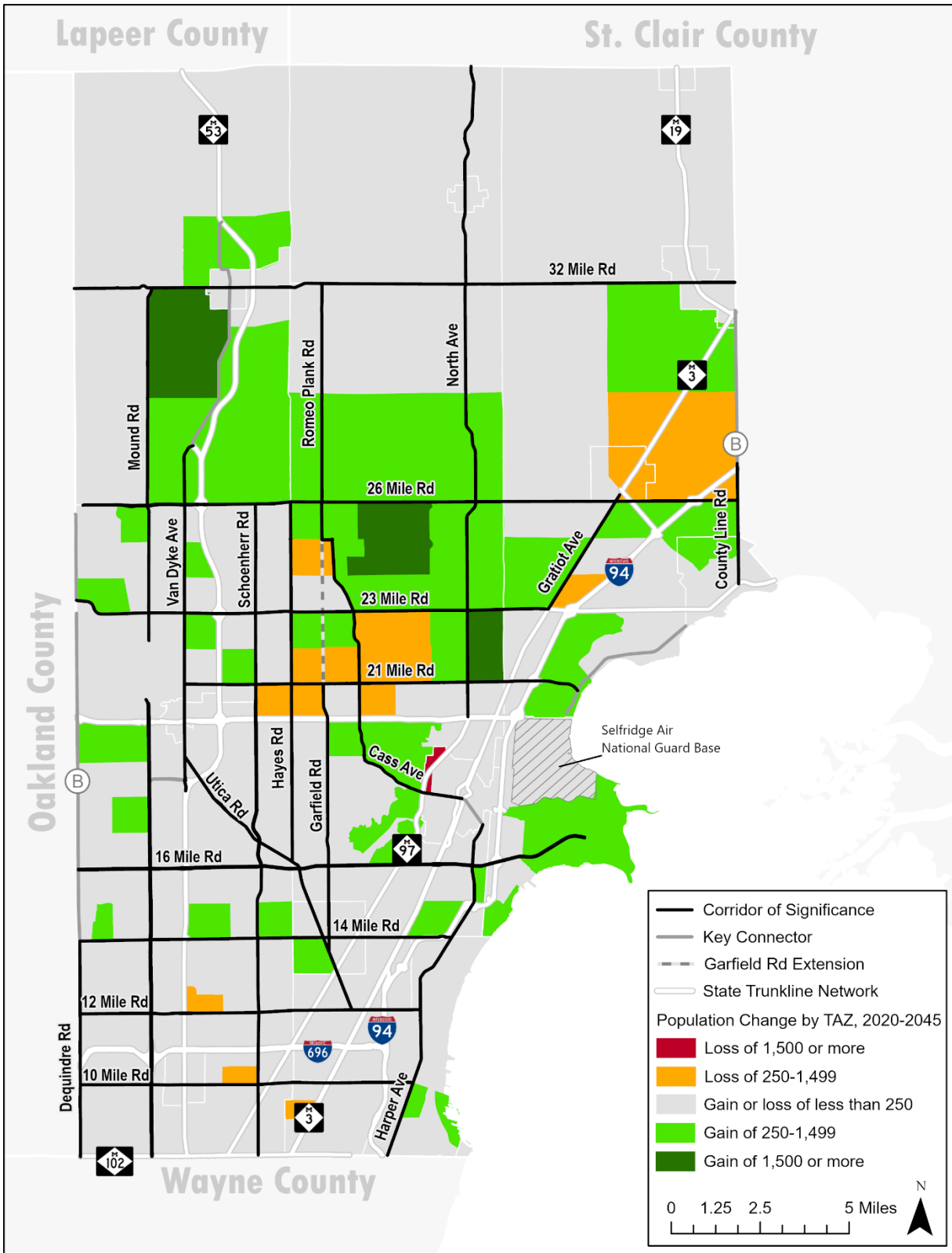
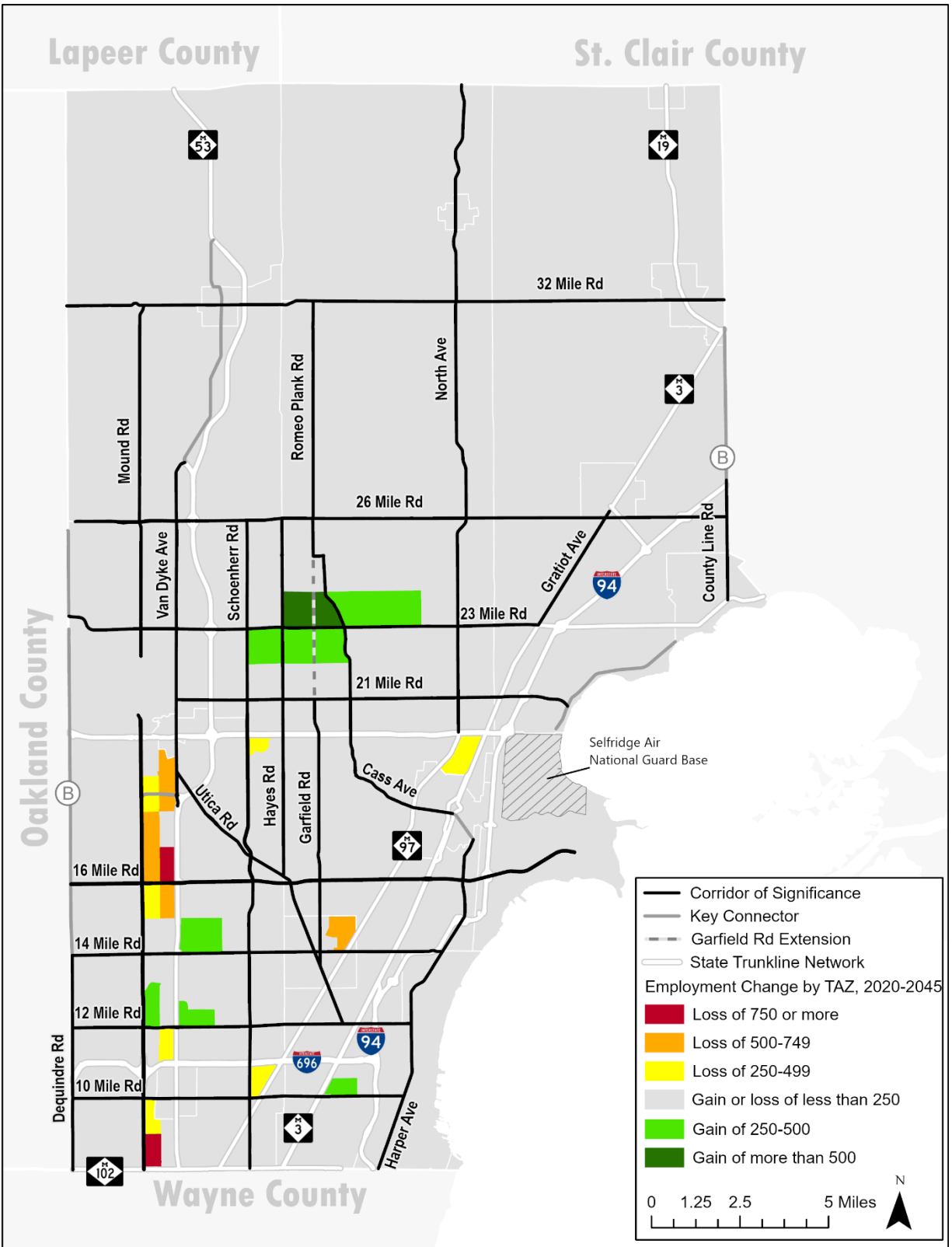


