DRAFT

2050
LONG RANGE TRANSPORTATION PLAN




Adopted by:
St. Clair County Transportation Study (SCCOTS): June 12, 2024
St. Clair County Metropolitan Planning Commission: June 12,2024

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Photo Courtesy of the City of Port Huron

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Introduction

INTRODUCTION

The St. Clair County transportation system is about more than simply moving people and things from one place to another. Our transportation system is about economic opportunity, quality of life, and environmental stewardship. Well planned and coordinated, our transportation system can be a catalyst for collaboration and opportunity. It is the responsibility of the St. Clair County Metropolitan Planning Commission and the St. Clair County Transportation Study (SCCOTS) to ensure that the time, talent, and resources we invest in transportation infrastructures delivers the kind of system and community that we desire and need.

St Clair County Metropolitan Planning Commission has produced the SCCOTS 2050 Long Range Transportation Plan to ensure that our transportation system is coordinated throughout the region and serves our current needs while contributing to the future we all desire. Wise investment in our future demands a foresighted plan that balances transportation, land use, and natural resources. St Clair County worked with civic leaders, public officials, and area residents to define a vision for the SCCOTS 2050 Long Range Transportation Plan. This vision seeks to align future transportation needs with policy to preserve the area's resources.

PLANNING PROCESS

This plan was developed with the assistance of local, regional, and state transportation agencies, who met to provide guidance, discuss objectives, and review draft products.

Agencies participating in the steering committee include:

- St. Clair County Metropolitan Planning Commission
- Blue Water Area Transit Commission
- St. Clair County Road Commission
- Southeast Michigan Council of Governments
- St. Clair County Transportation Study- Technical Committee
  - City of Algonac
  - City of Marine City
  - City of Marysville
  - City of Port Huron
  - City of St. Clair
  - City of Yale
  - City of Memphis
  - Village of Capac
  - MDOT

HOW THIS DOCUMENT IS ORGANIZED

This document is organized into four sections.

Part I: Articulates the considerations, vision, and goals that influenced the development of the SCCOTS 2045 Long Range Transportation Plan.

Part II: Explains in greater detail the purpose of the plan.

Part III: Describes the multimodal transportation system envisioned by the plan.

Part IV: Sets forth the specific strategies and steps required to achieve the transportation goals and implement the transportation system envisioned by the region.

STRIKING A BALANCED APPROACH TO TRANSPORTATION

As we worked with communities and agencies to develop this Plan, we were reminded that our ultimate goal was to create a plan that improved the overall livability of our region by balancing the need to move traffic with the need to build quality communities. In order to achieve this balance, we considered not only the movement of vehicles but the mobility of people, the sustainability of the system, and impact of our future investments on land use and growth patterns.

The four main elements of a balanced transportation system include:

Move goods and people by providing:

- A safe and efficient network of roads, highways, and railways
- Transit options
- Bicycle and pedestrian facilities

New Picture Column

FEDERAL PLANNING EMPHASIS AREAS

SCCOTS 2050 Long Range Transportation Plan must comply with certain requirements set forth by federal law. Specifically, Bipartisan Infrastructure Law

Tackling the Climate Focus– Transition to a Clean Energy, Resilient Future
Help achieve the national greenhouse gas reduction goals of 50-52 percent below 2005 levels by 2030, and net-zero emissions by 2050, and increase resilience to extreme weather events and other disasters resulting from the increasing effects of climate change.

Equity and Justice40 in Transportation Planning
Advance racial equity and support for underserved and disadvantaged communities. This will help ensure public involvement in the planning process and that plans and strategies reflect various perspectives, concerns, and priorities from impacted areas.

Complete Streets
The goal is to provide an equitable and safe transportation network for travelers of all ages and abilities, including those from marginalized communities facing historic disinvestment. This vision is not achieved through a one-size-fits-all solution – each complete street is unique and developed to best serve its community context and its primary role in the network.

Public Involvement
The use of Virtual Public Involvement (VPI) broadens the reach of information to the public and makes participation more convenient and affordable to greater numbers of people. Virtual tools provide increased transparency and access to transportation planning activities and decision making processes. Many virtual tools also provide information in visual and interactive formats that enhance public and stakeholder understanding of proposed plans, programs, and projects.

New Picture Column

Increasing participation earlier in the process can reduce project delays and lower staff time and costs.

Strategic Highway Network (STRAHNET)/ U.S. Department of Defense (DOD) Coordination

FHWA Division and FTA regional offices should encourage MPOs and State DOTs to coordinate with representatives from DOD in the transportation planning and project programming process on infrastructure and connectivity needs for STRAHNET routes and other public roads that connect to DOD facilities.

Federal Land Management Agency (FLMA) Coordination

Through joint coordination, the State DOTs, MPOs, Tribal Governments, FLMAs, and local agencies should focus on integration of their transportation planning activities and develop cross-cutting State and MPO long range transportation plans, programs, and corridor studies, as well as the Office of Federal Lands.

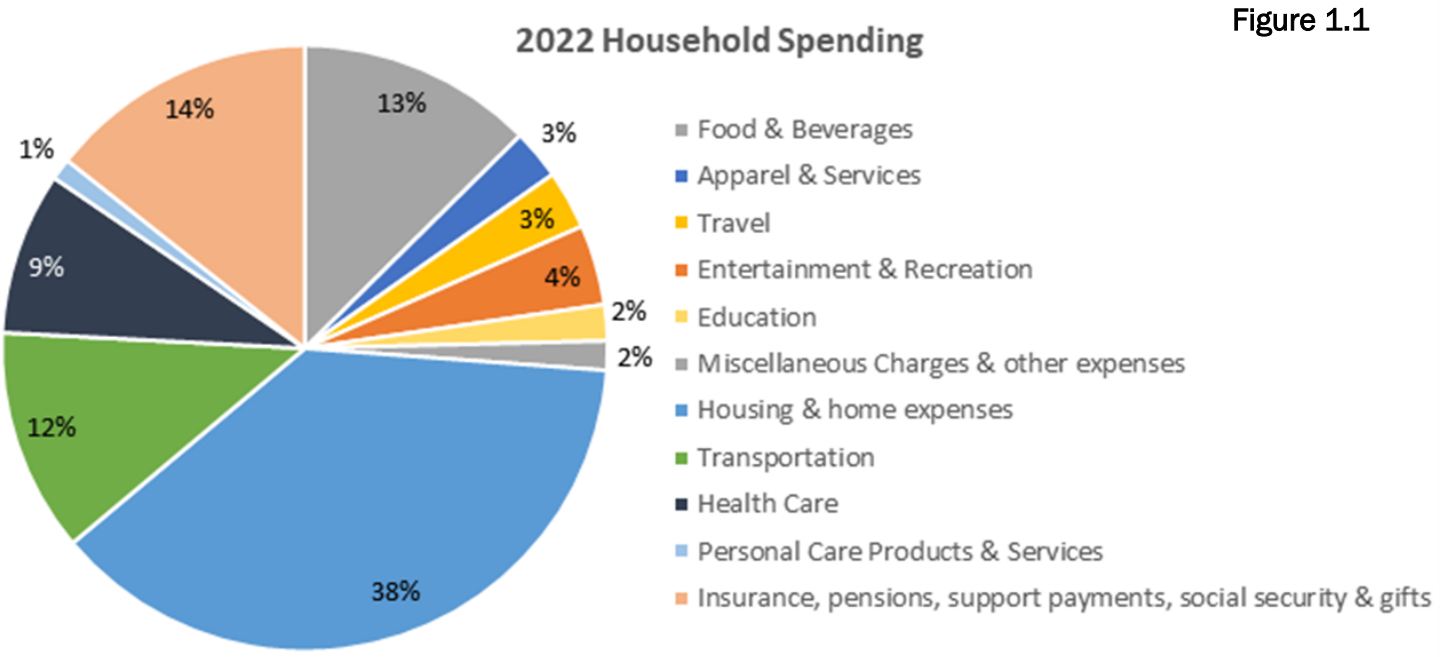
Planning and Environmental Linkages (PEL)

The use of PEL is a collaborative and integrated approach to transportation decision-making that considers environmental, community, and economic goals early in the transportation planning process, and uses the information, analysis, and products developed during planning to inform the environmental review process.

Data in Transportation Planning

Data sharing principles and data management can be used for a variety of issues, such as freight, bike and pedestrian planning, equity analyses, managing curb space, performance management, travel time reliability, connected and autonomous vehicles, mobility services, and safety.

Figure 1.1



Improve quality of travel by providing:

- Context sensitive design solutions
- Personal security and safety
- Improved reliability

Manage demand on the system by providing:

- A connected road network
- Coordinating land use policy
- Policies that encourage telecommuting/e-commerce

Build a sustainable system by:

- Reducing environmental impacts
- Minimizing cost

Considering the Impact of Transportation on our Lives and Landscape

Throughout this process, we also kept in mind the significant impact that transportation infrastructure has on our lives and landscapes.

Transportation systems and investments have a profound impact on our region. They do more than simply respond to growth. They are, in fact, primary determinants to the patterns of growth and land use in a community. Where we focus our transportation investments, and the types of transportation investments we make, goes a long way toward determining where and how we live. For this reason, we considered carefully the direct and indirect impacts of our transportation decisions.

On a more local level, streets have a tremendous impact on the quality of our communities. They comprise the majority of public spaces. In most of our communities, roads and related infrastructure occupy more land than our parks, our playgrounds, and our public places. For this reason, we must plan and design our transportation system with consideration for those who live with it as well as those who use it.

Finally, it is wise to consider the influence of transportation decisions on our wallets. Transportation is typically a household's second largest expenditure. This is the case for St. Clair County if you combine transportation and travel expenses, accounting for 15 percent of all expenses (See Figure 1). Even if transportation is not combined, it is the fourth largest expenditure at 12 percent. Housing & home expenses being the largest expense and Insurance, Food & Beverage, and Transportation all within one percent of each other.

Housing and transportation costs are the two largest expenditures for most households and combining them provides a more accurate depiction of the true cost of housing where the substantial price of living in a vehicle dependent area becomes evident. Many households spend 50 percent of their income on rent and transportation costs combined. This is where St. Clair County is at. When combined, housing and transportation costs comprise 50 percent of total expenditures and if travel expenses are added in the mix, the amount spent swells to 53 percent.

The cost of transportation is a very significant component of household costs that many tenants and home buyers only discover after moving to a community. Generally, the cost of transportation to work, to buy groceries, or to medical facilities is higher in rural areas where less expensive housing is found. Households may unintentionally trade cheaper housing costs located away from economic centers and heavily populated areas for increased transportation costs and number of vehicles owned. Low-income families spent a far greater share of their income on core needs, such as housing, transportation, and food, than upper-income families spent.

Similar to people anywhere, rural and small town residents rely on transportation to access jobs, schools, medical facilities, retail shopping, recreation, social events and other services. As a county with many rural areas and small towns St. Clair faces challenges of lengthy travel distances and limited travel options. While it is sometimes assumed that public transportation is only essential for large urban areas with significant traffic congestion, public transportation can also play an important role in rural areas and small towns. As the county is constantly seeking more efficient solutions to their transportation needs, looking into the expansion of public transportation throughout the more rural areas of the county may be an economical and practical consideration

Background

The St. Clair County Transportation Study (SCCOTS) is a state designated transportation study area within southeast Michigan. SCCOTS functions similar to a Metropolitan Planning Organization (MPO) by setting transportation policy and developing plans. Through the Michigan Department of Transportation (MDOT) and Southeast Michigan Council of Governments (SEMCOG), the designated MPO for the region, over five million dollars in federal funds are allocated to SCCOTS annually.

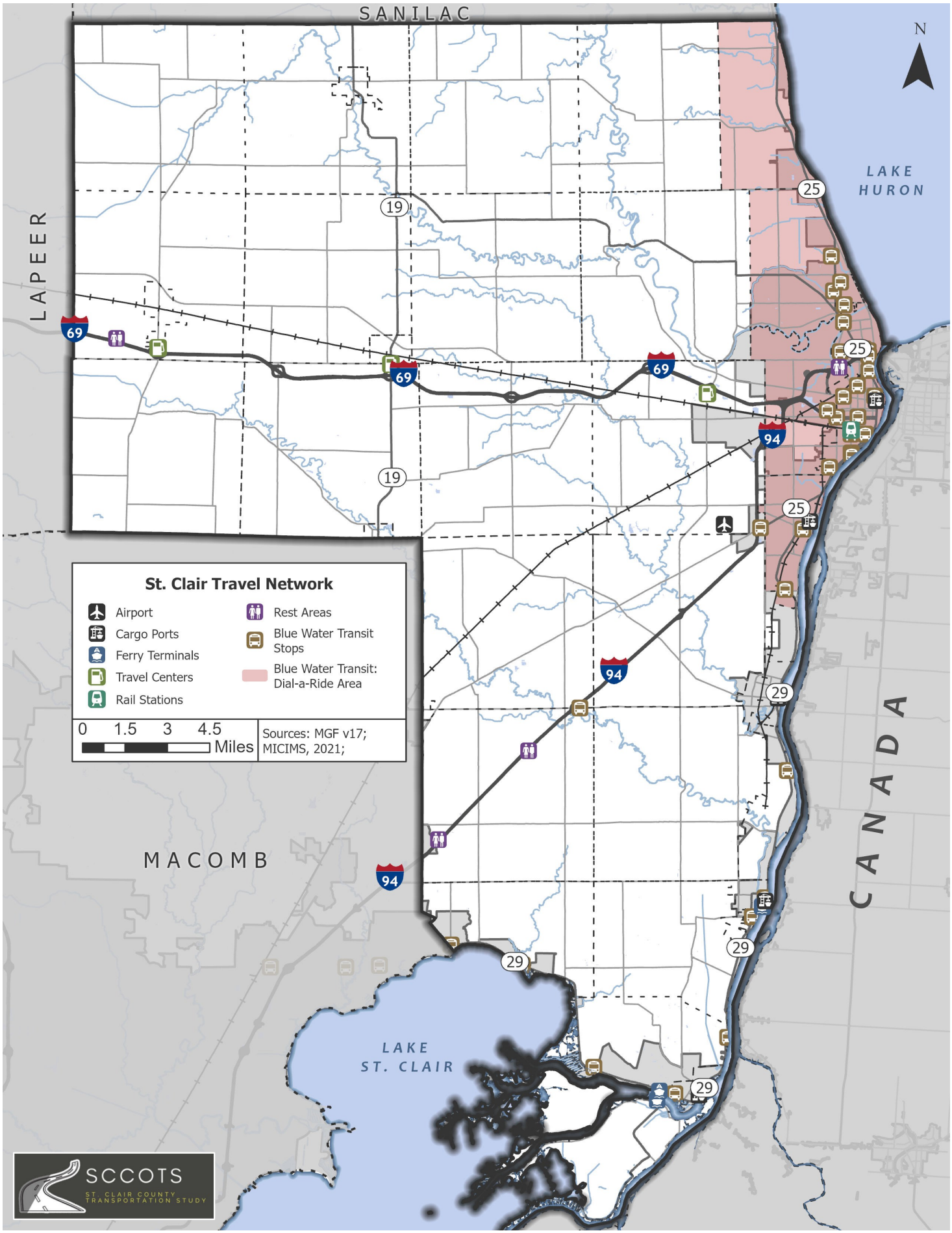
SCCOTS provides several services within St. Clair County, including identifying the county's long range transportation needs as part of the Long Range Transportation Plan (LRTP). The SCCOTS 2045 LRTP was adopted in 2019, and included planning requirements established in the Fixing America's Surface Transportation Act or the "FAST Act" which was signed into law by President Obama in 2015.