Figure C-10 Macomb County Employment Change 2020-2045



Appendix D

System Safety and Congestion Data

Figure D-1 Crash Density on Macomb County Corridors of Significance

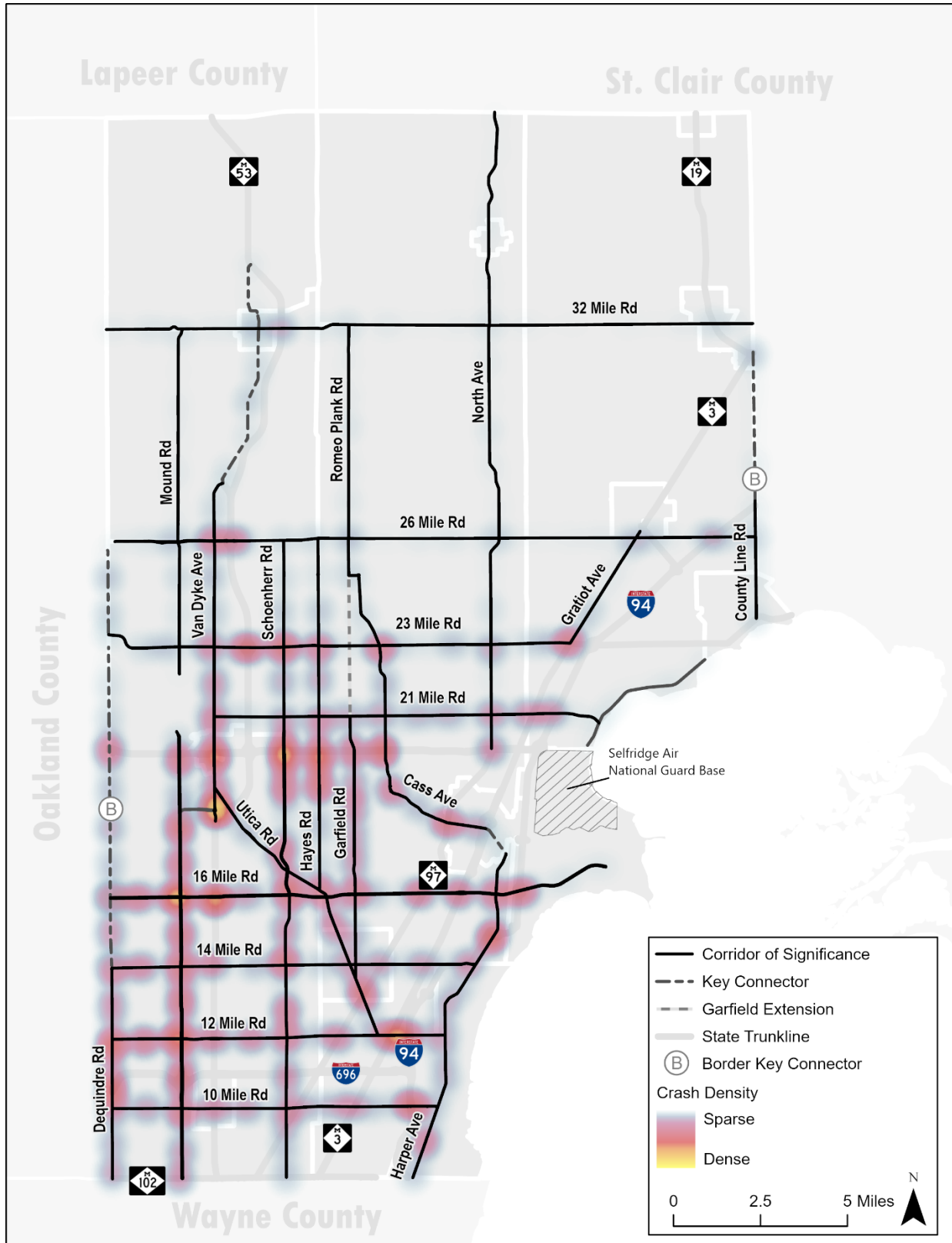


Figure D-2 2020 AADT on Macomb County Roads

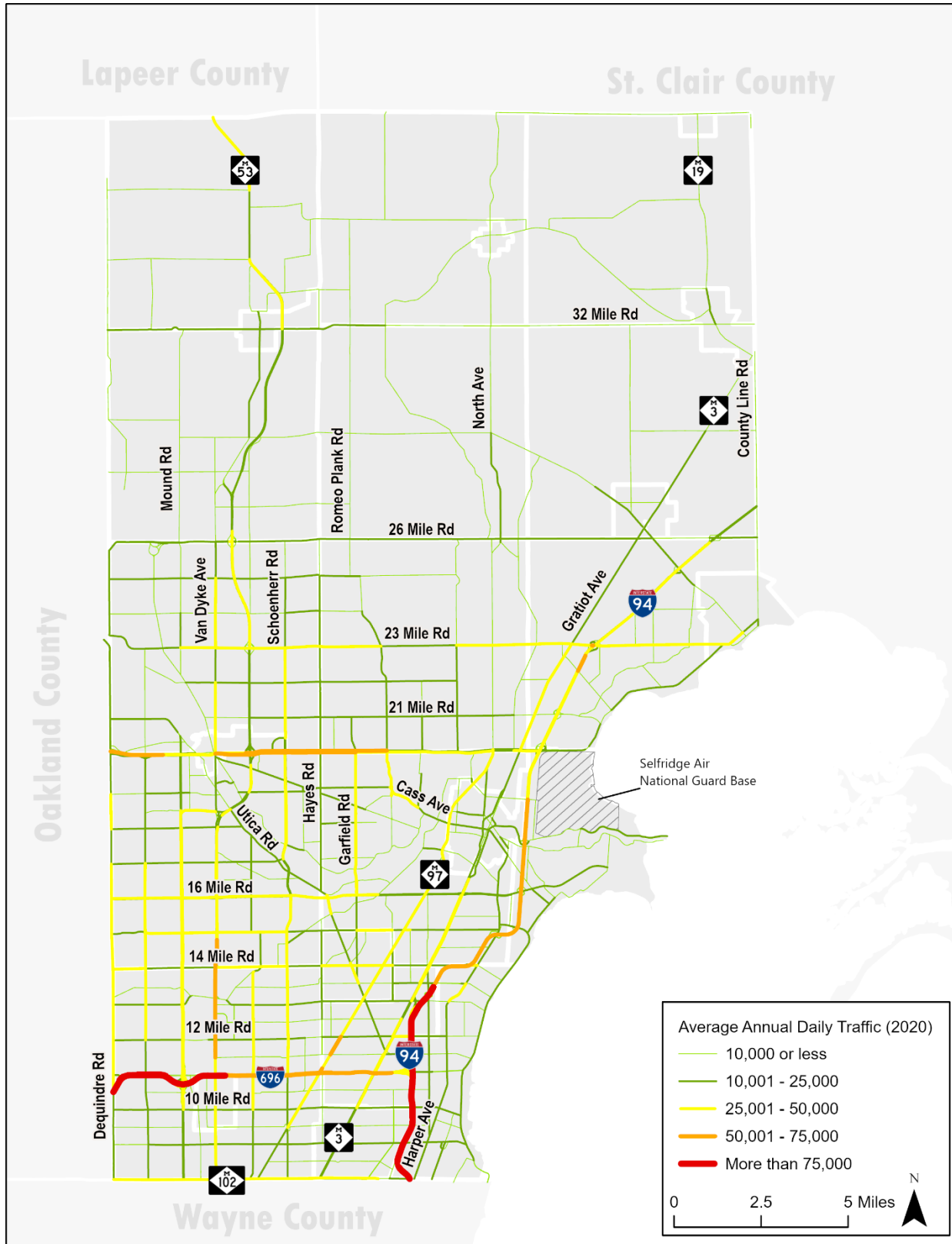
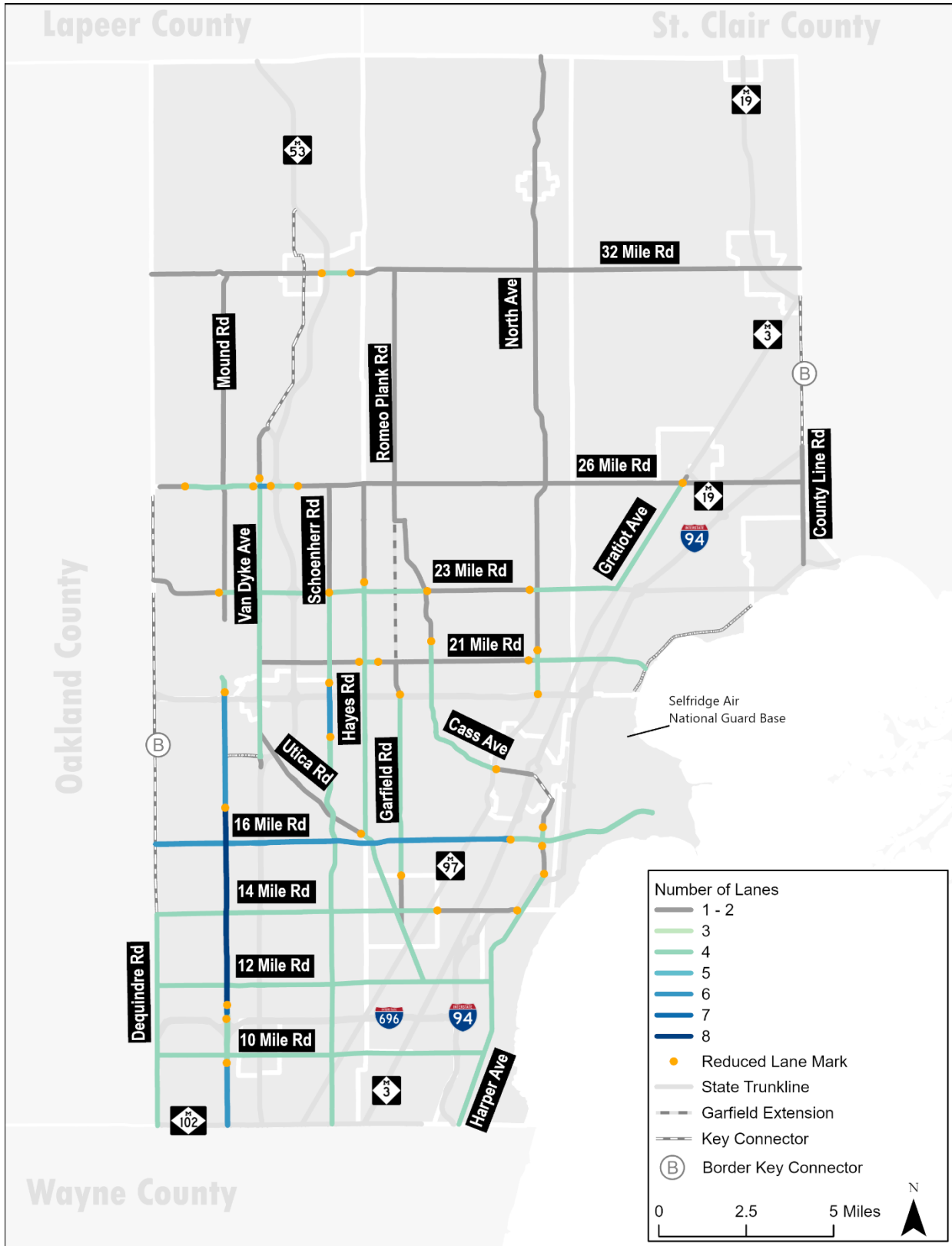


Figure D-3 Lane Capacity of Macomb County Corridors of Significance



Appendix E

Stakeholder Engagement Survey

The Countywide Stakeholder Engagement Survey opened on August 4, 2022 and closed on September 2, 2022. It consisted of the following questions.

1. In which region of Macomb County is your community located?
 - a. North (north of 26 Mile Road)
 - b. Central (between 26 Mile Road and 14 Mile Road)
 - c. South (south of 14 Mile Road, including the entirety of the City of Fraser)

2. On a scale of one star (worst) to ten stars (best), how would you rate the quality of the existing County-owned (not State-owned or municipal-owned) road system in Macomb County?
 - 1-2 = failed, requiring reconstruction
 - 3 = poor, requiring structural improvements
 - 4 = fair, requiring structural improvements
 - 5 = fair, requiring preservative treatments
 - 6 = good, requiring preservative treatments
 - 7 = good, requiring crack sealing and minor patching
 - 8 = very good, requiring little or no maintenance
 - 9-10 = excellent, requiring no maintenance

3. Please write comments on question 2 here.

4. On a scale of one star (worst) to ten stars (best), how would you rate the quality of the existing County-owned bridges in Macomb County?
 - 1 = failed and is closed, requiring major rehabilitation or replacement
 - 2 = critical, requiring emergency repair, rehabilitation, replacement, or closure
 - 3 = serious, requiring emergency repair, rehabilitation, replacement, or closure
 - 4 = poor, requiring major rehabilitation or replacement
 - 5 = fair, requiring preventative maintenance or minor rehabilitation
 - 6 = satisfactory, requiring preventative maintenance or minor rehabilitation
 - 7 = good, requiring routine maintenance
 - 8 = very good, requiring routine maintenance
 - 9-10 = excellent, requiring routine maintenance

5. Please write comments on question 4 here.

6. How do the conditions of the County-owned roads in your community compare to the overall conditions of the County-owned road system in Macomb County?
 - a. Better
 - b. About the same
 - c. Worse
 - d. Other

7. If you have any comments on question 6 or answered “Other,” please write them here. If you don’t have comments, answer “Not Applicable” here.

8. How do the conditions of the County-owned bridges in your community compare to the overall conditions of the County-owned bridges in Macomb County?

- a. Better
- b. About the same
- c. Worse
- d. Other

7. If you have any comments on question 8 or answered “Other,” please write them here. If you don’t have comments, answer “Not Applicable” here.

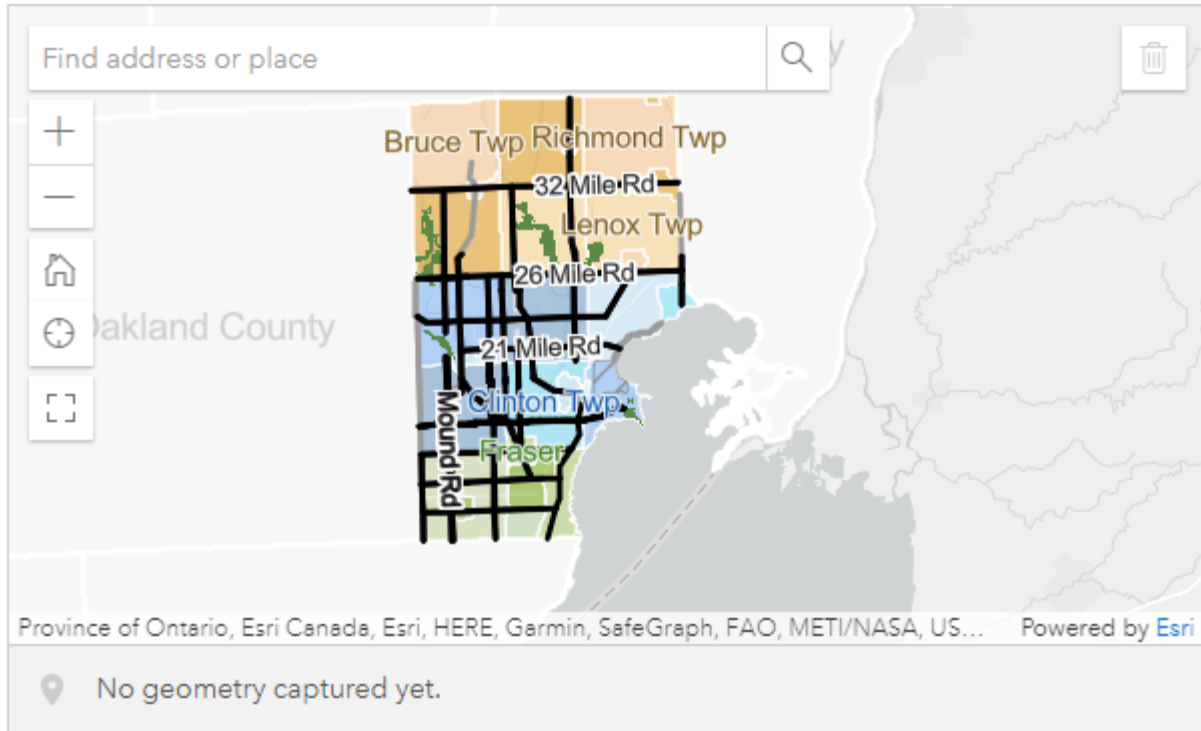
The Macomb County Federal Aid Transportation Improvement Program Subcommittee recommends defining a Corridor of Significance as a corridor that meets the criteria below:

- It is under MCDR’s jurisdiction;
- It is federal aid-eligible;
- At least 75% of the corridor is designated as a county primary road in terms of Act 51;
- It is an arterial or collector road in terms of its NFC;
- It connects to a state trunkline;
- It has an origin and a terminus at either: a state trunkline, another Corridor of Significance, a county border, or a significant regional public or strategic point of interest; and
- It extends through or provides strategic access to at least three municipalities within the County.

Continuity within the county system is also an important factor.

In cases where roads switch between being county primary roads and state trunklines, only those segments which are designated as county primary roads are recommended to be considered. These segments themselves should then extend through or provide strategic access to at least three municipalities within the County.

The below map reflects these criteria:



40

10. Please identify any specific federal aid investment priorities you would like the Macomb Federal Aid Committee to consider both within and outside of your community’s geographic boundaries. Any comments on the above Corridor of Significance criteria and map can be provided here.

11. One of the criteria is that a Corridor of Significance extends through or provides strategic access to at least three municipalities within the County. On a scale of one star (almost never) to five stars (always), how important is interagency coordination in the successful planning and delivery of a major road or bridge project?

12. Please write comments on question 11 here.

⁴⁰ Esri.

13. Which of the following items best characterize your major concerns about the current state of countywide Corridors of Significance? (You may select multiple items.)

- a. Insufficient infrastructure for automobiles
- b. Insufficient infrastructure for bicyclists, pedestrians, and transit
- c. Declining road and bridge infrastructure conditions
- d. Roads are too wide
- e. Roads are too narrow
- f. Too much automobile traffic congestion
- g. Too much freight congestion
- h. Safety issues
- i. Lack of “smart” technologies within the system
- j. I don’t have any major concerns about County-owned Corridors of Significance
- k. Other

14. If you have any comments on question 13 or answered “Other,” please write them here. If you don’t have comments, answer “Not Applicable” here.

15. Order the following by importance when prioritizing road investments on the County-owned system. (Drag to order.)

- a. Preservation of the existing road and bridge infrastructure
- b. Routine maintenance
- c. Safety and mobility
- d. Capacity improvement/expansion
- e. Other

16. If you have any comments on question 15 or answered “Other,” please write them here. If you don’t have comments, answer “Not Applicable” here.

17. On a scale of one star (not important) to five stars (most important), how important is it that a countywide Corridor of Significance be usable by automobile drivers?

18. Please write comments on question 17 here.

19. On a scale of one star (not important) to five stars (most important), how important is it that a countywide Corridor of Significance be usable by truck drivers?

20. Please write comments on question 19 here.

21. On a scale of one star (not important) to five stars (most important), how important is it that a countywide Corridor of Significance be usable by bicyclists?

22. Please write comments on question 21 here.

23. On a scale of one star (not important) to five stars (most important), how important is it that a countywide Corridor of Significance be usable by pedestrians?

24. Please write comments on question 23 here.

25. How do you feel about multimodal (bicycling, walking, and transit) considerations in regard to a countywide Corridor of Significance?

- a. They are very important
- b. They are somewhat important
- c. Neutral
- d. They are not important
- e. Other

26. If you have any comments on question 25 or answered “Other,” please write them here. If you don’t have comments, answer “Not Applicable” here.

27. Is there anything else you would like to share as the countywide Corridors of Significance Study proceeds?

Appendix F

Stakeholder Engagement Meetings

F.1 Stakeholder Meeting Materials

Figure F-1 Northern Macomb County Stakeholder Engagement Meeting Invitation

From: [Eric Dimoff](#)
To: [supervisor; president; clerk; mfillbrook; areeder; mgrabow; cityofmemphis; Ann Fridehora; supervisor; info@cityofrichmond.net; supervisorsteve; supervisor@richmondwp.org; smalzahn; Sam Previti; amorminor; pomeara@rowepsc.com; mall; ssalf; rpoorte@bmjinc.com; Lou Urban; ken.kingsley; mmacdonald; mkozak; ctedecker](#)
Cc: [jcrumm; Scott Wanagat](#)
Subject: Please Join Us: Countywide Corridors of Significance Study Stakeholder Engagement Meeting in Northern Macomb County
Date: Thursday, August 4, 2022 1:19:15 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[Corridor Study Northern Stakeholder Meeting Invite.pdf](#)

Good afternoon,

We invite you to join us for a stakeholder engagement meeting on **August 23, 2022** from **9 a.m. to 11 a.m.** in northern Macomb County to discuss the Macomb County – Federal Aid Committee (FAC) Countywide Corridors of Significance Study. Please find the attached invitation with additional information.

Location

Washington Township Municipal Building
57900 Van Dyke Avenue
Washington, MI 48094

The Macomb County Department of Roads (MCDR) takes a comprehensive and strategic approach to managing the County's road, bridge, and transportation network, working closely with its 27 municipal partners to provide the public with a quality transportation system.

The Countywide Corridors of Significance Study is led by the Macomb County FAC in partnership with MCDR. The purpose of the study is to identify a planning framework for long-term federal aid system investments in MCDR-owned roads and bridges. The study will also help guide the process of recommending projects for the Phase II Transportation Improvement Program (TIP) Update for the Macomb County FAC.

To RSVP for the stakeholder engagement meeting, please contact Eric Dimoff at edimoff@rcmcweb.org or 586-840-1759 by **August 16, 2022**.

In advance of the meeting, we are seeking your input as a community stakeholder. Please take a few moments to answer some questions on behalf of the community you represent. [Click here](#) to take the survey **no later than August 17**.

We appreciate your input and look forward to meeting with you.

Eric Dimoff
Public Information Officer
Macomb County Department of Roads
roads.macombgov.org

**Macomb County – Federal Aid Committee
(FAC)**

Countywide Corridors of Significance Study

Stakeholder Engagement Meeting

Please join us for a stakeholder engagement meeting in Northern Macomb County to discuss the Corridors of Significance Study

August 23, 2022

9 a.m. – 11 a.m.

Washington Township Municipal Building
57900 Van Dyke Avenue
Washington, MI 48094

The Macomb County Department of Roads (MCDR) takes a comprehensive and strategic approach to managing the County's road, bridge, and transportation network, working closely with its 27 municipal partners to provide the public with a quality transportation system.

The Countywide Corridors of Significance Study is led by the Macomb County FAC in partnership with MCDR. The purpose of the study is to identify a planning framework for long-term federal aid system investments in MCDR-owned roads and bridges. The study will also help guide the process of recommending projects for the Phase II Transportation Improvement Program (TIP) Update for the Macomb County FAC.

To RSVP for the stakeholder engagement meeting, please contact Eric Dimoff at edimoff@rcmcweb.org or 586-840-1759 by August 16, 2022.

In advance of the meeting, we are seeking your input as a community stakeholder. Please take a few moments to answer some questions on behalf of the community you represent. Click [here](#) to take the survey no later than August 17.

Figure F-2 Central Macomb County Stakeholder Engagement Meeting Invitation

From: Eric Dimoff
To: blersten@kgharbie.com; mccannon@chesterfieldtownship.org; cdedecker@louurban.com; r.cannon@redstar.com; m.bednar@schabot.com; kverkest@avik.com; dnummer@frankvhdano.com; vankfilinj@kozak.com; msmith@kropo@cityofmountclemens.com; kseidel@semaan@cityofnewbaltimore.org; rbombly@cityofnewbaltimore.org; jmonte@pce-eng.com; rstathakis@chelsea-schneider.com; gwilson@aseel.a.pubros.com; michael.c.taylor@markvanderpool.com; brent.bashaw@aconigliaro.com; spangori@mayor.gov; dow@jcrumma.com; scott.wanagat@scottwanagat.com
Subject: Please Join Us: Countywide Corridors of Significance Study Stakeholder Engagement Meeting in Central Macomb County
Date: Thursday, August 4, 2022 1:22:58 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[Corridors Study Central Stakeholder Meeting Invite.pdf](#)

Good afternoon,

We invite you to join us for a stakeholder engagement meeting on **August 29, 2022 from 9 a.m. to 11 a.m.** in central Macomb County to discuss the Macomb County – Federal Aid Committee (FAC) Countywide Corridors of Significance Study. Please find the attached invitation with additional information.

Location

Macomb County Department of Roads
117 South Groesbeck Highway
Mount Clemens, MI 48043

The Macomb County Department of Roads (MCDR) takes a comprehensive and strategic approach to managing the County's road, bridge, and transportation network, working closely with its 27 municipal partners to provide the public with a quality transportation system.

The Countywide Corridors of Significance Study is led by the Macomb County FAC in partnership with MCDR. The purpose of the study is to identify a planning framework for long-term federal aid system investments in MCDR-owned roads and bridges. The study will also help guide the process of recommending projects for the Phase II Transportation Improvement Program (TIP) Update for the Macomb County FAC.