Bipartisan Infrastructure Law

The President's Bipartisan Infrastructure Law makes historic investments in the transportation sector: improving public safety and climate resilience, creating jobs across the country, and delivering a more equitable future.

The Bipartisan Infrastructure Law (BIL) includes five-year reauthorization (FY22-26) of surface transportation programs and direct advanced appropriations. Total transportation funding in this five-year package is over $660 billion, including the following over five years:

- Federal Highway Administration: $365 billion
- Federal Transit Administration: $107 billion
- Federal Railroad Administration: $102 billion
- Federal Aviation Administration: $25 billion
- National Highway Traffic Safety Administration: $8 billion
- Federal Motor Carrier Safety Administration: $5 billion
- Maritime Administration: $2 billion
- Office of the Secretary of Transportation: $43 billion


SANILAC
LAPEER
MACOMB
LAKE HURON
LAKE ST. CLAIR
CANADA
N
St. Clair Travel Network
Airport
Cargo Ports
Ferry Terminals
Travel Centers
Rail Stations
Rest Areas
Blue Water Transit Stops
Blue Water Transit: Dial-a-Ride Area
0 1.5 3 4.5 Miles
Sources: MGF v17; MICIMS, 2021;
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

The key components to the BIL include;

SAFETY

Highway Safety Improvement Program
To achieve a significant reduction in traffic fatalities and serious injuries on all public roads

Railway-Highway Crossings Program
For the elimination of hazards at railway-highway crossings

Safe Streets for All
Support local initiatives to prevent transportation-related death and serious injury on roads and streets (commonly referred to as "Vision Zero" or "Toward Zero Deaths" initiatives)

Wildlife Crossings Pilot Program
Support projects that seek to reduce the number of wildlife-vehicle collisions, and in carrying out that purpose, improve habitat connectivity

WORKFORCE

Davis-Bacon and Buy America Provisions
Davis-Bacon wage requirements apply for most major highway programs
Buy America waivers for title 23 projects require public notice of proposed waivers, public comment, annual report to Congress

CLIMATE & RESILIENCY

Carbon Reduction Program
Provide funding for projects to reduce transportation emissions or the development of carbon reduction strategies.

PROTECT Grants
Planning, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure

Charging and Fueling Infrastructure
Deploy electric vehicle (EV) charging and hydrogen/ propane/natural gas fueling infrastructure along designated alternative fuel corridors and in communities

ST CLAIR COUNTY GOALS & OBJECTIVES

The following goals were developed to align our vision with the Federal, State, and Regional planning factors.

1: Preserve transportation infrastructure in ways that are cost-effective and match our community's needs.

- Improve the condition of roads and bridges.
- Create maintenance plans to extend the lifespan of infrastructure.
- Ensure we are tracking community needs and investments to inform our infrastructure decisions.
- Create a plan to evaluate infrastructure assets and priorities in coordination with other infrastructure owners.
- Increase and diversify funding to maximize impact of infrastructure investments and support quality places to live, work, and play.

2. Increase Safety for all travelers, regardless of mode.

- Make transportation safer by minimizing traffic fatalities and injuries.
- Improve safety for all modes of travel (including pedestrians, cyclists, and transit users).
- Use the Safe System Approach to reduce road deaths and injuries by managing consequences of human mistakes.
- Slow down traffic in busy pedestrian areas.
- Increase public knowledge of safe transportation practices.

3. Ensure that everyone, regardless of differences like race, gender, ethnicity, national origin, age, physical or cognitive ability, or income can easily reach essential services and employment opportunities.

- Ensure connectivity between modes and improve last-mile options.
- Improve transit reliability and access to jobs and other core services.

- Work with stakeholders to create transportation solutions that cater to everyone including historically marginalized communities.

4. Use technology to enhance the transportation system in a cost-effective way.

- Encourage the use of innovative and cost-effective technologies.
- Develop connected and automated technologies for future use.
- Ensure that diverse communities and users throughout the region have equal access to, education on, and can afford new technology.

5. Create a transportation system that is resilient, protects the environment, and improves community health.

- Increase infrastructure coordination between agencies and local government.
- Spend more money on stormwater and greenways to prevent flooding and support water quality.
- Make the transportation system better prepared for extreme weather and climate change.
- Reduce pollution from transportation to make the air cleaner and keep people healthier.
- Engage communities to understand their transportation needs and concerns for the environment.

6.Help the regional economy by making sure goods move smoothly and efficiently, making trade connections better, allowing more people to work in different places, and supporting tourism, and placemaking.

- Make places more attractive to people by designing streets that everyone can safely use.
- Slow down traffic in busy shopping areas to make them safer for pedestrians.
- Make transportation connections better between regional economic centers to help goods move around and the economy to grow.
- Make it easier to travel to economic centers.
- Provide many transportation options for people to get to and from work.

7. Educate and work with local governments, transportation agencies, utility providers, and residents to make the transportation system better.

- Educate residents about the costs of transportation improvements and potential impacts of different approaches.
- Increase awareness and understanding of the transportation system and how it is maintained and enhanced.
- Get more people involved in transportation planning and decision making.

8. Increase spending and options for local governments to meet the transportation needs of their communities.

- Help transportation agencies get more money from different places, like the government or private groups.
- Identify long-term funding opportunities in the region.

9. Prepare for challenges that occur as the region's population gets older, like not being able to move around as easily and not having enough workers.

- Provide more travel options like transit, paratransit, shared-rides, biking, and walking.
- Make the transportation system work better for seniors by making sure they can get to destinations that are important to them.

10. Determine how safe and effective the transportation system is by collecting and studying data to make smart investments.

- Make sure transportation spending matches the goals.
- Set goals for each transportation focus area.
- Create a system to collect and analyze a lot of information about transportation.

National Electric Vehicle Program
Strategically deploy electric vehicle (EV) charging infrastructure and establish an interconnected network to facilitate data collection, access, and reliability

Congestion Relief Program
Advance innovative, integrated, and multimodal solutions to reduce congestion and the related economic and environmental costs in the most congested metropolitan areas with an urbanized area population of 1M+.

BRIDGES

Bridge Formula
Replace, rehabilitate, preserve, protect, and construct bridges on public roads

Bridge Investment
Improve bridge (and culvert) condition, safety, efficiency, and reliability

EQUITY

Reconnecting Communities Pilot Program
Restore community connectivity by removing, retrofitting, or mitigating highways or other transportation facilities that create barriers to community connectivity, including to mobility, access, or economic development

Rural Surface Transportation Grants
Improve and expand the surface transportation infrastructure in rural areas to increase connectivity, improve the safety and reliability of the movement of people and freight, and generate regional economic growth and improve quality of life.

FEDERAL LANDS & TRIBAL

Federal Lands Transportation Program
Improve the transportation infrastructure owned and maintained by the following Federal Lands Management Agencies

Federal Lands Access Program
For projects on Federal Lands Access Transportation Facilities that are located on or adjacent to, or that provide access to Federal lands.

Tribal Transportation Program
Provides funds to Federally recognized Indian tribes in order to improve the condition of eligible Bureau of Indian Affairs (BIA)/tribally owned and non-BIA/ tribally owned bridges.

Nationally Significant Federal Lands and Triibal Projects Program
Provides funding for the construction, reconstruction, and rehabilitation of nationally significant projects within, adjacent to, or accessing Federal and Tribal lands.

SIGNIFICANT INFRASTRUCTURE & FREIGHT

National Infrastructure Project Assistance Program
Provide funding through single-year or multiyear grant agreements for eligible surface transportation projects

Local and Regional Project Assistance Program
Projects with a significant local or regional impact that improve transportation infrastructure

INFRA (National Significant Multimodal Freight & Highway Proejcts
To improve the safety, efficiency, and reliability of the movement of freight and people in and across rural and urban areas.

Reduction of Truck Emissions at Port Facilities Program
To reduce truck idling and emissions at ports, including through the advancement of port electrification.

Photos on these pages

RESEARCH, DEVELOPMENT, TECHNOLOGY, & EDUCATION

For major highway-related research, development, technology, and education programs.

PLANNING AND PROJECT DELIVERY

Metropolitan Planning Program
A cooperative, continuous, and comprehensive framework for making transportation investment decisions in metropolitan areas. Program oversight is a joint Federal Highway Administration/Federal Transit Administration responsibility.

Prioritization Process Pilot Program
Pilot program to support data-driven approaches to planning that can be evaluated for public benefit.

Transportation Access Pilot Program

- develop or acquire an open-source accessibility data set with measures of the level of access by multiple transportation modes to jobs, education, various services, and other important destinations;
- provide the data to participating States, MPOs, and rural transportation planning organizations; and
- use the data to help those entities improve their transportation planning by measuring the level of access to important destinations for different demographic groups or freight commodities, then assessing the change in accessibility that would result from new transportation investments.

Accelerating Project Delivery

EMERGENCY RELIEF

Provides funds for emergency repairs and permanent repairs on Federal-aid highways and roads, tribal transportation facilities, and roads on Federal lands that the Secretary finds have suffered serious damage as a result of natural disasters or catastrophic failure from an external cause.

PUBLIC INPUT

St. Clair County is committed to a proactive public outreach effort throughout the development and maintenance of the 2050 LRTP, a Public Participation Plan was adopted by the Metropolitan Planning Commission in June 2017. That plan helped to guide the public participation activities for the development of the 2050 LRTP. The public outreach focuses on maximizing awareness of the study process, obtaining input from residents and employers, and ultimately building support for the plan. Many of the public involvement outreach efforts are completed in conjunction with SEMCOG and the development of their Regional Transportation Plan.

Goals & Objectives Survey to SCCOTS

MPC Staff sent out a survey to the SCCOTS Advisory Committee to help shape and prioritize what the goals and objectives would look like for St. Clair County Transportation Study. Our goals and objectives model those in SEMCOG's Regional Transportation Plan.

Listening Tour

For this Long Range Transportation Plan we conducted a four stop listening tour to gather input at different locations throughout the county; north, south, central, and east. This allowed us to hear from individuals with various concerns. Below is a summary of some of the main topics of conversations.

Roads/Bridges:

- Safety Concerns and non-motorized facilities
- Additional Crossing over Black River
- Roundabouts
- Driver Behaviors
- Lower Speed Limits
- Issues at Rail Crossings

Non-motorized:

- More separated trails/paths in the county
- Complete gaps in Bridge to Bay Trail and make more connection to other trails and parks
- Personal Safety/Security for women on trails
- Have uniform regulations for e-bikes, golf carts, and Sxs
- Increased safety for Peds/Bikes
- Increase visibly at trail/road crossings
- More Education/Training for kids

Transit

- Incldue transit facilities in the corrirdors studies/planning

- Complete on-board surveys
- More dial a ride options

Electric Vehicles/Alternative Fuels

- How do we tax these vehicles?
- E—bikes provide economic opportunities, create different parking issues/concerns
- Is the grid ready for the influx in EV that is predicted?

Short Survey at Fall Planning Workshop

MPC hosted a planning workshop in October 2023, and distributed a brief three-question survey with the attendees registration packet.

1. What is the biggest Transportation Challenge that you face?
2. How safe do you feel on our roadways/sidewalks/bike lanes?
3. Where would you like to see a new trail/path/bike lane?

Thirty-six surveys were filled out. Figure 1.3 is a word cloud generated from question one, these were the most popular words submitted, the larger the word the more frequent it was written on the surveys. Safety, cost, fuel, insurance, poor road quality were among some of the major transportation concerns. Fifty percent of the people that responded considered the roads to be ranked a 7 or above in terms of safety., see Figure 1.2

A digital copy of the LRTP was e-mailed to each municipality in the County and it was also posted on the MPC Website. The County made a few social media posts as well. A public hearing for the 2050 Long Range Transportation Plan was held on Wednesday, May 15, 2024 at the St Clair County Transportation Study Policy Committee (Metropolitan Planning Commission) Meeting.

Figure 1.2

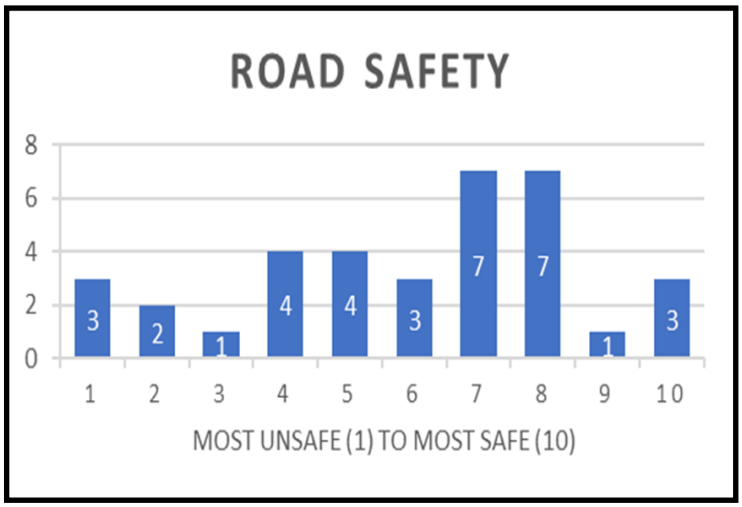
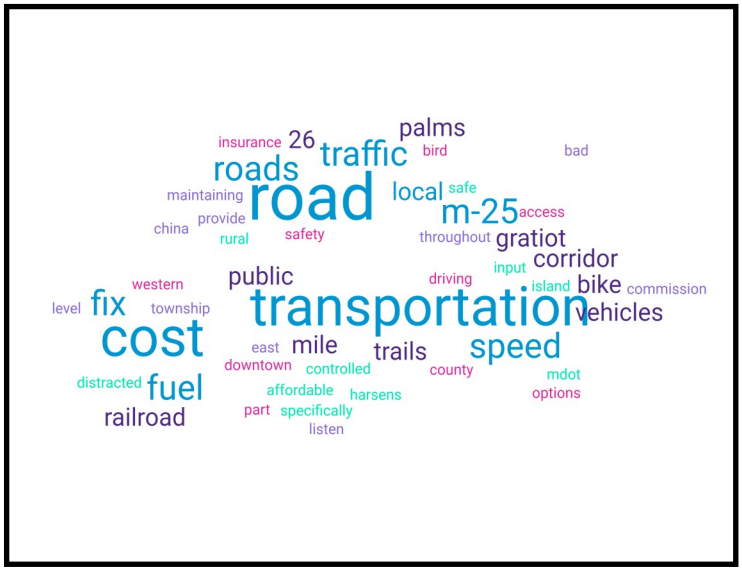


Figure 1.3



Part 2
How The Plan Works

The SCCOTS 2050 Long Range Transportation Plan is intended not only to set forth the strategies to be employed achieve the region's goals and vision but also the tactics, including specific projects, that will be used to actually achieve our desired objectives.

The SCCOTS 2050 Long Range Transportation Plan is designed to be an action-oriented tool for creating the future we desire. It has been developed with the participation of those key to its implementation and has been written in a way to allow sufficient flexibility to respond to future change while establishing specific steps to be taken in the interim.

The intended users of this Plan are the local municipalities and agencies who will implement the various projects identified and the interested public, who will be critical in holding public agencies, like St. Clair County, accountable for their performance in executing the plan.

This section explains how the Plan will be implemented and how interested parties can monitor and amend the Plan as appropriate.

ADOPTION OF THE PLAN

The SCCOTS 2050 Long Range Transportation Plan was adopted by the St. Clair County Metropolitan Planning Commission on January 16, 2019.

AMENDMENTS

Amendments to the Plan can be considered between major plan updates. Requests should be submitted in writing and include:

1) A complete description of the amendment. The description should identify the implementing jurisdiction, where the item appears in the plan, and fully describe the change being proposed.
2) Detailed maps showing the location and effect of the amendment.
3) Any technical information needed to show that the amendment will not have an adverse impact on countywide travel.

SCCOTS Staff will review the request and forward it to the SCCOTS Advisory Committee for their consideration if it meets all qualifying criteria. Amendment requests will be forwarded to the SCCOTS Advisory Committee on a quarterly basis.

Administrative Amendments

These amendments do not require action by the SCCOTS Committee. If an Administrative Amendment is approved by the Transportation Planner, the amendment shall be provided online for the benefit of the public and to the SCCOTS Committee for informational purposes before the next SCCOTS Meeting.

Components of the Plan which do not require amendment

Amendments to descriptive text, including demographic forecasts, background data, performance information, and other content that is advisory or informational in nature does not require formal amendments to the SCCOTS 2050 Plan. Any change to these components should be considered as part of the subsequent major update.

Amendments that require a formal plan amendment process

All other plan amendments require a formal plan amendment process as described in the St. Clair County Public Participation Plan.

FEDERALLY-REQUIRED METROPOLITAN PLANNING PROCESS

The SCCOTS 2050 Long Range Transportation Plan keeps needed Federal Transportation funding flowing to the County. As a condition of receiving such federal funding, SCCOTS is required to develop an updated

Plan Adoption Process

Figure 2.1

Long Range Transportation Plan every 4-5 years. The continuous, comprehensive, and cooperative transportation planning processes used to develop the Plan provides an opportunity for local communities to comes together to set the priorities for the transportation investments in the county.

SCCOTS Transportation Improvement Program

The SCCOTS Transportation Improvement Program (TIP) is a federally required program that includes a listing of key projects in St. Clair County that will be implemented in the short term with Federal, State, and Local funding. For projects to be included in the TIP and received Federal or State funding, they must be consistent with the long range plan.

Selection of Projects

SCCOTS oversees project selection processes for several sources of state and federal funding. The policies, project list, and maps of the plan govern these project selection processes.

Local Project Development

The plan also plays a role in local project development.

Regionally-Significant Projects

The plan includes an accounting of all regionally-significant projects, regardless of funding source. Should the region become a non-attainment area for air quality, regionally significant projects will not be able to move forward without being included in the plan and accounting for their impact on regional air quality.

Regional Framework

The plan provides for coordination of investments in the regional transportation network by entities.

Part 3
Multi-Modal System

Blue Water Area Transit

INTRODUCTION

SCCOTS 2050 Long Range Transportation Plan provides a vision for how the region can implement a comprehensive multi-modal transportation system by 2050. The system will address future transportation needs within the constraints of anticipated funding, while supporting regional air quality, preserving our natural resources, and considering social equity.

This plan calls for the region to:

- Prioritize maintenance of the existing system.
- Support livable communities and efficient use of transportation investments through better integration of land use and transportation.
- Expand investments in public transportation , bicycle and pedestrian infrastructure, and other projects that support reduced demand on the region's roadway system.
- Increase investments in state of the art operation and management of the roadway system, and;
- Leverage local funding and innovative funding resources to support plan implementation.

The major components of the Long Range Transportation Plan are all highly interrelated projects, programs, and policies that work in concert to support efficient access and movement of goods and people over the life of the plan.

POPULATIONS TRENDS AND FORECASTS

One element that fuels the need for regular updates to the LRTP is the change and shift in demographic and socioeconomic trends. This refers to the number of residents and employees in the county, where they will live and work, and their social and economic factors that affect how and when they travel. Past trends and the future outlook are used to determine the expected impact to the transportation system through 2050 based on the anticipated shift in demographics. Between 2010 and 2020, the population of the County decreased by 1.63% from 163,040 to 160,383. Much of this population loss was a result of a weak economy and loss of jobs.
According to SEMCOG, St. Clair County currently has a 2023 (July) population of 160,081, representing an approximate population decrease of 302 (-0.19%) from 2020 United States Census figures and 2,959 (-1.81%) from 2010 Census figures. While we have experienced a rather steady drop in population for over a decade, this decline is estimated to come to an end and grow to over 163 thousand by 2050.

The forecasted population change by community within St. Clair County is one of either minimal growth or decline (See Figure 3.1). With the exception of four communities, each municipality within the County is anticipated to experience their population fluctuate either positively or negatively, but all staying within the single digits percentage rates (-9.48%-9.58%).
Fort Gratiot Township is slightly higher with an anticipated growth rate of 12 percent by 2050, but the City of Richmond is expected to grow the most, by over 15 percent. The Townships of Greenwood and Lynn, are the only communities with populations expected to shrink at a rate in the double digits by 2050 (-13.62% and -13.88%, respectively). This appears to be a trend similar to other counties that have been experiencing their population shifting outward from the cities and villages into the suburban and rural townships.

Age Composition

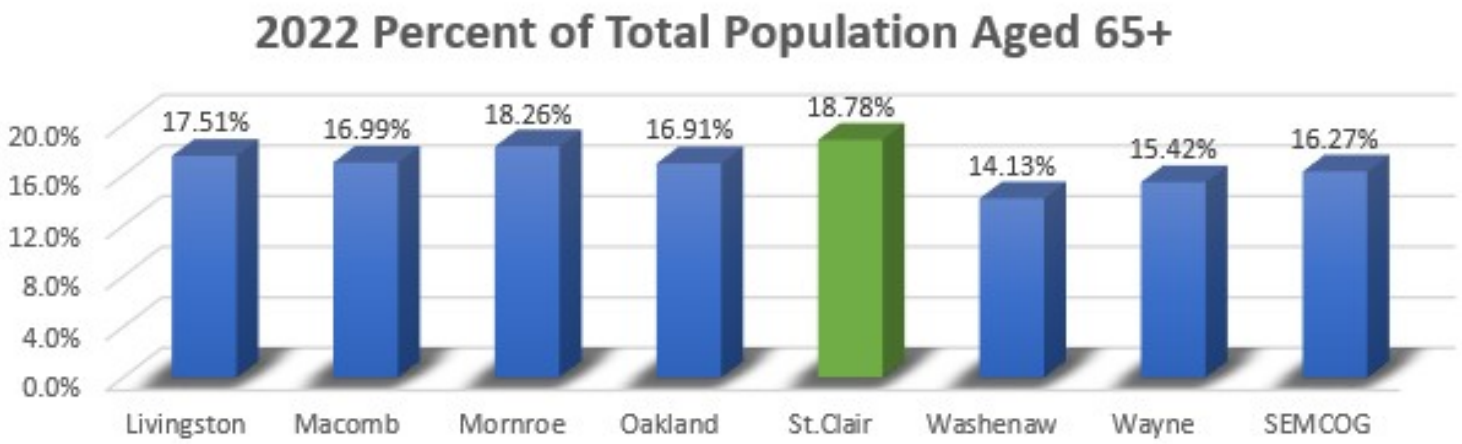
Looking at the County's population when broken down by age reveals it is changing composition and the average age is becoming older. This is a significant issue from a transportation perspective as experience indicates that older populations seek out alternative transportation options, as they are unable to rely solely on their cars, or are no longer interested in doing so. It will become critical to adequately provide for the changing mobility needs of older adults as their transportation preferences shift over time. According to the 2022 U.S. Census American

Figure 3.1

Population Forecast: St. Clair County Communities					
	2020	2030	2040	2050	Growth
St. Clair County	160,383	159,213	164,884	163,144	1.72%
Algonac City	4,196	4,207	4,265	4,132	-1.53%
Berlin Township	3,115	2,917	3,085	3,022	-2.99%
Brockway Township	1,897	1,861	1,900	1,799	-5.17
Burtchville Township	4,077	4,012	4,109	4,021	-1.37%
Casco Township	3,990	3,782	3,897	3,782	-5.21%
Capac Village	1,983	1,997	2,043	2,091	5.45%
China Township	3,509	3,439	3,598	3,475	-0.97%
Clay Township	8,446	8,429	9,176	9,255	9.58%
Clyde Township	5,523	5,143	5,251	5,173	-6.34%
Columbus Township	4,112	4,012	4,048	4,032	-1.95%
Cottrellville Township	3,406	3,227	3,264	3,159	-7.25%
East China Township	3,704	3,772	3,960	3,886	4.91%
Emmett Township	2,257	2,137	2,137	2,043	-9.48%
Emmett Village*	258	238	246	239	-7.36%
Fort Gratiot Township	11,242	11,981	12,460	12,600	12.08%
Grant Township	1,829	1,689	1,733	1,675	-8.42%
Greenwood Township	1,490	1,433	1,419	1,287	-13.62%
Ira Township	4,967	5,156	5,268	5,114	2.96%
Kenockee Township	2,405	2,322	2,390	2,333	-2.99%
Kimball Township	9,609	9,670	10,010	10,194	6.09%
Lynn Township	1,117	1,008	1,005	962	-13.88%
Marine City	4,079	4,065	4,117	3,943	-3.33%
Marysville City	9,997	10,064	10,548	10,334	3.37%
Memphis City	315	345	352	340	7.94%
Mussey Township	2,251	2,151	2,147	2,052	-8.84%
Port Huron City	28,983	28,754	29,479	29,270	0.99%
Port Huron Township	10,792	10,624	11,382	11,497	6.53%
Richmond City	5,875	6,204	6,717	6,799	15.73%
Riley Township	3,199	3,105	3,201	3,136	-1.97%
St. Clair City	5,464	5,642	5,850	5,839	6.86%
St. Clair Township	7,085	7,123	7,481	7,470	5.43%
Wales Township	3,180	3,046	3,198	3,166	-0.44%
Yale City	1,903	1,801	1,862	1,820	-4.36%

Source: SEMCOG

Figure 3.2



Aging Population- Source: U.S. Census

Community Survey, approximately 18.78 percent of the population in St. Clair County was age 65 or older. This is a higher proportion of elderly residents than in any of the other six counties within the SEMCOG region or the average of the entire Southeast Michigan region which is comprised of 16.27 percent (See Figure 3.2) aged 65 or older. Between 2020 and 2050, the number of residents aged 65 or older is expected to increase by nearly 29%, with an anticipated 40,479 people. In 2050, the population of the Southeast Michigan region is anticipated to consist of 21.47 percent age 65 or older.

However, an increase of people over the age of 65 is not the only driver of this trend but also a diminishing proportion of the population under the age of 18. The youth population of the county is experiencing a decrease which is anticipated to continue into the forecasted future of St. Clair County. This is a similar trend occurring among all of southeastern Michigan, with the exception of Livingston Washtenaw Counties. Looking at the last Census and into the future, from 2020 to 2050, the proportion of the population in St. Clair County under the age of 18 is expected to decrease by over 10 percent during the 30 year timespan. Meanwhile, the proportion of the population aged 65 or over is anticipated to grow by 28.7% during the same 35 year span. Taking into consideration the current forecasted population numbers and the growing elderly population beginning to decline in numbers due to mortality, without an influx of population from outside of the county or a significant increase in birth rates, St. Clair County is likely to see a dramatic decline in coming decades.

Economic Trends and Forecasts

Current conditions as well as anticipated future trends indicate only moderate growth in Southeast Michigan's population and labor market over the next 30 years. The forecasted employment change of St. Clair County at the community level is one of either minimal growth or decline. Over half (17 communities) of the County's 33 municipalities are expected to experience some growth. With the exception of nine communities, each municipality within St. Clair County is anticipated to experience a positive or negative fluctuation of less than 5%. There are three communities projected to lose jobs at rates greater than 5% (Greenwood Township, -5.17%; City of Marysville, -5.74%; City of St. Clair, -9.36%), with the City of St. Clair also being expected to lose the highest amount of jobs with an expected loss of 418 jobs. Wales Township is expected to see the greatest jump in employment percentage wise with an anticipated increase of 11.41 percent by 2050. However, the community with the highest figure of new jobs is the City of Richmond with the anticipation of 78 jobs to be added by 2050 (0.73 percent increase) As projections, these numbers simply reflect the labor force changes we can expect if past trends continue into the future; however, there are many factors that could alter these expected trends.

Labor Force

Statewide, the workforce actually shrunk in size, with a decrease of 135,000 persons – or nearly 3% - from 2017 to 2021. Within the region the relative size of

Figure 3.3

Employment Forecast					
	2020	2030	20400	2050	Growth
Southeast Michigan	2,695,336	3,095,012	3,152,120	3,226,962	19.72%
St. Clair County	60,808	68,791	68,799	67,531	11.06%
Algonac City	679	767	803	799	17.67%
Berlin Township	399	478	505	494	23.81%
Brockway Township	452	525	541	545	20.58%
Burtchville Township	576	654	692	687	19.27%
Casco Township	1,000	1,108	1,139	1,138	13.80%
Capac Village	563	680	686	686	21.85%
China Township	923	1,003	905	958	3.79%
Clay Township	2,178	2,347	2,388	2,342	7.53%
Clyde Township	727	832	797	802	10.32%
Columbus Township	762	824	815	795	4.33%
Cottrellville Township	532	632	653	633	18.98%
East China Township	1,801	1,865	1,868	1,854	2.94%
Emmett Township	233	279	297	294	26.18%
Emmett Village*	174	203	214	209	20.11%
Fort Gratiot Township	6,070	6,813	6,718	6,581	8.42%
Grant Township	225	246	255	263	16.89%
Greenwood Township	257	290	286	275	7.00%
Ira Township	1,714	2,015	2,022	1,976	15.29%
Kenockee Township	299	345	358	362	21.07%
Kimball Township	2,495	2,682	2,722	2,669	6.97%
Lynn Township	146	164	167	170	16.44%
Marine City	2,181	2,405	2,387	2,314	6.10%
Marysville City	6,341	7,042	6,830	6,640	4.72%
Memphis City	88	117	126	126	43.18%
Mussey Township	362	441	444	437	20.72%
Port Huron City	17,272	19,367	19,493	19,219	11.27%
Port Huron Township	5,237	5,867	5,923	5,795	10.65%
Richmond City	1,292	1,534	1,596	1,612	24.77%
Riley Township	499	549	560	553	10.82%
St. Clair City	3,186	4,466	4,277	4,048	27.06%
St. Clair Township	1,757	1,935	1,986	2,001	13.89%
Wales Township	482	561	600	625	29.67%
Yale City	1,189	1,281	1,256	1,232	3.62%

Source: SEMCOG

the workforce decreased in all counties from 2019 to 2021, in part because of the impacts of the COVID-19 pandemic in 2020. St. Clair County's workforce shrunk by 1,816, or 2.4%, from 2017 to 2021.