To RSVP for the stakeholder engagement meeting, please contact Eric Dimoff at edimoff@rcmcweb.org or 586-840-1759 by **August 22, 2022**.

In advance of the meeting, we are seeking your input as a community stakeholder. Please take a few moments to answer some questions on behalf of the community you represent. [Click here](#) to take the survey no later than **August 17**.

We appreciate your input and look forward to meeting with you.

Eric Dimoff
Public Information Officer
Macomb County Department of Roads
roads.macombgov.org

**Macomb County – Federal Aid Committee
(FAC)**

Countywide Corridors of Significance Study

Stakeholder Engagement Meeting

Please join us for a Stakeholder Engagement Meeting in Central Macomb County to discuss the Corridors of Significance Study

August 29, 2022

9 a.m. – 11 a.m.

Macomb County Department of Roads (MCDR)
117 South Groesbeck Highway
Mount Clemens, MI 48043

MCDR takes a comprehensive and strategic approach to managing the County's road, bridge, and transportation network, working closely with its 27 municipal partners to provide the public with a quality transportation system.

The Countywide Corridors of Significance Study is led by the Macomb County FAC in partnership with MCDR. The purpose of the study is to identify a planning framework for long-term federal aid system investments in MCDR-owned roads and bridges. The study will also help guide the process of recommending projects for the Phase II Transportation Improvement Program (TIP) Update for the Macomb County FAC.

To RSVP for the stakeholder engagement meeting, please contact Eric Dimoff at edimoff@rcmcweb.org or 586-840-1759 by August 22, 2022.

In advance of the meeting, we are seeking your input as a community stakeholder. Please take a few moments to answer some questions on behalf of the community you represent. Click [here](#) to take the survey no later than August 17.

Figure F-3 Southern Macomb County Stakeholder Engagement Meeting Invitation

From: [Eric Dimoff](#)
To: [rbinson](#); [dchampoine](#); [Lou Urban](#); [jchow@sewinc.com](#); [mayorowens](#); [spangori](#); [citymanager](#); [mvligneron](#); [taylor](#); [stockwood](#); [walby.kip](#); [Eike_Denise](#); [chart](#); [mayor](#); [Tina Garshes](#); [msmith](#)
Cc: [jcrumm](#); [Scott Wanaqat](#)
Subject: Please Join Us: Countywide Corridors of Significance Study Stakeholder Engagement Meeting in Southern Macomb County
Date: Thursday, August 4, 2022 1:26:27 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)
[Corridors Study Southern Stakeholder Meeting Invite.pdf](#)

Good afternoon,

We invite you to join us for a stakeholder engagement meeting on **August 31, 2022** from **1 p.m. to 3 p.m.** in southern Macomb County to discuss the Macomb County – Federal Aid Committee (FAC) Countywide Corridors of Significance Study. Please find the attached invitation with additional information.

Location

Warren City Hall
1 City Square
Warren, MI 48093

The Macomb County Department of Roads (MCDR) takes a comprehensive and strategic approach to managing the County's road, bridge, and transportation network, working closely with its 27 municipal partners to provide the public with a quality transportation system.

The Countywide Corridors of Significance Study is led by the Macomb County FAC in partnership with MCDR. The purpose of the study is to identify a planning framework for long-term federal aid system investments in MCDR-owned roads and bridges. The study will also help guide the process of recommending projects for the Phase II Transportation Improvement Program (TIP) Update for the Macomb County FAC.

To RSVP for the stakeholder engagement meeting, please contact Eric Dimoff at edimoff@rcmcweb.org or 586-840-1759 by **August 24, 2022**.

In advance of the meeting, we are seeking your input as a community stakeholder. Please take a few moments to answer some questions on behalf of the community you represent. [Click here](#) to take the survey no later than **August 17**.

We appreciate your input and look forward to meeting with you.

Eric Dimoff
Public Information Officer
Macomb County Department of Roads
roads.macombgov.org

**Macomb County – Federal Aid Committee
(FAC)**

Countywide Corridors of Significance Study

Stakeholder Engagement Meeting

Please join us for a stakeholder engagement meeting in Southern Macomb County to discuss the Corridors of Significance Study

August 31, 2022

1 p.m. – 3 p.m

Warren City Hall
1 City Square
Warren, MI 48093

The Macomb County Department of Roads (MCDR) takes a comprehensive and strategic approach to managing the County’s road, bridge, and transportation network, working closely with its 27 municipal partners to provide the public with a quality transportation system.

The Countywide Corridors of Significance Study is led by the Macomb County FAC in partnership with MCDR. The purpose of the study is to identify a planning framework for long-term federal aid system investments in MCDR-owned roads and bridges. The study will also help guide the process of recommending projects for the Phase II Transportation Improvement Program (TIP) Update for the Macomb County FAC.

To RSVP for the stakeholder engagement meeting, please contact Eric Dimoff at edimoff@rcmcweb.org or 586-840-1759 by August 24, 2022.

In advance of the upcoming meeting, we are seeking your input as a community stakeholder. Please take a few moments to answer some questions on behalf of the community you represent. Click [here](#) to take the survey no later than August 17.

Macomb County – Federal Aid Committee
(FAC)
Countywide Corridors of Significance Study
Stakeholder Engagement Meeting
Summer 2022
Agenda

*Moderator: Eric Dimoff, Macomb County Department of
Roads (MCDR) Communications Director*

1. Welcome and Introductions – John Crumm, AICP, MCDR Director of Planning and FAC Chair
2. Coordination of Local Planning – John Crumm, MCDR
3. Corridors of Significance – Carly Mitchell, HNTB
4. Summary of Survey Feedback – Alexandra Horst, HNTB
5. FAC Summer Meeting Highlights – Scott Wanagat, MCDR Highway Engineer and FAC TIP Subcommittee Member
6. Call for Projects (CFP) – Scott Wanagat, MCDR
7. Traffic, Safety, and Operational Update – Dr. John Abraham, MCDR
8. Key Considerations for Corridors of Significance – Dustin Elliott, HNTB
9. Transportation Improvement Program (TIP) Update Phase II Candidate Projects – Dustin Elliott, HNTB
10. Stakeholder and Public Comment – John Crumm, MCDR
11. Next Steps – John Crumm, MCDR

Macomb County – Federal Aid Committee

Countywide Corridors of Significance Study

Stakeholder Engagement Meetings

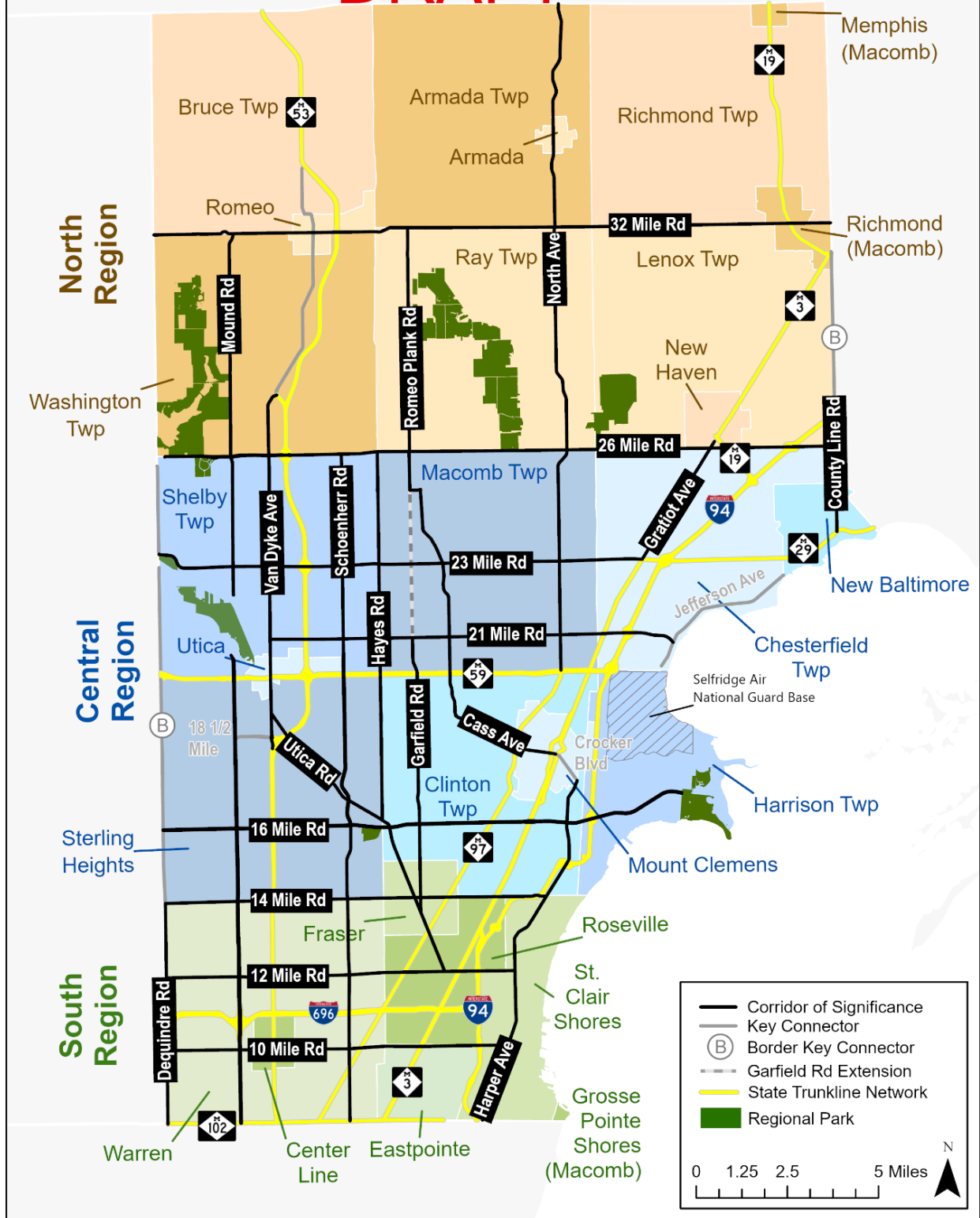
The Countywide Corridors of Significance Study (Study) is led by the Macomb County Federal Aid Committee (FAC) in partnership with the Macomb County Department of Roads (MCDR). The purpose of the Study is to identify a planning framework for long-term federal aid system investments on MCDR-owned roads and bridges. The Study will also help guide the process for recommending Phase II Transportation Improvement Program (TIP) Update projects.

The Macomb County Federal Aid TIP Subcommittee recommends defining a Corridor of Significance as a corridor that meets the criteria below:

- It is under MCDR’s jurisdiction;
- It is federal aid-eligible;
- At least 75% of the corridor is designated as a county primary road in terms of Act 51;
- It connects to a state trunkline;
- It has an origin and a terminus at either:
 - A state trunkline,
 - Another Corridor of Significance,
 - A county border, or
 - A significant regional public or strategic point of interest; and
- It extends through or provides strategic access to at least three municipalities within the County.

The following map and table reflect the criteria.

DRAFT



Corridor Name	Origin	Terminus
10 Mile Road	Dequindre Road (Warren)	Harper Avenue (St. Clair Shores)
12 Mile Road	Dequindre Road (Warren)	Harper Avenue (St. Clair Shores)
14 Mile Road	Dequindre Road (Warren / Sterling Heights)	Harper Avenue (St. Clair Shores)
16 Mile Road	Dequindre Road (Sterling Heights)	Metropark (Harrison Township)
21 Mile Road	Van Dyke Avenue (Shelby Township)	Jefferson Avenue (Chesterfield Township)
23 Mile Road	Dequindre Road (Shelby Township)	Gratiot Avenue (Chesterfield Township)
26 Mile Road	Dequindre Road (Shelby Township / Washington Township)	County Line Road (Chesterfield Township / Lenox Township)
32 Mile Road	Dequindre Road (Washington Township / Bruce Township)	County Line Road (Lenox Township / Richmond Township / Richmond (Macomb County))
County Line Road	M-29 (New Baltimore)	27 Mile Road (Lenox Township)
Dequindre Road	M-102 (Wayne County / Warren)	14 Mile Road (Warren / Sterling Heights)
Garfield Road / Extension	Utica Road (Fraser)	21 Mile Road (Macomb Township)
Gratiot Avenue	23 Mile Road (Chesterfield Township)	M-19 (New Haven)
Harper Avenue	M-102 (Wayne County / St. Clair Shores)	Crocker Boulevard (Clinton Township / Mount Clemens)
Hayes Road	Utica Road (Sterling Heights / Clinton Township)	26 Mile Road (Shelby Township / Macomb Township / Washington Township / Ray Township)
Mound Road	M-102 (Wayne County / Warren)	32 Mile Road (Bruce Township / Washington Township)
North Avenue	M-59 (Clinton Township / Macomb Township)	Bordman Road (Armada Township / St. Clair County)
Romeo Plank Road / Cass Avenue	M-3 (Mount Clemens)	32 Mile Road (Ray Township / Armada Township)
Schoenherr Road	M-102 (Wayne County / Warren)	26 Mile Road (Shelby Township / Washington Township)
Utica Road	12 Mile Road (Roseville)	Van Dyke Avenue (Sterling Heights)
Van Dyke Avenue	M-53 (Sterling Heights)	M-53 (Washington Township)

SUBMITTING AGENCY	JURISDICTION	ROAD NAME	LIMITS	FIX TYPE	PHASE	AVG. TOTAL POINTS	FY(S)	TOTAL SUBMITTED COST	FED. AID REQUESTED	LOCAL MATCH	
Phase I											
City of Fraser	MCDR	Garfield Road	14 Mile Road-15 Mile Road	Reconstruction	CON	68.0	2024	\$5,500,000	\$4,501,750	\$998,250	*
MCDR	MCDR	Mound Road	Toepfer Road-Rinke Avenue	Reconstruction	EPE	63.4	2022	\$1,000,000	\$818,500	\$181,500	*
		Metropolitan Parkway	West of Mound Road-east of Van Dyke Avenue, including RR grade separation								*
Chesterfield Township	MCDR	23 Mile Road	Gratiot Avenue-Canadian National RR	Reconstruction	CON	51.8	2024	\$4,000,000	\$3,274,000	\$726,000	*
MCDR	MCDR	Utica Road	Hayes Road-Metropolitan Parkway	Rehabilitation	CON	51.6	2025	\$3,155,000	\$2,582,368	\$572,633	*
City of Center Line	MCDR	10 Mile Road	Lorraine Avenue-Sherwood Avenue	Reconstruction	CON	51.2	2024	\$7,500,000	\$6,138,750	\$1,361,250	*
City of Sterling Heights	City of Sterling Heights	15 Mile Road	Mound Road-Van Dyke Avenue	Rehabilitation	CON	51.2	2026	\$2,900,000	\$2,373,650	\$526,350	**
Charter Township of Clinton	MCDR	Kelly Road	15 Mile Road-14 Mile Road	Reconstruction	CON	49.2	2025	\$4,450,000	\$3,642,325	\$807,675	*
City of Sterling Heights	City of Sterling Heights	17 Mile Road	Mound Road-Van Dyke Avenue	Rehabilitation	CON	47.6	2025	\$2,100,000	\$1,718,850	\$381,150	**
City of Sterling Heights	City of Sterling Heights	15 Mile Road	Van Dyke Avenue-Mustang Drive	Rehabilitation	CON	46.0	2026	\$2,700,000	\$2,209,950	\$490,050	**
MCDR	MCDR	Dequindre Road	8 Mile Road-Maplelane Avenue	Reconstruction	CON	45.6	2026	\$8,625,000	\$7,059,563	\$1,565,438	*
MCDR	MCDR	14 Mile Road	Van Dyke Avenue-Hoover Road	Rehabilitation	CON	45.0	2025	\$4,780,000	\$3,912,430	\$867,570	*
City of Roseville	City of Roseville	13 Mile Road	Gratiot Avenue-Eastern City limits	Rehabilitation	CON	44.4	2025	\$2,025,000	\$1,657,463	\$367,538	**
City of Eastpointe	City of Eastpointe	9 Mile Road	Tuscany Avenue-Kelly Road	Reconstruction	CON	44.4	2026	\$4,043,875	\$3,309,912	\$733,963	**
City of Warren	City of Warren	Frazho Road	Hoover Road-Schoenherr Road	Rehabilitation	CON	43.6	2024	\$1,600,000	\$1,309,600	\$290,400	**
City of Roseville	City of Roseville	Frahzo Road	Hayes Road-Kathy Avenue	Rehabilitation	CON	43.2	2023	\$1,200,000	\$982,200	\$217,800	**/*
Harrison Township	MCDR	North River Road	End of Mount Clemens project-Bridgeview Street	Rehabilitation	CON	42.2	2025	\$3,000,000	\$2,455,500	\$544,500	*
Harrison Township	MCDR	Jefferson Avenue	South River Road-Metropolitan Parkway	Rehabilitation	CON	41.2	2026	\$1,695,000	\$1,387,358	\$307,643	*
City of Mount Clemens	City of Mount Clemens	Hubbard Avenue	North Groesbeck Highway-Canadian National RR	Rehabilitation	CON	40.6	2024	\$1,178,000	\$964,193	\$213,807	**
City of St. Clair Shores	City of St. Clair Shores	Stephens Street	Little Mack Avenue-I-94	Reconstruction	CON	40.6	2025	\$1,800,000	\$1,473,300	\$326,700	**
Chesterfield Township	MCDR	Sugarbush Road	Callens Road-Jefferson Avenue	Reconstruction	CON	40.6	2026	\$1,300,000	\$1,064,050	\$235,950	*
City of Richmond	City of Richmond	Gratiot Avenue	M-19-County Line Road	Preventative Maintenance	CON	40.2	2023	\$126,000	\$103,131	\$22,869	**

Total Phase I Projects

\$64,677,875 \$52,938,841 \$11,739,034

Notes:	
1	All estimates are preliminary - Federal Aid participation rate assumed @ 81.85% - due to current pricing dynamics inflation impacts will be assessed at the time of programming after consultation with SEMCOG
2	*Local Match Share 50-50 between MCDR and City/Township
3	**Local Match Share 100% City
4	***This project may be combined with an existing project and amended into the current TIP
5	Engineering, inspection and administration of all CON phase projects will not be federal-aid eligible, will be the responsibility of the Agency of Jurisdiction and are subject to the same local cost share as the direct construction costs shown

SUBMITTING AGENCY	JURISDICTION	ROAD NAME	LIMITS	FIX TYPE	PHASE	AVG. TOTAL POINTS	FY(S)	TOTAL SUBMITTED COST	FED. AID REQUESTED	LOCAL MATCH	
Phase II											
City of Warren	City of Warren	Common Road	Hayes Road-Schoenherr Road	Rehabilitation	CON	38.2	2025	\$1,600,000	\$1,309,600	\$290,400	**
Charter Township of Clinton	MCDR	14 Mile Road	Kelly Road-Gratiot Avenue	Rehabilitation	CON	38.2	2023	\$4,125,000	\$3,376,313	\$748,688	*
Charter Township of Clinton	MCDR	15 Mile Road	Gratiot Avenue-Harper Avenue	Rehabilitation	CON	37.8	2024	\$3,700,000	\$3,028,450	\$671,550	*
		Harper Avenue	Shook Road-I-94								
City of Roseville	City of Roseville	Little Mack Avenue	Gratiot Avenue-Masonic Boulevard	Rehabilitation	CON	36.8	2026	\$1,000,000	\$818,500	\$181,500	**
City of St. Clair Shores	City of St. Clair Shores	Jefferson Avenue	10 Mile Road-12 Mile Road	Rehabilitation	CON	36.0	2024	\$4,225,000	\$3,458,163	\$766,838	**
Chesterfield Township	MCDR	Chesterfield Road	23 Mile Road-Gratiot Avenue	Reconstruction Realignment	CON	35.6	2025	\$1,500,000	\$1,227,750	\$272,250	*
Harrison Township	MCDR	Lanse Creuse Street/ Reimold Street	South River Road-Crocker Boulevard	Rehabilitation	CON	35.0	2023- 2026	\$1,552,000	\$1,270,312	\$281,688	*
City of Mount Clemens	City of Mount Clemens	Hubbard Avenue	Canadian National RR-North Avenue	Rehabilitation	CON	34.4	2025	\$450,000	\$368,325	\$81,675	**
City of Eastpointe	City of Eastpointe	Hayes Avenue	Stephens Drive-10 Mile Road	Preventative Maintenance	CON	32.4	2026	\$659,250	\$539,596	\$119,654	**
City of Warren	City of Warren	Stephens Road	Van Dyke Avenue-Hoover Road	Rehabilitation	CON	31.6	2024	\$1,600,000	\$1,309,600	\$290,400	**
City of Mount Clemens	City of Mount Clemens	Clair Avenue	North Avenue-Northbound Gratiot Avenue	Rehabilitation	CON	29.2	2026	\$650,000	\$532,025	\$117,975	**
City of Fraser	City of Fraser	Klein Road	Utica Road-Garfield Road	Rehabilitation	CON	28.8	2026	\$450,000	\$368,325	\$81,675	**
City of St. Clair Shores	City of St. Clair Shores	Greater Mack Avenue	12 Mile Road-13 Mile Road	Rehabilitation	CON	28.8	2024	\$1,255,000	\$1,027,218	\$227,783	**
City of Eastpointe	City of Eastpointe	Toepfer Drive	Kelly Road-Beaconsfield Road	Reconstruction	CON	26.6	2025	\$1,253,330	\$1,025,851	\$227,479	**
Macomb Township	MCDR	21 Mile Road	North Avenue-Card Road	Widening and Reconstruction	CON	N/A	2025	\$9,900,000	\$8,103,150	\$1,796,850	*
Macomb Township	MCDR	21 Mile Road	Card Road-Heydenreich Road	Widening and Reconstruction	CON	N/A	2026	\$9,000,000	\$7,366,500	\$1,633,500	*
Charter Township of Shelby	MCDR	Schoenherr Road	23 Mile Road-24 Mile Road	Widening and Reconstruction	CON	N/A	2024	\$9,750,000	\$7,980,375	\$1,769,625	*
Charter Township of Shelby	MCDR	Schoenherr Road	24 Mile Road-25 Mile Road	Widening and Reconstruction	CON	N/A	2025	\$8,850,000	\$7,243,725	\$1,606,275	*
Charter Township of Shelby	MCDR	Hayes Road	23 Mile Road-24 Mile Road	Widening and Reconstruction	CON	N/A	2026	\$9,850,000	\$8,062,225	\$1,787,775	*