St. Clair County's labor force includes 74,255 residents, of which 94% were employed in 2021. These labor numbers are on par with the State of Michigan, which also had 94% of its labor force employed that year. The 2021 employment numbers were roughly 4% less than pre-COVID employment levels in 2019. Over the past five years, St. Clair County's unemployment rate has been slightly higher than the state as a whole. The county's unemployment rate is closely tied to that of the state and the nation as a whole, both of which saw similar increases in unemployment during the COVID-19 pandemic.

Workforce and education must be aligned with economic development goals. In order to align, there must be an understanding of the requirements of industries in the region. The knowledge, skills and education required by industry in order to successfully compete must also be understood. Educational opportunities must be expanded to meet these needs. In order to ensure that individuals have the skills necessary to advance, partnerships with business and education must be built within the workforce development system. That said, a college education is not the only pathway to a higher wage job. There is also a need for skilled trades within the county and community partners need to ensure there are quality opportunities for students and workers to learn these valuable skills that can lead to a good career.

Travel Patterns

Travel generated by employers and employees contributes significantly to peak-time trips on a transportation network. This may include impacts on traffic volumes and traffic congestion, demands for new or upgraded access or infrastructure, or an opportunity for targeted investments in public transit. According to SEMCOG Data, approximately 43,000 St. Clair County residents, or 62.5 percent, worked within the county. Of the 25,914 residents, or 37.5 percent who commuted to work outside of the county, 606 people, less than one percent of that number is commuting outside of the state. Data on where

Figure 3.4

Where St. Clair County's Workforce Lives, 2016		
	Count	Share
Total All Jobs	51,550	100%
St. Clair County	43,280	84%
Macomb County	3,805	7.4%
Our of the Region, Instate	3,463	6.7%
Oakland County	505	1%
Wayne County	345	0.7%
Out of State	77	0.1%
Monroe County	45	0.1%
Livingston County	15	0%
Washtenaw County	15	0%
*Workers, age 16 and over employed in St. Clair County		

Source: SEMCOG

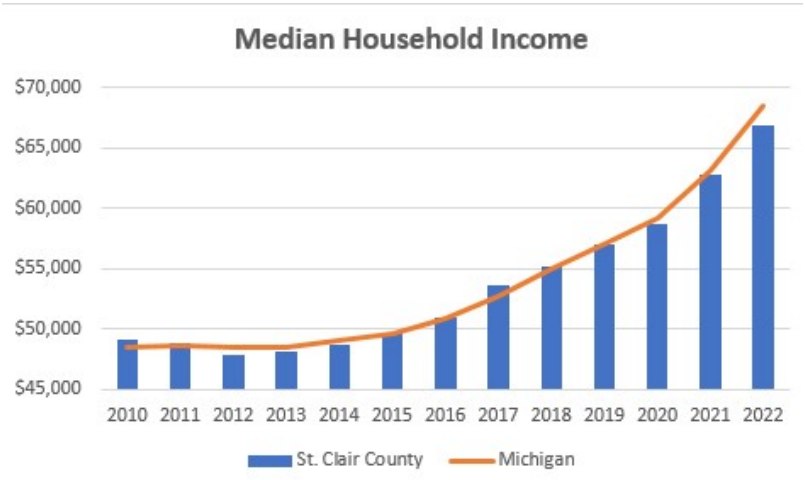
Figure 3.5

Where St. Clair County Residents Work, 2016		
	Count	Share
Total All Jobs	69,194	100.0%
St. Clair County	43,280	62.5%
Macomb County	16,245	23.5%
Oakland County	3,600	5.2%
Wayne County	3,155	4.6%
Out of the Region, Instate	2,163	3.1%
Out of State	606	0.9%
Washtenaw County	55	0.1%
Monroe County	50	0.1%
Livingston County	40	0.1%
*Workers, age 16 and over residing in St. Clair County		

Source: SEMCOG

Figure 3.6

SMR in Marysville, MI: Large Employer in St. Clair County



Source: U.S. Census

individuals in St. Clair County live and work provide valuable insight for assessing transportation. According to the United States Census, On The Map Application and LEHD Origin-Destination the top ten county level locations where workers who are employed in St. Clair County live and commute from are depicted in Figure 3.4 and the top ten county level destinations where workers who live in St. Clair County commute to are depicted in Figure 3.5

Where people live and the transportation options available can influence their travel method choices. Driving is undeniably the predominant mode of travel in St. Clair County. According to 2022 ACS data, at least 40 percent of the county's workforce have two vehicles available, an even greater amount, 42 percent, have three or more vehicles available and only 2.3 percent of the workforce has no vehicle available to them. Only 1.2 percent walked to work and less than one percent of St. Clair County workers used public transportation. Of all work trips made, the majority, 82.6 percent, are made by people driving alone and the amount of carpooling has decreased. The number of commuters using public transportation, walking, or biking has remained relatively constant.

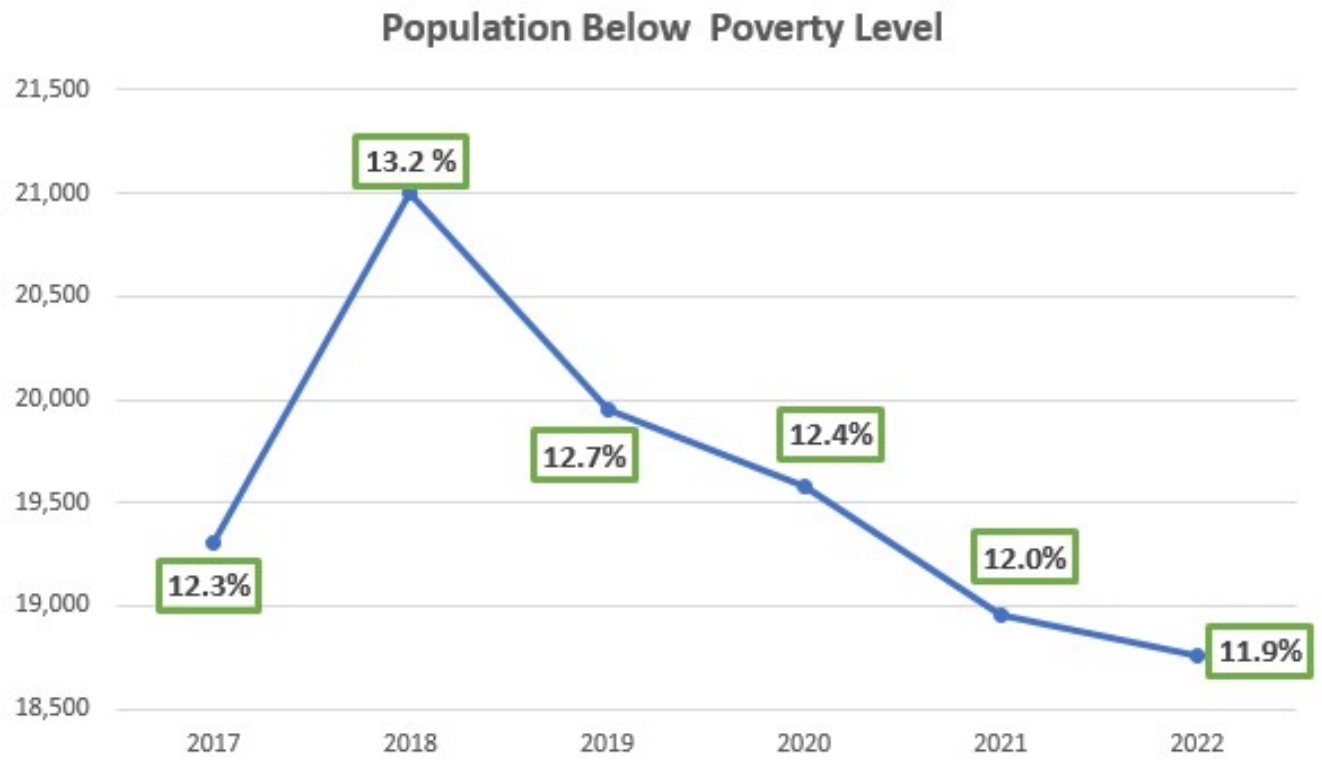
It takes St. Clair County residents an average of 29.1 minutes to get to work. Approximately 52 percent have a commute time under 25 minutes, and almost 16 percent have a commute of less than 10 minutes. At the other end of the spectrum, 13 percent commute at least an hour to get to their workplace. St. Clair's commute times are slightly higher than at the state level, where the average commute time is 24.5 minutes; over 59 percent have a commute less than 25 minutes, and just over 6 percent commute at least an hour to work.

Income and Poverty Trends

Income is another important dimension of the region's economic profile. The labor market is the foundation of income for the vast majority of families. Family incomes are affected by weak labor markets, both through job loss and through hour and wage cuts for those who have work. Although the median household income of St. Clair County has been increasing since 2015 after holding steady between 2010 and 2014. During this same timespan the average household income in St. Clair County has been consistent with the household incomes for the State of Michigan. The current median household income is $66,877, according to the 2022 U.S. Census American Community Survey estimates. This is an increase of 13.9 percent or $8,165 from the 2020 Census estimates.

Household income significantly influences a person's travel behavior. The less disposable income a person has, the less likely they are to own multiple vehicles or even one vehicle, and likely to have a higher dependency on other forms of transportation, such as public transport, family and/or friends, walking or bicycling. The higher disposable income a person has, the more likely they are to own multiple cars. In addition, it is more probable they have a larger selection of housing choices in relation to where they

Figure 3.7



Source: U.S. Census

work, shop, and recreate and how they commute (by car, public transportation as a choice rider, or other modes) as wealthier households are more likely to travel further distances and more frequent for leisure activities.

The official U.S. Census Bureau's poverty measure uses money income to determine a person's poverty status. Money income includes all sources of income with the exception of capital gains or losses, noncash benefits and tax credits. Each family or unrelated individual in the population is assigned a money income threshold based on the size of his or her family and age of its members. A person is defined as living in poverty if his or her family income is below the poverty threshold for that family size and composition (the poverty threshold for a couple with two children was $31,200 in 2022 If a family's total income Is less than the poverty threshold for a family of equal size, that family and everyone in it is considered to be in poverty. The poverty thresholds are adjusted each year to reflect changes in the consumer price index.

The U.S. Census' 2022 American Community Survey reported that 18,761 persons or 11.9 percent lived below poverty level (See Figure 11). This is a decrease of over 4 percent from the 2020 Census that reported over 19,500 persons were living in poverty. The U.S. Census' 2022 American Community Survey also reported that 18,761 people were at or below the poverty level. This equates to 11.9 percent. This is a 2.8 percent decrease from the 19,310 people (12.3 percent) reported to be in poverty in 2017).

A. Countywide Roadway System

Improvement and expansion to the current system of roadways in the County with a focus on:

- Relieving existing congestion hot-spots.
- Improving safety and security.
- Supporting public transportation, and;
- Serving expected and desired future growth in the County.

The financially constrained project list on page 4-8 of this plan provides detailed information about the roadway projects that would be implemented.

Regional Significance and Roadway

Who is responsible for the location and design of road?

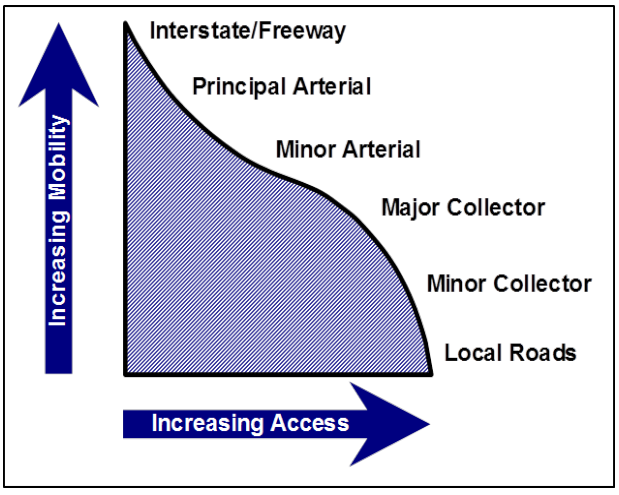
The SCCOTS 2050 Long Range Transportation Plan does not govern the specific design or alignment of roadways. Nor does it govern the design of intersections. The jurisdiction responsible for the upgrading or constructing the roadway has authority over all aspects related to alignment, design and connections between facilities. While the system maps included in this plan show the approximate location of roadways, these may not align with actual or planned locations.

Functional Classification

The plan prioritizes regionally significant roadways. These are roadways that have been classified as arterials or higher, or that are, in some limited cases, collectors of regional significance. Over the life of the plan, additional improvements and expansions will also be made to the County's system of local roads and collectors which are not shown in the plan. In order for a roadway project to qualify for state or federal funding, it must be included in the SCCOTS 2050 Long Range Transportation Plan.

Local Priorities

While the focus of state and federal funding will be on regionally significant roadways, the plan also identifies numerous projects, which would be paid for entirely with local funding. These projects have been prioritized for inclusion in the plan by the potential project sponsor.



Multimodal Functionality

Federally-funded roadways in urban/suburban areas will be designed to function for multiple modes and uses. Where feasible, roads will be designed to accommodate bicycles and pedestrians. Roadways should also provide elements that are beneficial to freight and/or public transportation, including wide outer lanes and other features that support the movement of larger vehicles.

B. Public Transportation

Public transportation is critical to the County's productivity and economic development. It can reduce congestion, improve environmental quality, and encourage a more sustainable environment for development. Today, the County has several challenges to its public transportation, including:

- Increasing demand and costs which strain existing public transportation resources.
- Jurisdictional and service boundaries as well as funding barriers which increase cost and complexity of coordination and leave some communities with limited or no service, and;
- The lack of a predictable amount of annual State funding makes budgeting for current and future service very challenging.

Blue Water Area Transit Downtown Transfer Center

The Blue Water Area Transportation Commission (BWATC) provides transit services to several communities within St. Clair County including the cities of Port Huron and Marysville and the townships of Port Huron, Fort Gratiot and Burtchville. BWATC operates a combination of fixed route, demand response and contract services.

Downtown Transfer Center

A new transfer center opened in December of 2015, in downtown Port Huron. The center is located south of McMorran Place, between McMorran Blvd and Grand River Ave. This center provides more than 2,000 daily passengers who come downtown a safe and efficient means to transfer buses. Buses enter and depart in different directions and wait for passengers in two sheltered parallel lanes.
Blue Water Area Transit's bus transit center project included more than $2.5 million in improvements to the surrounding downtown area. BWAT improved landscaping, lighting, parking, walkways, outdoor seating, and roads, which makes the area more appealing for all downtown visitors.

In addition to BWAT funds, the $9.8 Million bus transit center project was made possible by support from federal funds (70%) and state funding (17.5%).

Existing Condtions and Trends

Blue Water Area Transit and a number of other agencies in the county currently provide general and/or client based public transportation services. While coverage is moderate, Map #2 illustrates that there are portions of the urbanized area that fall outside of the Blue Water Area Transit Service Area.

The communities that are included within the service area have opted to contribute. The City of Port Huron, Fort Gratiot Township, Burtchville Township, and Port Huron Township all have specific transit millages. The City of Marysville pays out of their general fund.

Fixed Routes

BWATC currently operates eight regularly scheduled bus routes (routes #1 to #6, #9, and shopper shuttle) within the City of Port Huron, Fort Gratiot Township, and Port Huron Township. Although there are fixed stops along each route, the service operates a flag system where necessary to allow bus riders to catch the bus anywhere along route. Headways are generally 45 minutes and all vehicles for the fixed route service are lift or ramps equipped and are equipped with bicycle racks. Map 3.1 displays the BWATC's current countywide service, including a detailed inset view of service in downtown Port Huron.

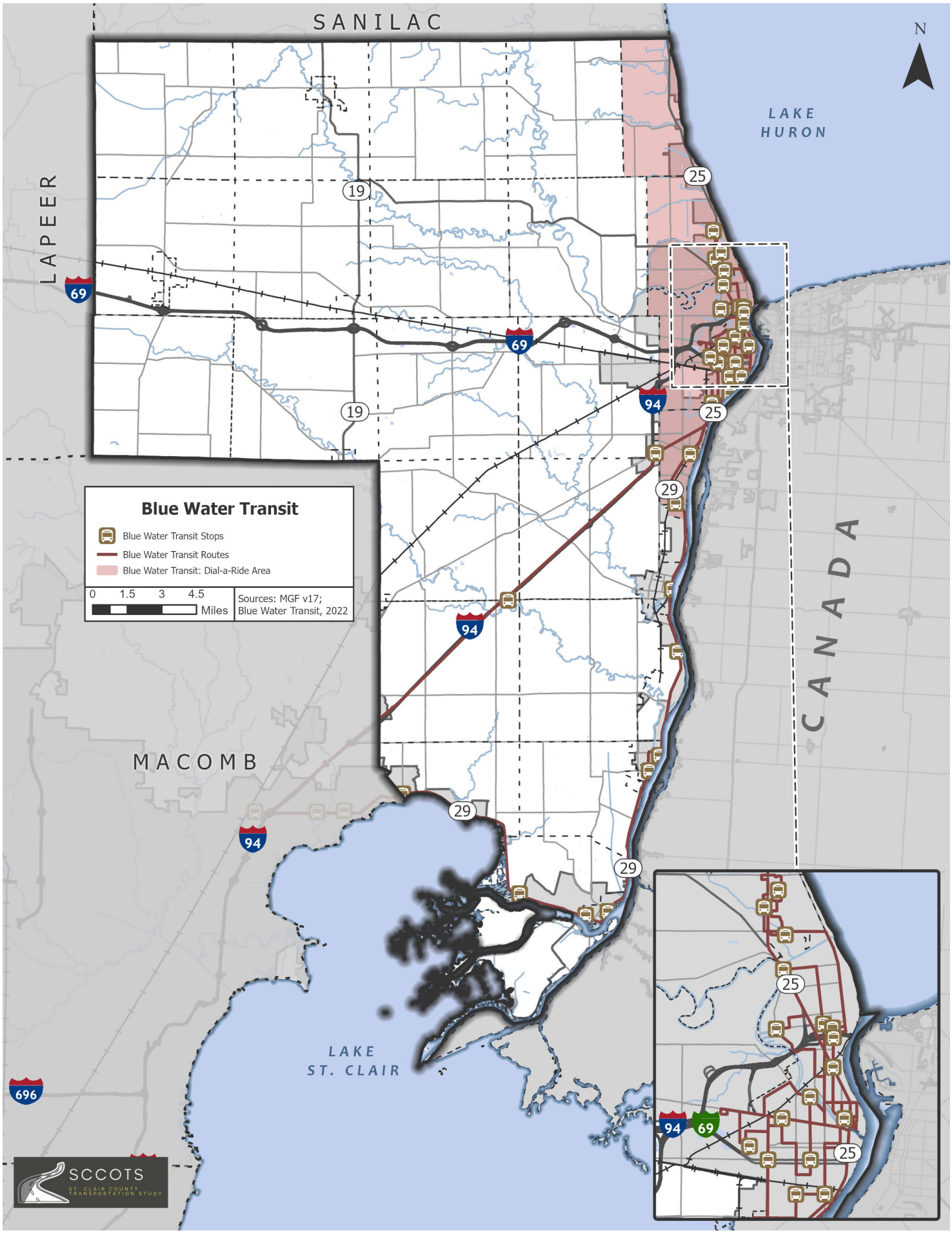
Demand Response

Demand response, or Dial-A-Ride, services are available Monday- Saturday to residents living in Burtchville, Port Huron, and Fort Gratiot townships and Monday - Friday in the City of Marysville. Bus service is often dispatched within the hour, depending on when a customer reserves a ride. Reservations made 24 hours in advance can usually guarantee a trip that conforms to a customer's schedule.

On-demand services are available for Americans with Disabilities Act (ADA) eligible riders, as well as limited mobility passengers. Reservations can be made as early as two weeks in advance and as late as the day prior to scheduled pick-up. All vehicles available for this service are ADA accessible

Commuter Routes

Two commuter routes run between Port Huron and Chesterfield Township, a community in northern Macomb County that is home to many suburban office parks, twice a day Monday through Friday. This service links up with the Suburban Mobility Authority for Regional Transportation (SMART) buses so commuters can make a connection to their final


SANILAC
LAPEER
MACOMB
LAKE HURON
LAKE ST. CLAIR
CANADA
N
Blue Water Transit
Blue Water Transit Stops
Blue Water Transit Routes
Blue Water Transit: Dial-a-Ride Area
0 1.5 3 4.5
Miles
Sources: MGF v17; Blue Water Transit, 2022
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

destination in Southeast Michigan and/or downtown Detroit. One route is called the I-94 Express Route. It has 4 stops in St. Clair County before reaching its final destination at 23 Mile Rd. and Gratiot. Commuters can also take the M-29 commuter route. This route services communities along the St. Clair River via M-29 and also connects to SMART at 23 Mile Rd. and Gratiot.

Shopper Shuttle

Shuttle service to major shopping centers in the northern end of the community is available to customers Monday through Friday beginning at 9:35 a.m. and Saturday beginning at 10:20 a.m. The shuttle provides door-to-door service to the shops along the route. Transfers between the shuttle and other BWATC buses are free. Shopper shuttle service ends at 8:50 p.m.

Blue Water Trolley

During the summer tourist season, BWATC operates a trolley route that highlights the historic and scenic sites of the downtown area. The route lasts approximately an hour and includes several points of interest, historic sites and panoramic views of the Blue Water Bridge and the St. Clair River. The fare for the Blue Water Trolley is ten cents.

Late Night Service

At this time the Late Night Service on Friday and Saturday nights has been suspended.

Funding and Governance

As development occurs, air quality, and people behaviors change the needs and desires for transit service increases over time, it will become more challenging to rely on the existing framework of funding and governance. Issues related to transit funding and governance includes:

- Distribution of Federal Transit Administration URBANIZED Area Formula Funding
- Distribution of Federal Transit Administration RURAL Area Formula Funding
- Proposed Funding Sources
- Contract for Services

There are several funding and revenue sources that enable BWATC to operate its services including:

- Federal: BWATC receives both capital and operating assistance from the FTA Urbanized Area Formula Program.
- State and Local: BWATC receives capital assistance from state gasoline taxes. Operating assistance comes from both state gasoline taxes and local community property taxes.
- Fare Revenue and Purchased Transportation Revenue: BWATC receives fare revenue from both directly operated and purchased transportation services.

Blue Water Trolley

Amtrak Service

The CN east-west route provides passage for Amtrak passenger rail service. The Port Huron depot station is the only scheduled stop in the County for daily round trip service between Port Huron and Chicago. And as this service continues to grow, more trips are likely to be added. The current Amtrak station is located on 16th Street in Port Huron and has a number of deficiencies that detract from the passenger experience and the functioning of the station itself.

Overall, the existing Amtrak station is inadequate to serve Amtrak passengers. The property on which the station is located is a narrow parcel that does not provide enough parking for passengers. Additionally, there is currently no connection to public transportation and there are further deficiencies from a security standpoint.

A collaborative group of community officials and local stakeholders have convened meetings to begin


Wadhams to Avoca Trail, Trestle Over Mill Creek

discussing the potential for developing a new Amtrak station to serve the Port Huron/St. Clair County area. Initial discussions have highlighted potential opportunities that a new Amtrak station could bring to the community. A likely location for a new station is the area between 24th Street and Michigan Street, at the site of the existing CN Tiffin Yard.

There is overwhelming community support for a new station that would be part of a larger development that would complement the services of the Amtrak station - amenities such as food, retail and hospitality services, potential for serving as a regional transportation center with connections to Blue Water Area Transit service, and other features that could make the new station part of a transit-oriented development (TOD). Both CN Railroad and Amtrak have taken part in these initial discussions and are amenable to further discussions about a new location, development as a larger transportation center, and establishment of other retail and hospitality amenities that will provide additional economic development opportunities.

C. Bicycle and Pedestrian

Accomodations

Planners, health advocates, and others are seeking solutions to promote bicycling and walking as active transportation choices that offer "savings in fuel costs, a smaller carbon footprint, and a practical way to achieve recommended levels of physical activity." Well-planned facilities for bicycle and pedestrian travel have been shown to have positive impacts on accessibility of destinations, air quality, congestion, healthy, local economies, personal savings, road maintenance, and safety. Given the growing consensus of the benefits of active transportation improvements, the principal issue is crafting a system of connected and enhanced facilities that work for St. Clair County. In addition to programmatic improvements in education, encouragement, and enforcement, these benefits are addressed by focusing on countywide facility improvements in the following areas:

- New and expanded facilities as complete streets with bicycle and pedestrian infrastructure
- Transit facilities connected to the roadway system
- Connecting to recreation facilities and open space
- Enhancing facilities in mixed-use areas


Bicyclists in St. Clair County

EXISITING CONDITIONS AND TRENDS

All roadways in the region currently serve as bicycle and pedestrian facilities, except those expressly forbidding access, such as the I-69 and I-94 expressways. Most of countywide pedestrian system is served by locally-developed sidewalks along major roadways. This system is not simply an "add-on" to the overall transportation system but a fundamental component and contributor to mobility since almost all trips include a pedestrian element. Funding and expertise at all levels are needed to continue filling pedestrian access gaps throughout the County.

Bicycle access is primarily provided by interconnected, low-volume streets, and shoulders or bicycle lanes on higher volume streets. Despite a developing network of bicycle facilities, many gaps still exist in the regional system.

GREENWAYS IN ST. CLAIR COUNTY

Greenways are corridors of land recognized for their ability to connect people and places together. According to the EPA, greenways promote outdoor recreation, catalyze economic development, increase adjacent property values, celebrate historical and cultural assets, promote conservation and environmental education and improve qualify of life.

Greenways have multiple purposes, but from a recreation perspective they have two major functions:

1) To link and facilitate hiking and biking access between residential areas and parks.
2) To provide opportunities for the linear forms of outdoor recreation (i.e. hiking, jogging, bicycling, equestrian riding, and walking) in which many St. Clair County residents engage today. These recreation activities require the development of trails along the greenways.

There are two primary trail systems within St. Clair County: the Wadhams to Avoca Trail and the Bridge to Bay Trail.

Wadhams to Avoca Trail

In 1999, PARC purchased the surface rights to 9.82 miles (100 acres) of right-of-way from CSX Railroad and began developing it as the Wadhams to Avoca Trail. In 2001 and 2004, PARC purchased two additional properties totaling 17.65 acres adjacent to the trail north of Imlay City Road for a trailhead and parking. In 2003, PARC purchased the surface rights to an additional two and a half miles of CSX Railroad right-of-way totaling 17.66 acres from Wadhams Road to Griswold Road. The trail is over 12.4 miles long and contains 160 acres.

To date, the 640-foot Mill Creek Trestle has been decked and railed for pedestrians and bike riders. Three acres of land southeast of the Trestle was purchased to create a horse crossing at Mill Creek.

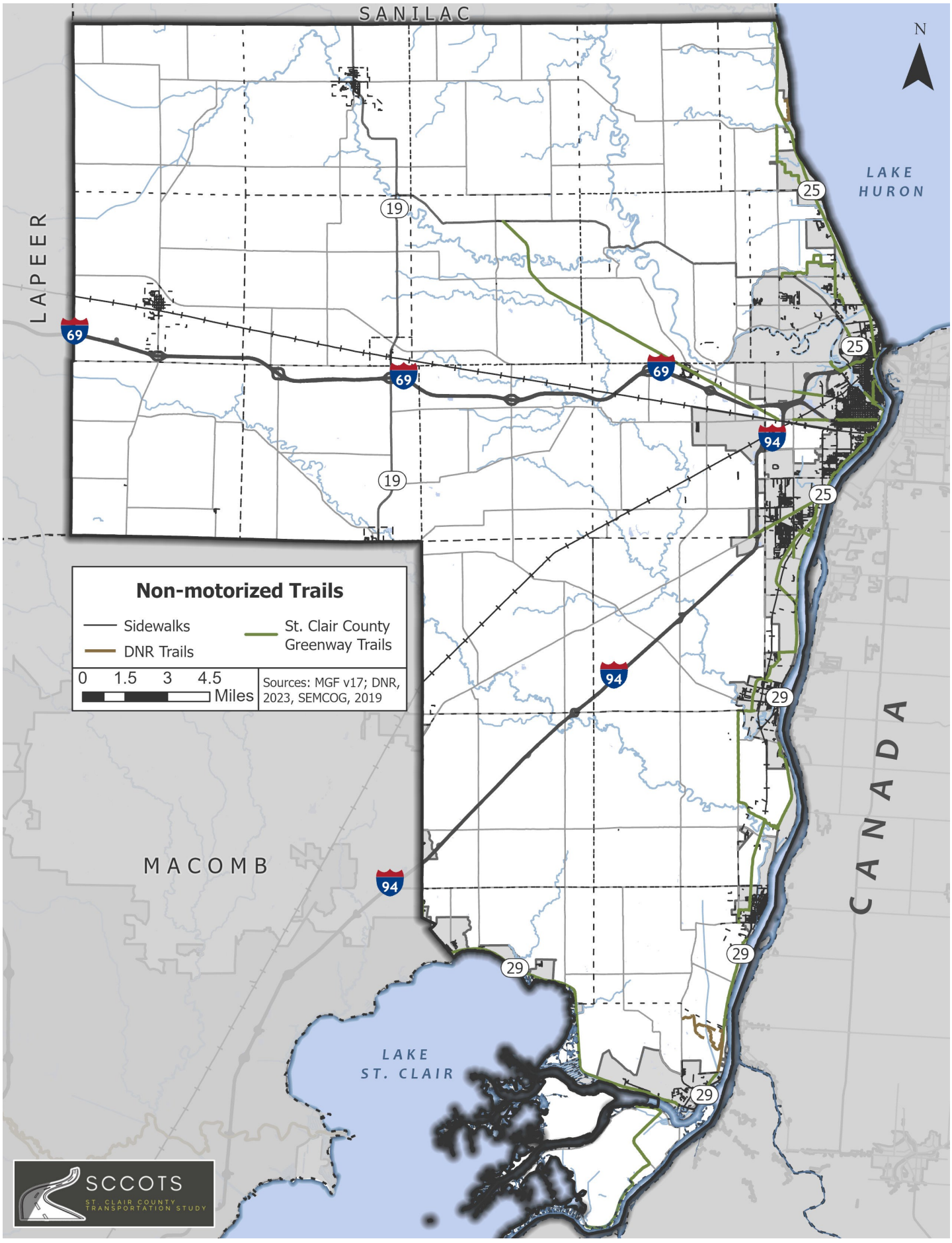
At the south end of the trail in Kimball Township, over five miles of trail have been paved starting at McLain Road running southeast to Griswold Road. The paved section of the trail passes through a developing residential area and is heavily used by residents.