Total Phase II Projects

\$71,369,580 \$58,416,001 \$12,953,579

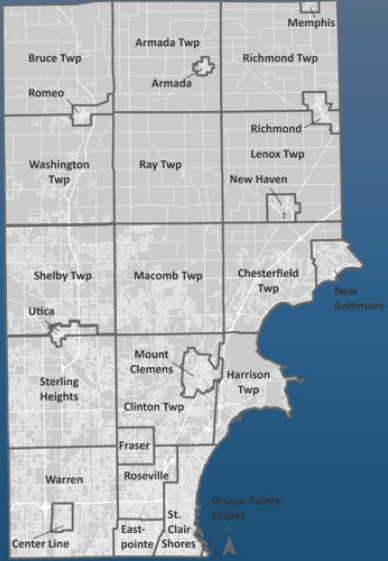
Notes:	
1	All estimates are preliminary - Federal Aid participation rate assumed @ 81.85% - due to current pricing dynamics inflation impacts will be assessed at the time of programming after consultation with SEMCOG
2	*Local Match Share 50-50 between MCDR and City/Township
3	**Local Match Share 100% City
4	***This project may be combined with an existing project and amended into the current TIP
5	Engineering, inspection and administration of all CON phase projects will not be federal-aid eligible, will be the responsibility of the Agency of Jurisdiction and are subject to the same local cost share as the direct construction costs shown

FYs are subject to change based on available funding, FAC prioritization and project readiness factors.

Figure F-4 Stakeholder Engagement Meeting Presentation

**Macomb County Federal Aid Committee (FAC)
Corridors of Significance Study
Stakeholder Engagement**

August 2022



Macomb County – Federal Aid Committee (FAC)

The map displays the following locations: Bruce Twp, Romeo, Washington Twp, Shelby Twp, Utica, Sterling Heights, Warren, Center Line, Armada Twp, Armada, Ray Twp, Macomb Twp, Mount Clemens, Clinton Twp, Fraser, Roseville, East-pointe, St. Clair Shores, Memphis, Richmond Twp, Richmond, Lenox Twp, New Haven, Chesterfield Twp, Harrison Twp, Grosse Pointe Shores, and New Baltimore.

Agenda – John Crumm

- Coordination of Local Planning
- Corridors of Significance
- Summary of Survey Feedback
- FAC Summer Meeting Highlights
- FAC Call for Projects (CFP)
- Traffic, Safety, and Operational Update
- Key Considerations for Corridors of Significance
- Transportation Improvement Program (TIP) Update Phase II Candidate Projects
- Stakeholder and Public Comment
- Next Steps



Macomb County – Federal Aid Committee (FAC)

Coordination of Local Planning – John Crumm

- Transportation asset management is a strategic and systematic approach to managing MCDR's road and bridge network and transportation system
 - Planning projects and allocating resources based on data, condition, and needs
 - Improving the system while delivering the greatest value to residents, drivers, and communities
- Need to coordinate land use, transportation, economic development, and utility planning
 - Land use and road investment coordination opportunities

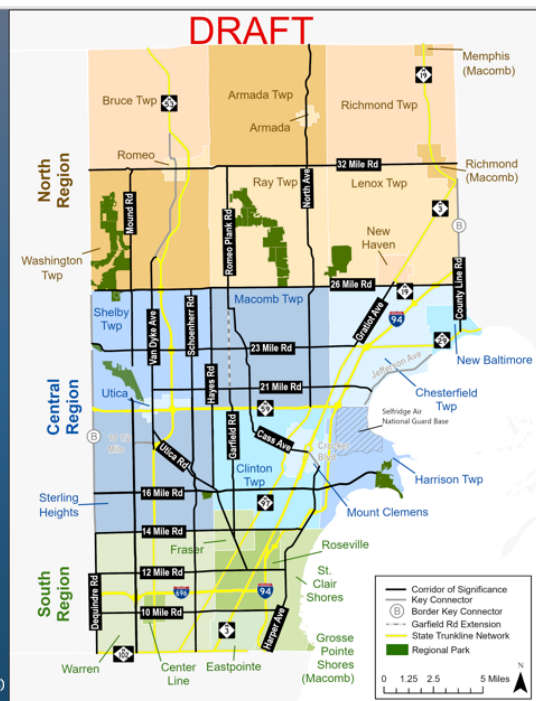


Macomb County – Federal Aid Committee (FAC)

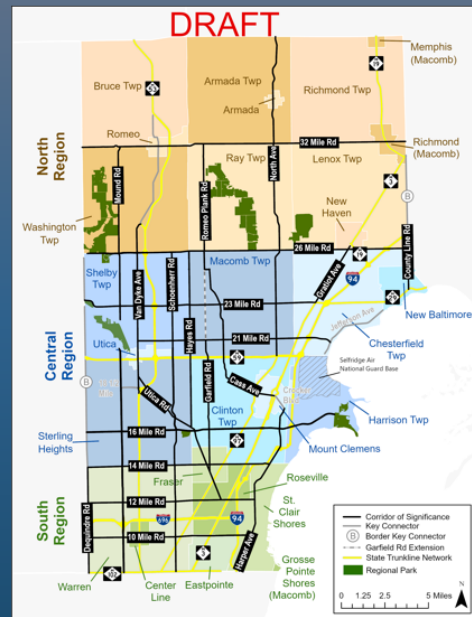
Corridors of Significance – Carly Mitchell

- It is under the Macomb County Department of Roads' (MCDR's) jurisdiction;
- It is federal aid-eligible;
- At least 75% of the corridor is designated as a county primary road in terms of Act 51;
- It connects to a state trunkline;
- It has an origin and a terminus at either:
 - A state trunkline,
 - Another Corridor of Significance,
 - A county border, or
 - A significant regional public or strategic point of interest; and
- It extends through or provides strategic access to at least three municipalities within the County.

Macomb County – Federal Aid Committee (FAC)



Corridor Name	Origin	Terminus
10 Mile Road	Dequindre Road	Harper Avenue
12 Mile Road	Dequindre Road	Harper Avenue
14 Mile Road	Dequindre Road	Harper Avenue
16 Mile Road	Dequindre Road	Metropark
21 Mile Road	Van Dyke Avenue	Jefferson Avenue
23 Mile Road	Dequindre Road	Gratiot Avenue
26 Mile Road	Dequindre Road	County Line Road
32 Mile Road	Dequindre Road	County Line Road
County Line Road	M-29	27 Mile Road
Dequindre Road	M-102	14 Mile Road
Garfield Road / Extension	Utica Road	21 Mile Road
Gratiot Avenue	23 Mile Road	M-19
Harper Avenue	M-102	Crocker Boulevard
Hayes Road	Utica Road	26 Mile Road
Mound Road	M-102	32 Mile Road
North Avenue	M-59	32 Mile Road
Romeo Plank Road / Cass Avenue	M-3	32 Mile Road
Schoenherr Road	M-102	26 Mile Road
Utica Road	12 Mile Road	Van Dyke Avenue
Van Dyke Avenue	M-53	M-53



Macomb County – Federal Aid Committee (FAC)

Summary of Survey Feedback – Alexandra Horst

- Intent is for feedback to inform current and future FAC planning and coordination
- 13 surveys completed between 8/4-23
 - Seven from Northern
 - Four from Central
 - Two from Southern
- Preliminary results – extended deadline to obtain more results

Macomb County – Federal Aid Committee (FAC)

Countywide Stakeholder Engagement Survey

This survey is to be taken by the management of each jurisdiction. Please answer the questions on behalf of the community you represent. All questions except some comment boxes are required to the best of your ability to answer them.

1. In which region of Macomb County is your community located?*

- North (north of 26 Mile Road)
- Central (between 26 Mile Road and 14 Mile Road)
- South (south of 14 Mile Road, including the entirety of the City of Fraser)

2. On a scale of 1 star (worst)-10 stars (best), how would you rate the quality of the existing County-owned (not State-owned or municipal-owned) road system in Macomb County?*

- 1-2 = failed, requiring reconstruction
- 3 = poor, requiring structural improvements
- 4 = fair, requiring structural improvements
- 5 = fair, requiring preservative treatments
- 6 = good, requiring preservative treatments
- 7 = good, requiring crack sealing and minor patching
- 8 = very good, requiring little or no maintenance
- 9-10 = excellent, requiring no maintenance

☆☆☆☆☆☆☆☆☆☆

Survey Feedback cont.

- Quality of existing County-owned roads is rated an average of 5.4/10; of bridges, 6.2/10
- Comment references to both Northern and Southern regions' roads being worse
- 46% rate the conditions of County-owned roads in their own community as worse than the overall conditions of the County-owned road system; 38% rate them about the same
- Importance of interagency coordination is rated an average of 4.6/5

Macomb County – Federal Aid Committee (FAC)

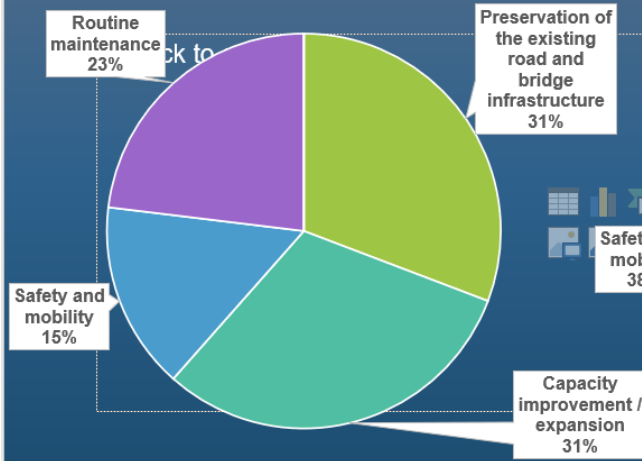
Survey Feedback cont.

- Two major concerns about current state of countywide Corridors of Significance are:
 1. Insufficient infrastructure for bicyclists, pedestrians, and transit
 2. Declining road and bridge infrastructure conditions
- Order of priority of road investments on County-owned system is ranked:
 1. Preservation of the existing road and bridge system
 2. Capacity improvement/expansion
 3. Safety and mobility
 4. Routine maintenance
 5. Other

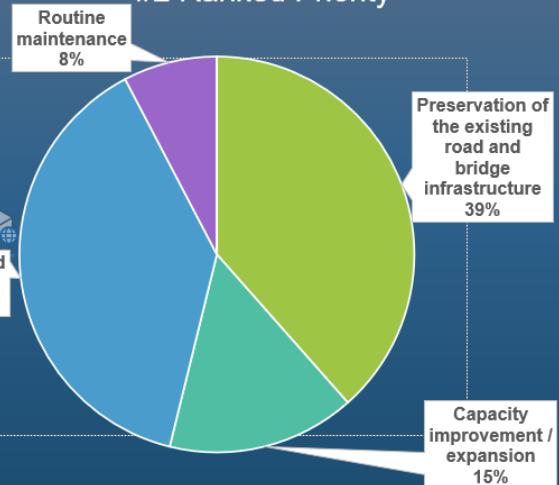
Macomb County – Federal Aid Committee (FAC)

Survey Feedback cont.