In a joint effort with the St. Clair County Road Commission, a hybrid pedestrian signal was installed in 2010 where the trail crosses Wadhams Road. It was the first time this type of signal has been used for a trail crossing in Michigan. The signal prompts flashing lights to stop traffic when a pedestrian wishes to cross the road.

Designated parking areas are located at the Wadhams Road, Imlay City Road, Lapeer Road and Avoca Road trailheads. The non-motorized trail is open to walkers, bicyclists and equestrians.

It is a priority of PARC and its community partners to extend the Wadhams to Avoca Trail to the City of Yale, as well as exploring opportunities to extend the trail beyond St. Clair County into Sanilac County.

Bridge to Bay Trail


SANILAC
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N
Non-motorized Trails
Sidewalks
DNR Trails
St. Clair County Greenway Trails
0 1.5 3 4.5
Miles
Sources: MGF v17; DNR, 2023, SEMCOG, 2019
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

The St. Clair County Parks and Recreation Commission (PARC) is working in conjunction with 13 local units of government to develop a 54-mile paved trail from Lakeport State Park to New Baltimore. St. Clair County helps to plan and promote the trail while each local unit of government is responsible for constructing their section of the trail. Even though PARC plays an instrumental coordinating role in the development of the Bridge to Bay Trail, the property that makes up that trail is owned by various municipalities and townships. Most trail construction projects are funded by grants. PARC usually helps to fund the local match required for trail construction grants.

The Bridge to Bay Trail extends from St. Clair County's northern border; under the Blue Water Bridge; through Port Huron, Marysville, St. Clair, Marine City, and Algonac; and past state and municipal parks, museums, gazebos, and lighthouses. Sometimes the trail is within reach of the water's edge and sometimes a few miles inland. It connects communities together for walkers, joggers, strollers, and bicyclists of all ages. The trail varies from a ten-foot wide separated paved pathway in the right of way along a road, or a five-foot wide dedicated bike lane.

Community partners have a primary goal of connecting the Bridge to Bay Trail to the Wadhams to Avoca Trail within St. Clair County, the Macomb Orchard Trail in Richmond (Macomb County), and the St. Clair Parkway Trail in Lambton, Ontario, Canada via ferry. As of 2021, roughly 26 miles of the 54-mile Bridge to Bay Trail is complete.

Funding for the Bridge to Bay Trail comes from the St. Clair County Parks and Recreation Millage, local government funds, and grants. Grant money for the trail has been provided by the United States government through federal transportation grants, and by the Michigan Department of Transportation (MDOT), the Michigan Department of Natural Resources (MDNR), and the Michigan Natural Resources Trust Fund (MNRTF).

Blue Water River Walk and Blue Water River Walk County Park

Blue Water River Walk County Park is a former railroad switch yard that has been partially restored to a coastal wetland. The wetlands feature three ponds, marshland and native plants. The habitat is home to amphibians, such as frogs and toads, and is a popular nesting and feeding spot for migratory birds. A boardwalk allows park visitors to get close to the wetland habitat without disturbing the natural features and interpretive signs help explain how the wetlands work. Just north of the wetlands is a picnic pavilion, a shade trellis, walkways, landscaping, an artificial lawn activity area, picnic tables, grills and benches. Future developments will include a children's playground, restrooms and a second pavilion.

Blue Water River Walk in Port Huron

Traveling through the park is the Blue Water River Walk. The River Walk is a paved pathway that begins at Desmond Landing to the north and travels southwest to 10th Street. The Blue Water River Walk is part of the Bridge to Bay Trail System. The Blue Water River Walk is owned by the Community Foundation of St. Clair County. St. Clair County Parks leases and maintains the grounds.

The St. Clair County Parks and Recreation Commission purchased 4.85 acres of land using two MNRTF grants and received a $1,039,500 grant from the National Fish and Wildlife Foundation to develop a 2.75-acre wetland on the very southern end of the river walk.

St. Clair County Trails Strategy and Action Plan

In 2019, St. Clair County, along with the Community Foundation of St. Clair County and numerous local and regional partners, developed an updated countywide trails plan that identifies existing gaps, and prioritized the timing and sequencing for completing needed connections. The overarching goal is to complete the Bridge to Bay Trail and Wadhams to Avoca trail

networks, which includes connecting to the Macomb Orchard Trail and the Great Lake-to-Lake Trail Route #1. These activities supported the adoption of an implementation-focused plan that clearly identifies opportunities, needs, and priorities for future trail and bikeway projects.

Ultimately, the planning process was a chance to step back and take stock of current facilities and position county government, local municipal partners, and other agencies to pursue and implement the next wave of trail projects across St. Clair County. A major goal of the plan is to connect community assets, downtowns, and recreation facilities.

Complete Streets

Complete Streets are streets designed and operated to enable safe use and support mobility for all users. Those include people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians, bicyclists, or public transportation riders. The concept of Complete Streets encompasses many approaches to planning, designing, and operating roadways and rights of way with all users in mind to make the transportation network safer and more efficient. Complete Street policies are set at the state, regional, and local levels and are frequently supported by roadway design guidelines.

Complete Streets approaches vary based on community context. They may address a wide range of elements, such as sidewalks, bicycle lanes, bus lanes, public transportation stops, crossing opportunities, median islands, accessible pedestrian signals, curb extensions, modified vehicle travel lanes, streetscape, and landscape treatments. Complete Streets reduce motor vehicle-related crashes and pedestrian risk, as well as bicyclist risk when well-designed bicycle-

Port Huron Bikeshare

Port Huron Bikeshare

specific infrastructure is included. They can promote walking and bicycling by providing safer places to achieve physical activity through transportation. One study found that 43% of people reporting a place to walk were significantly more likely to meet current recommendations for regular physical activity than were those reporting no place to walk (Powell, Martin, Chowdhury, 2003).

There is no singular design prescription for Complete Streets. Each one is unique and should respond to the individual community's population and needs. A Complete Street may include sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible public transportation stops, frequent and safe crossing opportunities, median islands, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts, and more. A complete street in a rural area will look quite different from a complete street in a highly urban area, but both are designed to balance safety and convenience for everyone using the road.

Implementing a Complete Streets Policy

A Complete Streets policy has the potential to end the project-to-project struggle to design better facilities by requiring all road and transportation improvement projects to begin with evaluating how the street serves all users– pedestrians, bicyclists, public transportation vehicles and passengers, trucks, and automobiles. Adopting a Complete Streets policy may require changing existing policies and practices of local communities and/or transportation agencies. In some cases it may be difficult to adopt a new procedure or to modify design guidelines. Furthermore, adopting a Complete Streets policy may require additional training for planning and engineering staff which will take time and cost money.

Ultimately, the desired outcome of a Complete Streets

policy is one in which a multi-modal street becomes the default design and only after a formal exception process is a non-compliant design allowed. The U.S. Department of Transportation's design guidance for *Accommodating Bicycle and Pedestrian Travel: A Recommended Approach,* names three exceptions where roadways can lack facilities for all users:

- Excessive Cost
- Absence of need
- Roads where bicyclist and pedestrians are prohibited

Some additional challenges for implementing a Complete Streets policy may include:

- Lack of right-of-way in cramped thoroughfares may make multi-modal improvements difficult, costly, or impossible
- Overcoming the misconception that Complete Streets cost more to build than traditional streets when in fact Complete Streets often cost less to construct. By fully considering the needs of all non-motorized travelers (pedestrians, bicyclists, and persons with disabilities) early in the life of a project, the costs associated with including non-motorized facilities are minimized
- Ensuring accurate transportation analysis as current methodologies for studying traffic may result in misleading results. For example, some current traffic methodologies may fail to consider how the presence of transit in a mixed-use corridor could potentially lower trip generation rates and thus reduce traffic volumes and congestion.

An Ideal Complete Streets Policy

Regardless of a policy's form, the National Complete Streets Coalition has identified important elements of a comprehensive Complete Streets policy. These elements could potentially be used in evaluating transportation projects within St. Clair County. A Complete Streets policy should include the following:

1. Includes a vision for how and why the community wants to complete its streets. Specifies that 'all users' includes pedestrians, bicyclists and transit passengers of all ages and abilities, as well as trucks, buses and automobiles. Encourages street connectivity and aims to create a comprehensive, integrated, connected network for all modes.
2. Is adoptable by all agencies to cover all roads.
3. Applies to both new and retrofit projects, including design, planning, maintenance, and operations, for the entire right of way.
4. Makes any exceptions specific and sets a clear procedure that requires high-level approval of exceptions.
5. Directs the use of the latest and best design standards while recognizing the need for flexibility in balancing user needs.
6. Directs that Complete Streets solutions will complement the context of the community.
7. Establishes performance standards with measurable outcomes.
8. Includes specific next steps for implementation of the policy.

BIKESHARE

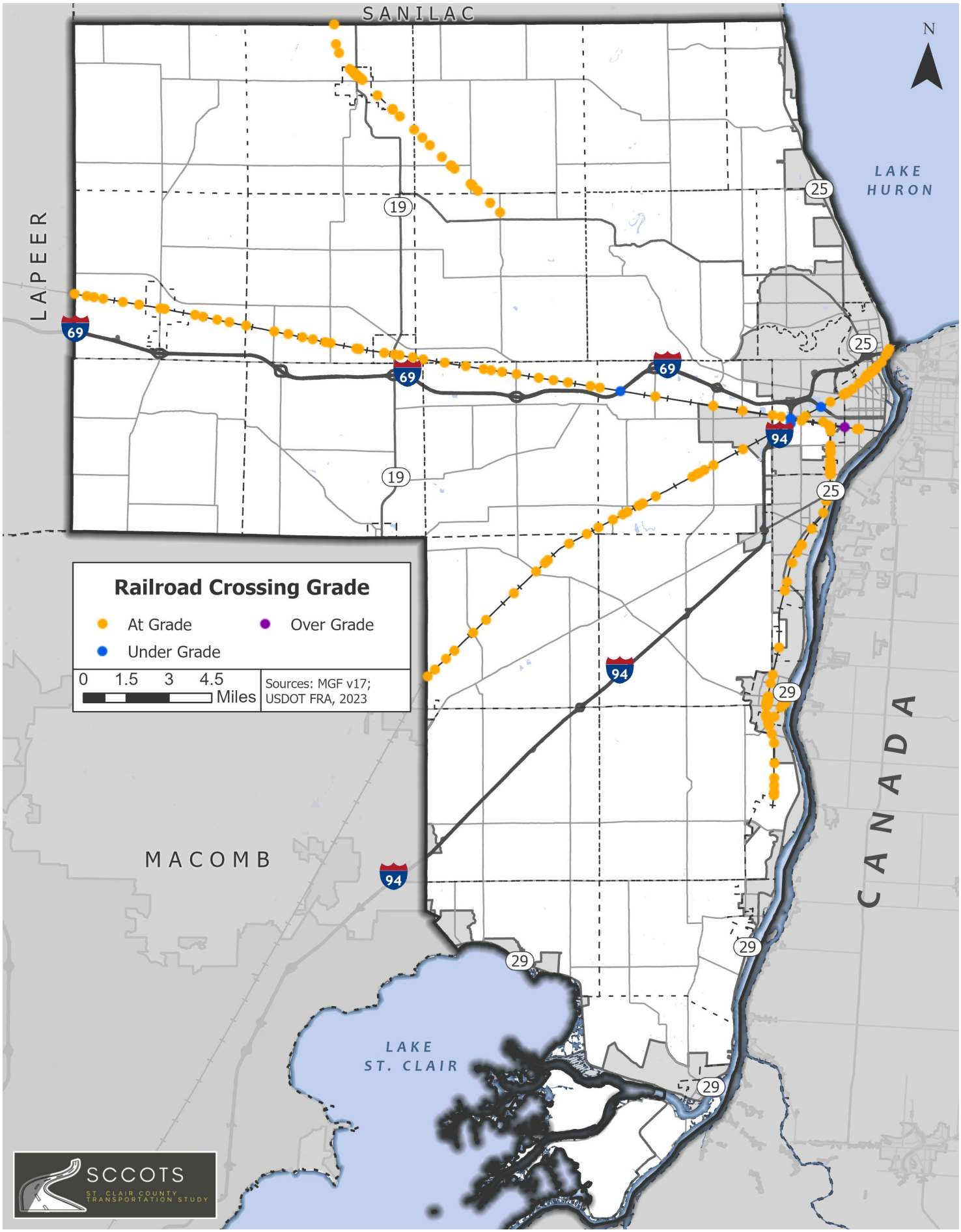
The Blue Water Area Transportation Commission (BWATC) began a Bike Share program in July of 2017 and agreed to continue the existing program at least through July of 2019. Currently, the program is managed for BWATC by the third-party bike share company Zagster. The program is funded by BWATC, the Michigan Department of Transportation, and four community partners.