#1 Ranked Priority



#2 Ranked Priority



Macomb County – Federal Aid Committee (FAC)

Survey Feedback cont.

- Importance of countywide Corridors of Significance being usable by automobile drivers is rated an average of 4.4/5; by truck drivers, 4.2/5; by pedestrians, 3.3/5; and by bicyclists 2.9/5
- Majority considers multimodal considerations in regard to countywide Corridors of Significance very or somewhat important
- Specific comments provided on:
 - 10, 21, 23, 26, and 32 Mile Roads
 - County Line, Garfield, Hayes, and Romeo Plank Roads
 - North Avenue

Macomb County – Federal Aid Committee (FAC)

FAC Summer Meeting Highlights – Scott Wanagat

- New Four-Year TIP Update
 - Phase I – Selected Preservation Priorities
 - Phase II – Preservation and Widening Candidates
- Network and funding challenges
 - Road system condition in general decline
 - Federal funding priorities are more grant-based
 - Insufficient funding to meet long-term preservation needs
 - Limited federal and state dollars for capacity improvements
 - System resilience, environmentally-friendly investments are top priorities
 - Logical termini environmental clearance policy concerns



Macomb County – Federal Aid Committee (FAC)

FAC Meeting Highlights cont.

- Infrastructure Investment and Jobs Act (IIJA)
 - National focus on freight, rail, nonmotorized, transit
 - Logistics / multimodal facilities
 - Electrification of the national system
 - Does not provide additional “real” dollars to local road agencies
 - Inflation taking a toll
- Result = fewer dollars for federal priorities



Macomb County – Federal Aid Committee (FAC)

Call for Projects (CFP) – Scott Wanagat

- Meet existing commitments in the TIP
- Use all available federal aid each year
- **Focus on construction phase and preservation**
- Prioritize National Highway System (NHS) network and higher-volume non-NHS routes
- Focus on larger projects with broad support, serving more customers
- Benefit all customers on the federal aid network
- Collaborate on border assets



Macomb County – Federal Aid Committee (FAC)

CFP cont. – Scott Wanagat

- Currently working from a running list as solicited in Fall / Winter 2021
- Continually looking to expound and reprioritize based on CORE meetings
 - Locations not selected through FAC – Local Project Priority
- MCDR to conduct evaluations this Fall / Winter for 2024 construction season

Macomb County – Federal Aid Committee (FAC)

Work	Road Type	Description	Estimated Cost
Rehabilitate and resurface	Two-lane asphalt	With bypass and turn lanes	\$2 million/mile
Rehabilitate and resurface	Five-lane concrete	Mill, base repair, and overlay	\$3 million/mile
Pave gravel road	Two-lane asphalt	Gravel to asphalt	\$3 million/mile
Road construction	Two-lane asphalt	Reconstruction	\$3 million/mile
Road construction	Two-lane concrete	Reconstruction	\$3.5 million/mile
Widen road	Five-lane concrete	Widen from two-lane road to five-lane road	\$9 million/mile
Reconstruct road	Five-lane concrete	Reconstruct from two-lane road to five-lane road	\$8.5 million/mile
Single-span	Two-lane bridge	Replacement	\$3 million
Single-span	Bridge	Rehabilitation	\$1.5 million/mile
Single-span	Bridge	Deck replacement	\$1 million
Single-span	Bridge	Preventative maintenance	Varies (<\$1 million/mile)

- Estimates are based on 2021 construction costs and data
- Estimated costs do not include preliminary engineering, construction engineering, or administrative fees

Macomb County – Federal Aid Committee (FAC)



Rehabilitation and resurfacing

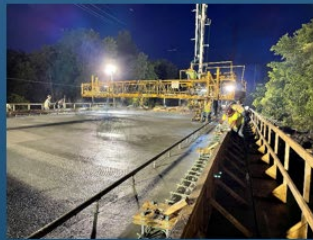


Reconstruction

Structure replacement



Structure rehabilitation



Structure preventative maintenance

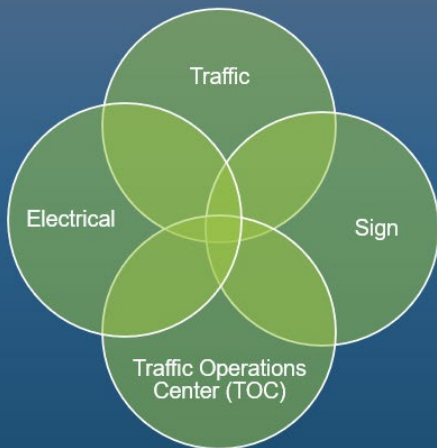


Macomb County – Federal Aid Committee (FAC)

Traffic, Safety, and Operational Update – Dr. John Abraham

Macomb County – Federal Aid Committee (FAC)

Traffic, Safety, and Operational Update cont.



Macomb County – Federal Aid Committee (FAC)

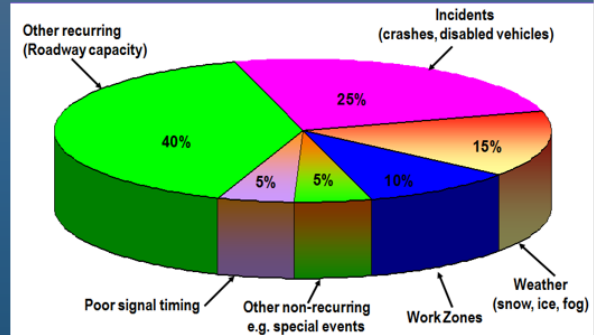
MACOMB COUNTY DRIVING THE FUTURE OF MOBILITY
 Macomb County is committed to the next generation of connected technologies that will enhance our vehicles and our roadways. We strive to find high-tech and innovative solutions that can help us achieve our goal as a fully-connected county for safer and smarter roads.

MACOMB COUNTY AT A GLANCE

- 3RD LARGEST COUNTY IN MICHIGAN, POPULATION 881,217
- 27 CITIES, TOWNSHIPS & VILLAGES
- MACOMB COUNTY ITS NETWORK
- STATE-OF-THE-ART OPERATIONS CENTER
- 740 TRAFFIC SIGNALS AND 1,700 MILES OF ROADS
- OPEN PLATFORM 2070 LINUX BASED ADVANCED TRAFFIC SIGNAL CONTROLLERS MANAGED BY CENTRACS CENTRALIZED SIGNAL SYSTEM
- 703 TRAFFIC SIGNALS CONNECTED TO OPERATIONS CENTER
- 330+ TRAFFIC MONITORING CAMERAS
- ROBUST COMMUNICATIONS NETWORK
- COUNTY OWNED WIRELESS AND FIBER NETWORK

Traffic, Safety, and Operational Update cont.

- Build additional lanes
- Incident management
- Manage planned events
- Monitor signal performance
- Use technology to better manage traffic
- Investments in ITS
 - >\$80 million over ten years
 - Most are 100%, no local match



Macomb County – Federal Aid Committee (FAC)

Traffic, Safety, and Operational Update cont.

Traffic Operations

- 15 contract staff
- Real-time operations
- Incident management
- Maintain ITS devices
- Manage events
- Construction timing
- Weather contingency timing
- Monitor system

Funded by Congestion Mitigation and Air Quality (CMAQ) funds – approximately \$3 million/year

Local match 20%



Macomb County – Federal Aid Committee (FAC)

Traffic, Safety, and Operational Update cont.

- Analyze data and perform engineering studies to identify defects and deficiencies regularly
- Select counter measures and develop projects
- Identify funding and implement projects in a **systemic** manner
 - Low-cost treatments: signs, guardrails (\$250,000/year)
 - Technology: traffic signals, intelligent transportation systems (ITS), transportation systems management and operations
 - Funding: MCDR, CMAQ, Highway Safety Improvement Program, High-Risk Rural Roads, Transportation Alternatives Program
- Evaluate effects of safety measures

Macomb County – Federal Aid Committee (FAC)

County Rank	Name	2016	2017	2018	2019	2020	Total	Average	Comparison 2016-2020
1	Van Dyke Avenue at 11 Mile Road	57	82	47	65	46	297	59.4	-19%
2	Van Dyke Avenue at 11 Mile Road	66	63	56	44	54	283	56.6	-18%
3	Northbound M-53 / Van Dyke Avenue Ramp	50	48	45	69	43	255	51	-14%
4	12 Mile Road at Dequindre Road	67	48	53	43	37	248	49.6	-45%
5	14 Mile Road at Schoenherr Road	56	63	41	43	29	232	46.4	-48%
6	23 Mile Road at Schoenherr Road	53	58	40	41	32	224	44.8	-40%
7	14 Mile Road at Dequindre Road	41	34	52	66	26	219	43.8	-37%
8	12 Mile Road at Ryan Road	53	46	50	38	31	218	43.6	-42%
9	Schoenherr Road at 13 Mile Road	50	41	47	37	36	211	42.2	-28%
10	Cass Avenue at M-97	47	44	55	34	30	210	42	-36%
10	18½ Mile Road at Van Dyke Avenue	47	47	29	61	26	210	42	-45%
12	15 Mile Road at Ryan Road	59	42	50	33	21	205	41	-64%
13	23 Mile Road at Gratiot Avenue	42	45	48	44	21	200	40	-50%
14	12 Mile Road at Hoover Road	43	31	53	41	29	197	39.4	-33%
15	23 Mile Road at Romeo Plank Road	47	53	43	31	20	194	38.8	-57%
16	12 Mile Road at Schoenherr Road	30	48	43	50	22	193	38.6	-27%
16	12 Mile Road at M-97	40	38	53	34	28	193	38.6	-30%
18	M-97 at Utica Road	42	36	40	36	33	187	37.4	-21%
19	Gratiot Avenue at 21 Mile Road	46	36	36	41	27	186	37.2	-41%
20	EB M-59 at Van Dyke Avenue	39	38	43	30	32	182	36.4	-18%

Average reduction: -36%

Macomb County – Federal Aid Committee (FAC)

Key Considerations for Corridors of Significance – Dustin Elliott

- Purpose is not to identify which projects will be advanced into the TIP but to help guide the TIP process
 - **Corridors of Significance Study will not produce a list of priority projects**
- Long-term planning is needed to implement major investments
- Must coordinate County and local planning, funding, asset management, etc., due to competing priorities for public investment
- Feasibility study is needed for a widening project before National Environmental Policy Act (NEPA) begins

Macomb County – Federal Aid Committee (FAC)

TIP Update Phase II Candidate Projects – Dustin Elliott

- See Phase II project list in handout
- Five widening projects
 - 21 Mile Road: Heydenreich Road-North Avenue (two projects)
 - Schoenherr Road: 23-25 Mile Roads (two projects)
 - Hayes Road: 23-24 Mile Roads
- Project justifications

Macomb County – Federal Aid Committee (FAC)

Stakeholder and Public Comment – John Crumm

Macomb County – Federal Aid Committee (FAC)

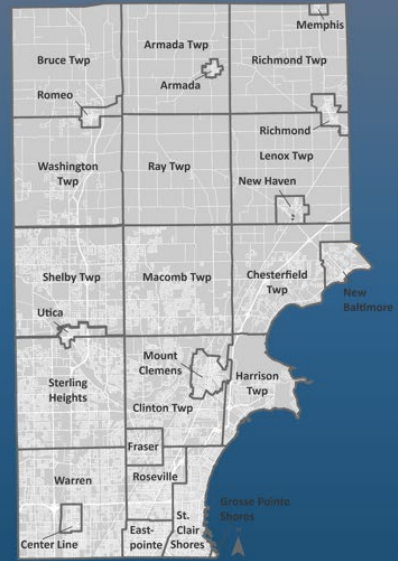
Next Steps – John Crumm

- Goal is for draft Corridors of Significance Study to be reviewed by FAC in September at Fall Meeting
- Final FAC review and acceptance of Study at special December Meeting
- Evaluation and scoring guidance for TIP Subcommittee to be reviewed
- Acceptance of Study will initiate evaluation and scoring of Phase II widening projects
 - **Study will not produce a list of priority projects**
- FAC TIP Subcommittee to recommend Phase II priorities to FAC in early 2023

Macomb County – Federal Aid Committee (FAC)

Thank You for your participation!

Macomb County FAC
Corridors of Significance Study
Stakeholder Engagement



Macomb County – Federal Aid Committee (FAC)

F.2 North Region Stakeholder Meeting Summary

The first stakeholder engagement meeting took place in Washington Township in the North Region on August 23, 2022. The meeting invitation was sent to 24 email addresses representing the jurisdictions in the region on August 4, 2022. RSVPs were sent by 14 people; three of those did not attend the meeting.

A total of 14 people, including three Township Supervisors and three municipal Public Works/Services Directors, attended the meeting. Four attendees represented Washington Township; two, Armada Township; and one each, Ray Township, Lenox Township, the Village of Romeo, and the City of Richmond. Representatives from the Village of New Haven, Bruce Township, the Village of Armada, Richmond Township, and the City of Memphis were invited but did not attend. In addition to the members of the FAC TIP Subcommittee, the following individuals were invited:

Table F-1 North Region Stakeholder Meeting Invitations

Jurisdiction	Administration	Engineering
Armada Township	Supervisor John W. Paterek	Catherine DeDecker
Village of Armada	President Marvin E. Wolak Clerk Michelle Poulos	Paul O'Meara
Bruce Township	Supervisor Mike Fillbrook	Mike Pifer
Lenox Township	Supervisor Anthony Reeder Deputy Supervisor Mark Grabow	Sermid Saif
City of Memphis	Mayor Eric Schneider	Phil Porte
Village of New Haven	President Ann Pridemore	Sermid Saif
Ray Township	Supervisor Joe Jarzyna	Lou Urban
City of Richmond	Mayor Tim Rix	Ken Kingsley
Richmond Township	Supervisor Christopher DeVos	Sermid Saif
Village of Romeo	President Christine Malzahn	Mike MacDonald
Washington Township	Supervisor Sebastian Previti	Mike Kozak Rich Amormino

During the meeting, the project team gave a presentation on the following topics:

- FAC Summer Meeting Highlights
- Summary of Survey Feedback
- Criteria for Corridors of Significance
- Traffic, Safety, and Operational Update
- TIP Update Phase II Candidate Projects
- FAC CFP Recommendation Goals
- Key Considerations for Corridors of Significance
- Coordination of Local Planning
- Stakeholder and Public Comment
- Next Steps

Key topics included the TIP Update; IJJA; network and funding challenges; types and estimated costs of road projects; MCDR's congestion mitigation and crash reduction efforts, TOC, and CFP process; transportation asset management; and the importance of coordinating land use and transportation planning.

Comments were provided by attendees on 23 Mile, 26 Mile, and 32 Mile roads, Mound Road, North Avenue, Romeo Plank Road, Schoenherr Road, and Van Dyke Avenue. Comments were also provided on 28 Mile and 29 Mile and Capac roads, which are not Corridors of Significance. Much of the discussion following the presentation focused on concerns about speed limits and traffic signals.

The project team made several notable clarifications. One, logical termini are key considerations for widening and capacity, but not necessarily rehabilitation, projects. Two, transportation infrastructure cannot be built in advance of development, but only for mitigation purposes once congestion exists. Finally, the federal government expects full corridors, not portions of them, to be studied when considering providing infrastructure funding. A reminder was given at the end of the meeting to complete the survey, after which one individual did.

Figure F-5 Image from North Region Stakeholder Meeting



F.3 Central Region Stakeholder Meeting Summary

The second stakeholder engagement meeting took place at MCDR in the Central Region on August 29, 2022. The meeting invitation was sent to 31 email addresses representing the jurisdictions in the region on August 4, 2022. Ten people sent RSVPs; four of those did not attend the meeting.

A total of ten people, including one Township Supervisor and three municipal Public Services Directors, attended the meeting. Two attendees each represented Clinton Township, Macomb Township, and Chesterfield Township, while one attendee each represented the City of Sterling Heights, the City of Mount Clemens, Shelby Township, and the City of New Baltimore. Representatives from Harrison Township and the City of Utica were invited but did not attend. In addition to the members of the TIP Subcommittee, the following individuals were invited:

Table F-2 Central Region Stakeholder Meeting Invitations

Jurisdiction	Administration	Engineering
Chesterfield Township	Supervisor Bradley A. Kersten Supervisor’s Assistant Karen Gharbie	Mitch O’Connor Catherine DeDecker Lou Urban
Clinton Township	Supervisor Robert J. Cannon Public Services Director Mary Bednar	Scott Chabot
Harrison Township	Supervisor Kenneth J. Verkest Clerk Adam Wit	Dave Nummer
Macomb Township	Supervisor Frank Viviano	Township Engineer Jim Van Tiflin Engineering Manager Crystal Kozak Mike Smith
City of Mount Clemens	Mayor Laura Kropp	Kyle Seidel
City of New Baltimore	Mayor Thomas Semaan Assistant to the Mayor Ron Trombly	John Monte
Shelby Township	Supervisor Richard Stathakis Deputy Supervisor Chelsea Schneider	Gordon Wilson Aseel Putros
City of Sterling Heights	Mayor Michael C. Taylor City Manager Mark Vanderpool	City Engineer Brent Bashaw Sal Conigliaro Steve Pangori
City of Utica	Mayor Thom Dionne Department of Public Works Superintendent Bill Lang	Sal Conigliaro

During the meeting, the project team gave a presentation on the following topics:

- Coordination of Local Planning
- Corridors of Significance
- Summary of Survey Feedback
- FAC Summer Meeting Highlights
- FAC CFP
- Traffic, Safety, and Operational Update
- Key Considerations for Corridors of Significance
- TIP Update Phase II Candidate Projects

- Stakeholder and Public Comment
- Next Steps

Key topics included transportation asset management, the importance of coordinating land use and transportation planning, the TIP Update, IJJA, CFP process, network and funding challenges, types and estimated costs of road projects, MCDR's congestion mitigation and crash reduction efforts, and MCDR's TOC.

Comments were provided by attendees on Harper Avenue and Hayes Road. Much of the discussion following the presentation focused on the Corridors of Significance map and table and clarifications about Phase II of the TIP Update. The project team explained that the *Countywide Corridors of Significance Study* will help develop criteria, which will then be used to prioritize Phase II projects. In analyzing Phase II projects, rehabilitation and capacity projects will not be compared to each other but only to other projects within their own work type. A reminder was given to complete the survey, after which two individuals did.

Figure F-6 Image from Central Region Stakeholder Meeting



F.4 South Region Stakeholder Meeting Summary

The third stakeholder engagement meeting took place in the City of Warren in the South Region on August 31, 2022. The meeting invitation was sent to 16 email addresses representing the jurisdictions in the region on August 4, 2022. Seven people sent RSVPs; three of those did not attend the actual meeting.

A total of seven people, including two Public Works Directors and two City Engineers, attended the meeting. Three attendees represented the City of Center Line; two attendees represented the City of St. Clair Shores; and one attendee each represented the Cities of Warren and Fraser. Representatives from the Cities of Eastpointe and Roseville were invited but did not attend. In addition to the members of the TIP Subcommittee, the following individuals were invited:

Table F-3 South Region Stakeholder Meeting Invitations

Jurisdiction	Administration	Engineering
City of Center Line	Mayor Bon Binson City Manager Dennis Champine	Lou Urban John Chown
City of Eastpointe	Mayor Monique Owens	Steve Pangori
City of Fraser	City Manager Elaine Leven	Mike Vigneron
City of Roseville	Mayor Robert Taylor	Scott Lockwood
City of St. Clair Shores	Community Development & Inspections Director Denise Pike Mayor Kip C. Walby	Chuck Hart
City of Warren	Mayor James R. Fouts	City Engineer Tina Gapshe Mike Smith

During the meeting, the project team gave a presentation on the following topics:

- Coordination of Local Planning
- Corridors of Significance
- Summary of Survey Feedback
- FAC Summer Meeting Highlights
- FAC CFP
- Traffic, Safety, and Operational Update
- Key Considerations for Corridors of Significance
- TIP Update Phase II Candidate Projects
- Stakeholder and Public Comment
- Next Steps

Key topics included transportation asset management, the importance of coordinating land use and transportation planning, the four-year TIP Update, IJJA, CFP process, network and funding challenges, types of road projects and their estimated costs, MCDR’s congestion mitigation and crash reduction efforts, and MCDR’s TOC.

Comments were provided by attendees on 10 Mile Road and Van Dyke Avenue (jurisdiction of MDOT). The importance of collaboration and coordination on 10 Mile Road, in particular, was highlighted. The discussion following the presentation covered MCDR’s philosophy and pavement preservation program,

the state of roads and land use in the South Region, federal grants, and the utilization of TIP funds. MCDR clarified that the pavement preservation program is typically most relevant in the Central and North Regions. As the South Region is built out, and many roads are at least 60 years old and have been rehabilitated, South Region roads are more likely to need to be reconstructed. This is in contrast to the Central Region, which continues to develop and has more need for widening projects. It was suggested that communities submit PASER ratings with applications for projects to be included in the TIP and that TIP funds not be used for widening projects.

The project team clarified that the local CFP provides an opportunity for planning for and vetting reconstruction projects. Local communities can contribute funds to enhance County projects. While MCDR previously prioritized reconstruction and widening projects, as the overall system condition in Macomb County continued to decline, MCDR's philosophy has changed to prioritize preservation. Widening projects can also be conducted for maintenance purposes, however.

Figure F-7 Image from South Region Stakeholder Meeting