Five locations were chosen for fixed stations. The station locations were strategically chosen to offer the widest coverage for individuals living and working in

Figure 3.8

Rail Containers					
Year	2019	2020	2021	2022	2023
Trains	3,903	2,954	2,863	3,330	3,293
Loaded	240,544	216,182	209,937	235,638	230,229
Unloaded	160,763	147,439	170,472	202,378	212,957

Source: Michigan Department of Transportation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LAKE HURON
LAKE ST. CLAIR
N
Railroad Crossing Grade
At Grade
Over Grade
Under Grade
0 1.5 3 4.5
Miles
Sources: MGF v17; USDOT FRA, 2023
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

Figure 3.9

Incoming: Truck Containers					
Year	2019	2020	2021	2022	2023
Trucks	808,541	729,281	850,354	873,605	834,731
Unloaded	189,070	140,844	154,243	162,684	119,596
Loaded	638,281	593,977	705,014	720,559	740,730

Source: Michigan Department of Transportation

Figure 3.10

2-Way Traffic on Blue Water Bridge			
Year	Cars	Trucks	Buses
2018	3,036,666	1,654,306	5,292
2019	2,944,860	1,596,580	5,002
2020	564,256	1,440,245	1,041
2021	363,024	1,658,391	620
2022	1,455,634	1,728,293	1,156
2023	2,009,411	1,621,461	2,130

Source: Michigan Department of Transportation

Truck arriving in St. Clair County after crossing the Blue Water Bridge

downtown Port Huron as well as individuals visiting the Blue Water Convention Center along the St. Clair River. Individuals can become annual members or daily members of the program and check out bikes from any of the five locations and return them to the station of their choice.

The bike share and individual transportation market is a rapidly changing market. Dockless bike share programs and battery powered scooters, both operated solely by private providers, are two of the emerging trends. Although BWATC expects some type of shared individual transportation to be available to the community in the future, who will operate it and how that will look is undetermined at this time.

Connect with Transit

The Blue Water Area Transit Commission has recently completed a few major transit investments and has plans for more. They have bicycle racks on the majority of their buses which allows for riders to complete their trips.

Better sidewalks and facilities are needed in some areas to access the transit sites more safely and efficiently, as well as bicycle racks at the busiest stops.

Connect with Recreation and Transportation Bicycle Facilities

Active and passive recreation facilities such as athletic fields, neighborhood parks, nature preserves, and beaches are important destination facilities that need to be connected into the bicycle system Development of the master trail plans and parks and recreation plans assure robust connectivity with other transportation modes and population centers.

Expanding Trails as Transportation Facilities

Expanding regional trails provides an enhanced transportation facility, as well as recreational facility, for bicycles and pedestrians. Regional trails also provide an opportunity for multiple jurisdictions to leverage limited local funding, which results in transportation and health benefits to the county.

Future Needs

Policy

Privately owned planes at the St. Clair County International Airport

Ferry crosses the St. Clair River to Canada

- *Maintain existing bicycle and pedestrian facilities,* Sometimes certain intersection improvements or expansions can inadvertently reduce or eliminate bicycle and pedestrian access. Additionally, limited access highway projects can limit crossing access for other modes, but this impact can be mitigated with pedestrian grade separations or other techniques.

- *Ensure bicycle and pedestrian facilities are developed in conjunction with roadway projects* in populated areas. Except for areas planned to be rural in 2050, roads should at least have facilities such as shoulders and sidewalks with connecting infrastructure to provide access for bicyclists and pedestrians in the future. To ensure adequate right-of-way is available to construct the facilities, jurisdictions should continue to acquire enough right-of-way for planned bicycle and pedestrian improvements.
- *Use discretionary funds* at the regional and state level, such as Surface Transportation Program and Transportation Alternatives Program funding to focus on filling gaps in urban areas, and funding special projects with limited local funding sources available.

Infrastructure

As with any transportation mode, supply is often outpaced by demand. Pedestrian infrastructure is needed throughout the county, but investments in existing developments may provide more impact by serving more potential users.

D. FREIGHT

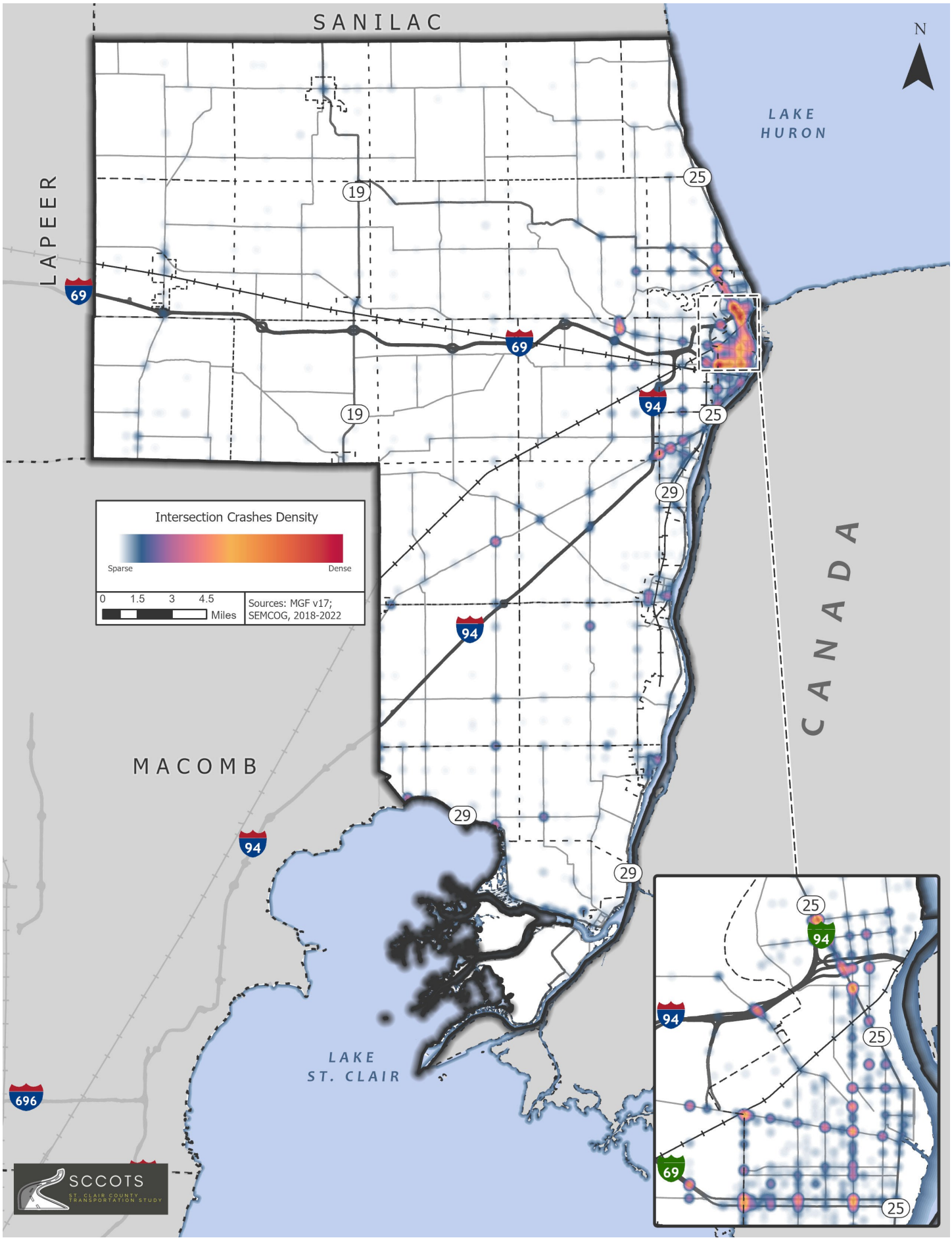
The movement of goods using a variety of modes is extremely important to economic development and growth opportunities of any metropolitan area. Properly planned accommodation for freight movement can drive economic opportunity in a region without undermining quality of life and environmental considerations. The 2050 SCCOTS Long Range Transportation Plan recognizes the importance of freight to the regional economy.

EXISITING CONDITIONS

Rail

CSX Transportation and CN North America Railroad provide Class I rail service to the County. The Class I rail routes in St. Clair County provide U.S. freight connections to Canada through the International Railroad Tunnel in Port Huron, as well as service to industrial sites throughout Michigan. In 2023, over 230,000 loaded containers and nearly 213,000 empty containers were shipped across the United States-Canadian border.

The CN North America's primary line runs east to west through the communities of Port Huron, Emmett, and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Intersection Crashes Density
Sparse
Dense
0 1.5 3 4.5
Miles
Sources: MGF v17; SEMCOG, 2018-2022
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

Figure 3.11

Intersection Crashes: Top 10 Locations							
Rank	Intersection	2018	2019	2020	2021	2022	Average
1	M 25 @ Krafft Rd	25	24	32	32	34	29.4
2	Pine Grove Ave @ Holland Ave	18	21	16	21	16	18.4
3	M25 @ Keewahdin Rd	13	10	18	16	12	13.8
4	Pine Grove @ Sanborn St	22	13	7	10	15	13.4
5	Hancock St @ Pine Grove Ave	12	14	9	19	12	13.2
6	Pine Grove Ave @ 10th Ave	13	11	12	14	11	12.2
7	Pine Grive Ave @ Garfield St	8	10	14	10	17	11.8
8	Gratiot Blvd @ Range Rd	10	14	8	11	16	11.8
9	Pine Grive Ave @ River Rd N	11	9	10	13	13	11.2
10	10th St @ Lapeer Ave	7	12	13	12	9	10.6

Source: SEMCOG

Capac. CN North America also has a route through the communities of Columbus Township and Smiths Creek on a SW-NE Detroit line. The CSC line runs from Marine City through St. Clair, Marysville, and Port Huron. St. Clair County rail routes are depicted in Map 4. On the map, the at-grade crossings are indicated, which shows the potential for vehicle/train conflict

Truck

Southeast Michigan's unique geographic position, and specifically St. Clair County, forms an integral gateway to Canada, Chicago and the Midwest, Mexico, and beyond. Given the geography of the region, the efficiency of the transportation system is determined by the quality and effectiveness of the state and regional highway and road system as well as by the efficiencies at the international border crossings.

St. Clair County is likely to experience significant increases in truck volume due to its status as a U.S. port/border gateway. The additional volume will place greater pressure on the county's transportation network by trying to balance the concerns of freight companies with local commuters and tourists. Due to the changes in truck volume, MDOT has plans to further improve the Blue Water Bridge Plaza specifically in regards to customs and the way that traffic moves. Recent improvements have been made to the I-94/I-69 interchange and the interstates in the surrounding area. A new Welcome Center located just west of the Blue Water Bridge on I-94 opened in May 2015. Welcome Centers are the first point of contact for visitors to the state; it is an important to have a good and welcoming first impression which is why this Welcome Center was necessary.

Figures 3.9 and 3.10 display border crossing data between 2019 to 20123.

Major truck stops

The trucking industry identified the need for full-service truck stops in the area. The Love's Travel Stops & Country Stores is headquartered in Oklahoma City, Oklahoma. Founded in 1964, Love's has more than 450 locations in 41 states. They have a long list of services for the trucking industry including; Emergency Roadside Assistance, Tire Services, Light Mechanical work, oil changes, and other preventative maintenance work.

Love's saw the opportunity here in St. Clair County and have constructed one travel stop off I-69 in Capac, MI about 29 miles west of the Blue Water Bridge. This just opened in March 2018. The other location planned in St. Clair County is located on I-94 in St. Clair Township, MI about 13 Miles southwest of the Blue Water Bridge. This truck stop opened early 2019.

Air

The St. Clair County International Airport (SCCIA) primarily functions as a cargo airport providing 24-hour customs/immigration services. The SCCIA is equipped with Pilot Controlled Lighting, an Automated Weather Observations System and an Instrument Landing System. The SCIAA's primary runway is 5,103 feet long by 100 feet wide and the secondary runway

is 4,100 feet long by 75 feet wide. Major roadways that serve the airport include I-94, I-69, and Gratiot Avenue.

Directly adjacent to the airport is the 80-acre St. Clair County Airport Industrial Park. This industrial park is geared towards attracting applied research and technology with 12,000-20,000 square foot facilities available. This location is considered ideal for corporate research and development, rapid prototyping, or related industrial activity due to the convenience of airport facilities for corporate and time sensitive logistics.
The Marine City Airport is also located in St. Clair County but is privately owned and classified as a general-utility airport. The I-94 and 26 Mile Road interchange is the closest major access point to serve this airport.

Port

Freighters travel through the St. Clair River and Lake Huron, the midpoint of the St. Lawrence Seaway system. Deep water ports along the shoreline can accommodate Great Lakes and ocean-going freighters.

There are 38 deep-water ports in the state of Michigan, four of which are in St. Clair County.

- Port Huron, Seaway Terminal: Commercial Port
- Marysville, Old DTE Site: US Customs Service Port
- St. Clair, DTE Site: US Customs Service Port
- Marine City, Ferry Service: US Customs Service Port

Ferry Service

- The Walpole Island Ferry provides year-round transport between Algonac and Wallaceburg, Ontario.
- The ferry service from Algonac to Russell Island and Harsens Island is the only access to the island outside private boat and aircraft.

E. Safety and Security

Safety

The safety of the transportation system is a growing concern in St. Clair County and throughout the region, state, and country. Safety is an important consideration for the transportation planning process which should work to resolve existing safety deficiencies while planning for a system that will perform safely in the future.

Blue Water River Walk in Port Huron

Data on locations, causes, and numbers of crashes is important in the transportation planning process. The data allows transportation planners to focus on changing the causes of the crashes, whether human behavior or the transportation system, to ultimately reduce the number of crashes. SCCOTS and its member jurisdictions use crash data to plan and prioritize improvements.

Existing Conditions and Trends

Vehicle Crashes

Safety in transportation can be attributed to human factors and the existing transportation system. In the years 2018-2022 alcohol and speeding were contributing factors to the highest number of fatal crashes in St. Clair County. Fatal crashes involving motorcycles were also very high. As well as fatal crashes involving only one vehicle, meaning that other cars were not involved and the cause of the cause of the crash could be attributed to either human behavior or the transportation system. Map 5 provides a breakdown of intersection crashes in St. Clair County for years 2018-2022.

Railroad and Vehicle Crashes

St. Clair County has a large number of railroad crossings. The road-rail grade crossing is a unique location within the transportation system, where two distinctly different transportation modes- roadway users and railroads- cross each other. Grade separation between these two modes is the optimal design to address safety concerns, but it is also the

most expensive measure and the funding is limited. Usually, railroads provide a standard crossbuck sign at each public crossing and federal funds are available at the state level for automatic grade crossing warning devices.

Safety Planning Considerations

Safety Conscious Planning

Safety Conscious Planning (SCP) is a proactive approach aimed at preventing accidents and unsafe conditions on the transportation network. Safety considerations are integrated into the transportation planning process at all levels. In developing SCP, the region should strive to minimize exposure, minimize risk, and minimize the consequences of crashes.

Safety Countermeasure

Safety upgrades can also be made to reduce the recurrence and severity of crashes on the existing transportation system. Effective countermeasures will depend on the nature of the crash. Examples include:

- Increase enforcement of Zero Tolerance laws for underage drinkers and distracted driving.
- Promote better access management policies and practices
- Continue speed enforcement in school and work zones
- Encourage the use of traffic calming
- Develop programs to encourage safe walking rather than driving for appropriate trips
- Increase helmet and protective gear usage through education
- Require safety belts and child safety seats for all seating locations
- Construct overpasses or underpasses to eliminate at-grade crossings

SECURITY

Concern over the security of the transportation system has grown as the country has responded to increasing incidents of terrorism and natural disasters. Federal regulations now require that security be addressed as a separate factor in the long range transportation planning process. The regulations also stress the importance of increasing the security of the transportation system for motorize and non-motorized users.

Existing Conditions

Coordination of security planning occurs at the federal, state, and local level. Overall, security guidance is provided by the U.S. Department of Homeland Security. The Michigan State Police and Homeland Security and St. Clair County Office of Emergency Management can provide detailed information of the types of threats that people in Michigan and St. Clair County are most exposed to and described coordination of security planning at the county and state levels. The Blue Water Area Transit Commission continues to take steps to ensure the security of the county's public transportation system including lighting and cameras.

A great deal of local security planning and operations in St. Clair County occurs in coordination with local police departments, sheriff office, and Emergency Operations Center in St. Clair County.

System Needs and Planning Considerations

Over the past few years, the need for more robust security planning has been increasingly important for agencies. In response, St. Clair County Metro Planning has increased its involvement in safety and security working groups, collected plans, reviewed relevant literature, and has been part of trainings and exercise hosted by the Office of Emergency Management. There are still other planning strategies that SCCOTS can participate in to strengthen transportation security. The following list provides a few examples of strategies that MPOs can utilize:

- Accommodating street closures, by providing efficient detours
- Using adaptive signal control
- Updating and Using Traveler Information Systems
- Analyzing the transportation network for emergency route planning/strategic gaps in the network
- Funding new strategies/technologies/projects that can help prevent events
- Funding and perhaps coordinating regional transportation surveillance system that can identify potential danger prior to its occurring.

F. SUSTAINABILTY AND ENVIRONMENTAL

Smart Growth and Sustainability are becoming

increasingly important in local and regional planning. Recognition of a deteriorating infrastructure and the volatile gas prices over the past decade has forced the nation to reconsider local, regional, and national transportation needs and priorities.

Preserving the existing transportation infrastructure is an important element within St. Clair County. Large capacity projects may no longer be the easy solution to address mobility concerns. Simply adding lanes will increasingly require more evaluation and justification. Future transportation planning decisions will emphasize other issues including environmental concerns. Maintaining and preserving the natural environment and social character of St. Clair County has always been of the outmost importance to St. Clair County residents and local officials. Avoiding, minimizing, or mitigating environmental impacts remain a priority throughout St. Clair County.

Communities across the country are using creative strategies to develop ways that preserve natural lands and critical environmental areas, protect water and air quality, and reuse already-developed land. They conserve resources by reinvesting in existing infrastructure and reclaiming historic buildings. By designing neighborhoods that have shops, offices, schools, churches, parks, and other amenities near homes, communities are giving their residents and visitors the option of walking, bicycling, taking public transportation, or driving as they go about their business. A range of different types of homes makes it possible for senior citizens to stay in their homes as they age, young people to afford their first home, and families at all stages in between to find a safe, attractive home they can afford. Through smart growth approaches that enhance neighborhoods and involve local residents in development decisions, these communities are creating vibrant places to live, work, and play. The high quality of life in these communities makes them economically competitive, creates business opportunities, and improves the local tax base.

Based on the experience of communities around the nation that have used smart growth approaches to create and maintain great neighborhoods, the Smart Growth Network developed a set of ten basic principles:

1) Mix land uses
2) Take advantage of compact building design
3) Create a range of housing opportunities and choices
4) Create walkable neighborhoods
5) Foster distinctive, attractive communities with a strong sense of place
6) Preserve open space, farmland, natural beauty, and critical environmental areas
7) Strengthen and direct development towards existing communities
8) Provide a variety of transportation choices
9) Make development decisions predictable, fair, and cost effective
10) Encourage community and stakeholder collaboration in development decisions

Climate Adaptation & Air Quality

Climate adaptation and air quality continue to be major issues and must be considered as we plan for the future because the impacts affect everyone in one way or another. Below are some statistics taken from a study developed by the Great Lakes Integrated Sciences and Assessments Center:

Temperature

- Average temperatures increased by 2.3 degrees F (1.3 degrees C) from 1968 to 2002 in the Great Lakes region.
- By 2050, average air temperatures are projected to increase by 1.8 to 5.4 degrees F (1 to 3 degrees C).

Extreme Weather Events

- The frequency and intensity of severe storms

The U.S. Environmental Protection Agency (EPA) defines environmental justice as *"the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."*

has increased, and current models suggest that this trend will continue as the effects of climate change become more pronounced.

- The amount of precipitation falling in the heaviest 1% of storms increased by 37% in the Midwest from 1958 through 2012.

Water Quality and Storm water Management

- Increased risk of droughts, severe storms, and flooding events may increase the risk of erosion, sewage overflow, lead to more interference with transportation, and more flood damage.
- Future changes in land use could have a far greater impact on water quality than climate change. The coupling of climate change and land use change could therefore result in even stronger effects in some areas.

Snow and Ice Cover

- From 1973 to 2010, annual average ice coverage on the Great Lakes declined by 71%.
- From 1975 to 2004, the annual number of days with land snow cover decreased by 15 and the average snow depth decreased by 2 inches (5.1 cm).

Lake Levels

- Other factors, such as land use and lake regulations also affect lake levels; however, it is still unclear how much of the recent trend in lake levels may be attributed to climate change.
- While most models project continued, long-term declines in lake levels, shorter-term variations will remain large, and periods of high lake levels are probable.

Water Availability

- Overall, the Great Lakes region is expected to become drier due to increasing temperatures and evaporation rates.
- The seasonal distribution of water availability will likely change. Warmer temperatures may lead to more winter rain and earlier peak streamflows.

Agriculture

- The growing season will likely lengthen and positively impact some crop yields.
- An increased frequency and intensity of severe weather, increased flooding, and drought risks, as well as more pests and pathogens will likely negatively impact crop yields.

Energy and Industry

- Warmer temperatures and more frequent heat waves will likely increase electricity demands, particularly in urban areas and during the summer months.

Transportation

- With increasing temperatures, damage to paved surfaces due to expanding and softening pavement is more likely.
- The most significant impact on roadways will likely be the increased risk of flood damage.
- Shipping lanes will likely be open earlier and longer due to reduced ice cover on the Great Lakes.
- Lower lake levels may lead to decreased depth of navigation channels and a reduction in the maximum loads carried by vessels.

Public Health

- Increased risk of heat waves and increased humidity may increase the number of heat-related deaths and illnesses.
- Diseases such as West Nile virus and Lyme disease may become more widespread since carrier insects will be more likely to survive milder winters.

G. Environmental Justice and Social Equity

A critical element of the 2050 Long Range Transportation Plan is the incorporation of fairness and equity into the development of all transportation policies and funding decisions. SCCOTS recognizes that the identification of traditionally underserved, low-income, minority and otherwise vulnerable populations is important because these populations often have specific and unique transportation needs to be considered, planned for, built, and maintained. Environmental justice and social equity play essential roles in transportation planning and visioning. The Long Range Planning development process includes

efforts to assess countywide performance with regard to socio-cultural effects and environmental justice and both the potential positive and adverse impacts of proposed transportation projects. At its heart, environmental justice is about making sure that the things we do and services we provide are helping, and not hurting, low-income communities and minority populations.

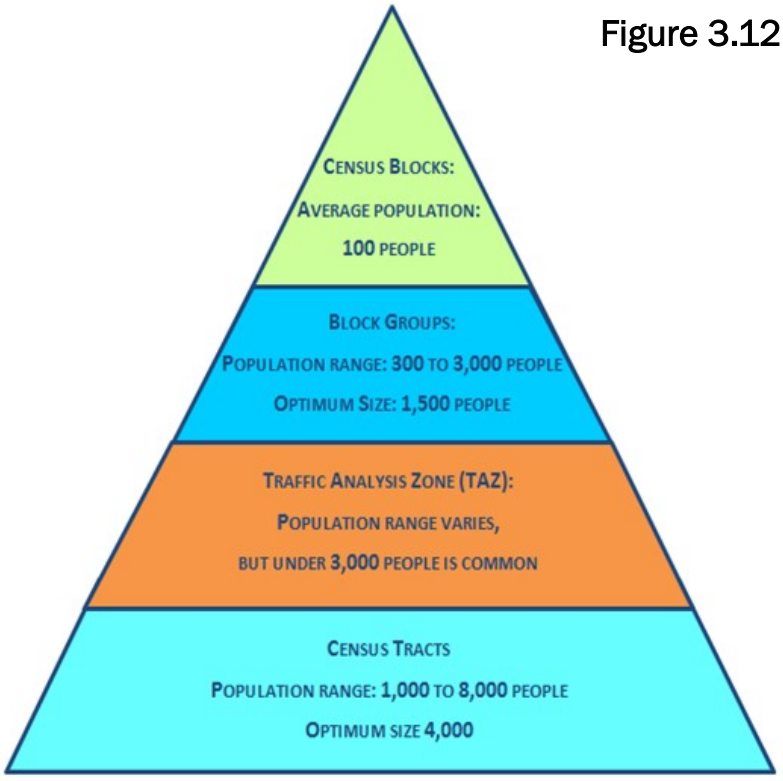
Ensuring Nondiscrimination

Environmental justice (EJ) addresses fairness of all populations, particularly disadvantaged and those populations that have been historically underrepresented. The concept of environmental justice was derived from Title VI of the Civil Rights Act of 1964 and other civil rights statutes. It was first put forward as a national policy goal in 1994 by the issuance of Presidential Executive Order No. 12898: Federal Actions to Address Environmental Justice in Minority Populations and Poverty Populations. It directs "each federal agency to make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and poverty populations." This concept is distinct from Title VI, which provides legal protection from discrimination on the basis of race, color, or national origin in federal programs.

In the two and a half decades since Order 12898 was issued, numerous additional rulings have been put into place in support of Environmental Justice. Drawing from the framework established by Title VI of the Civil Rights Act of 1964 and the National Environmental Policy Act (NEPA) of 1969, the U.S. Department of Transportation (USDOT) established the following three principles to ensure that planned transportation projects affecting EJ populations and nondiscrimination are properly addressed in the transportation planning process of federally funded activities:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including interrelated social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction, or significant delay in the receipt of benefits by minority populations and low-income populations.

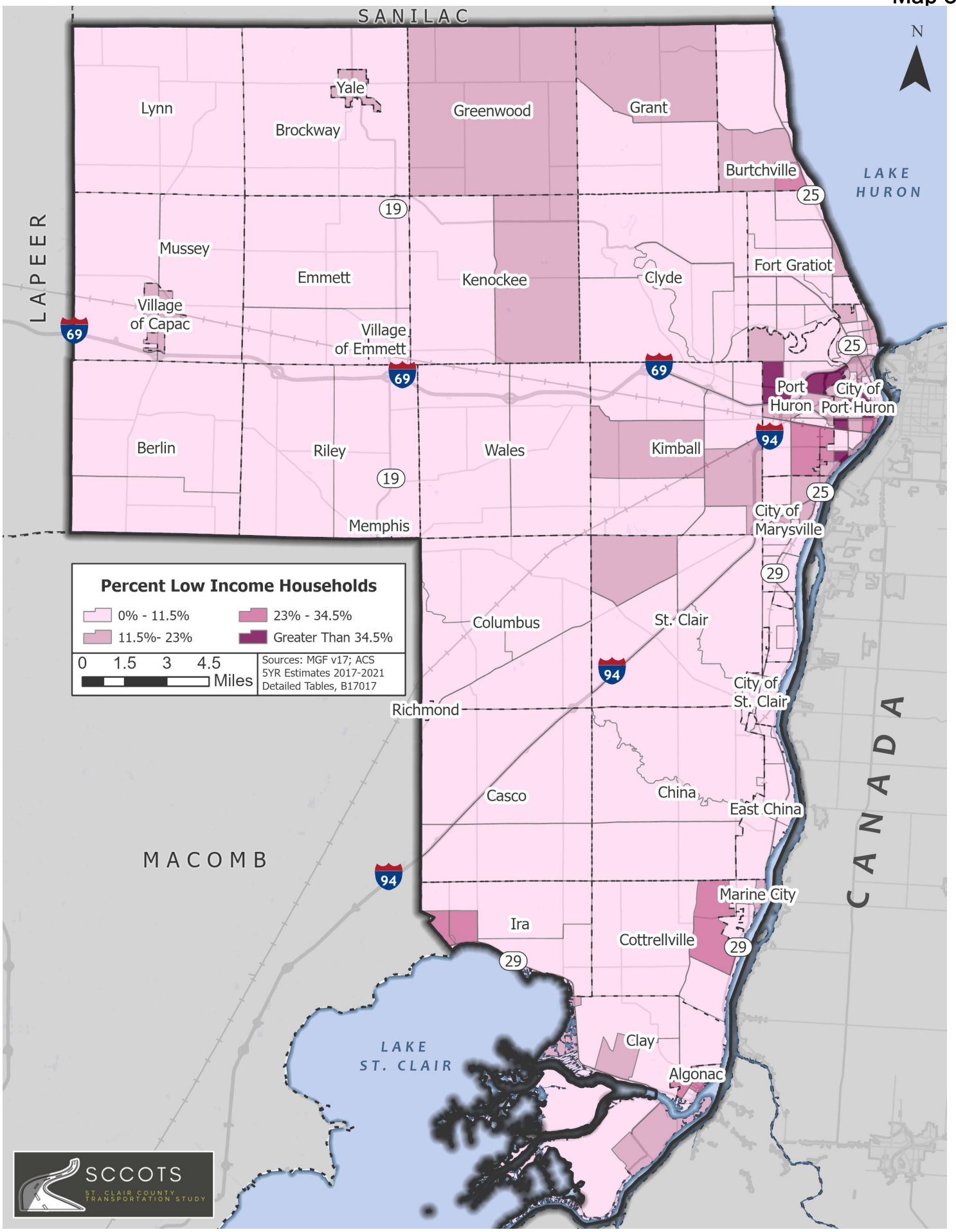
Figure 3.12



Geographic Areas- Source: U.S. Census

As a recipient of federal aid funding it is the policy of the St. Clair County Transportation Study (SCCOTS), the federally designated transportation agency responsible for comprehensive transportation planning in St. Clair County, to specifically address EJ in all SCCOTS transportation plans. SCCOTS must determine whether a program, policy, project, or activity will impact minority or low-income populations disproportionately and that these communities are:

- Afforded an opportunity under Title VI to participate in the planning process to ensure a non-discriminatory process, in each of its programs and activities whether federally funded or not, while developing and advancing transportation programs and projects.
- Involved in the identification of impacts associated with the project in an effort to determine if the effects suffered by these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Village of Capac
Village of Emmett
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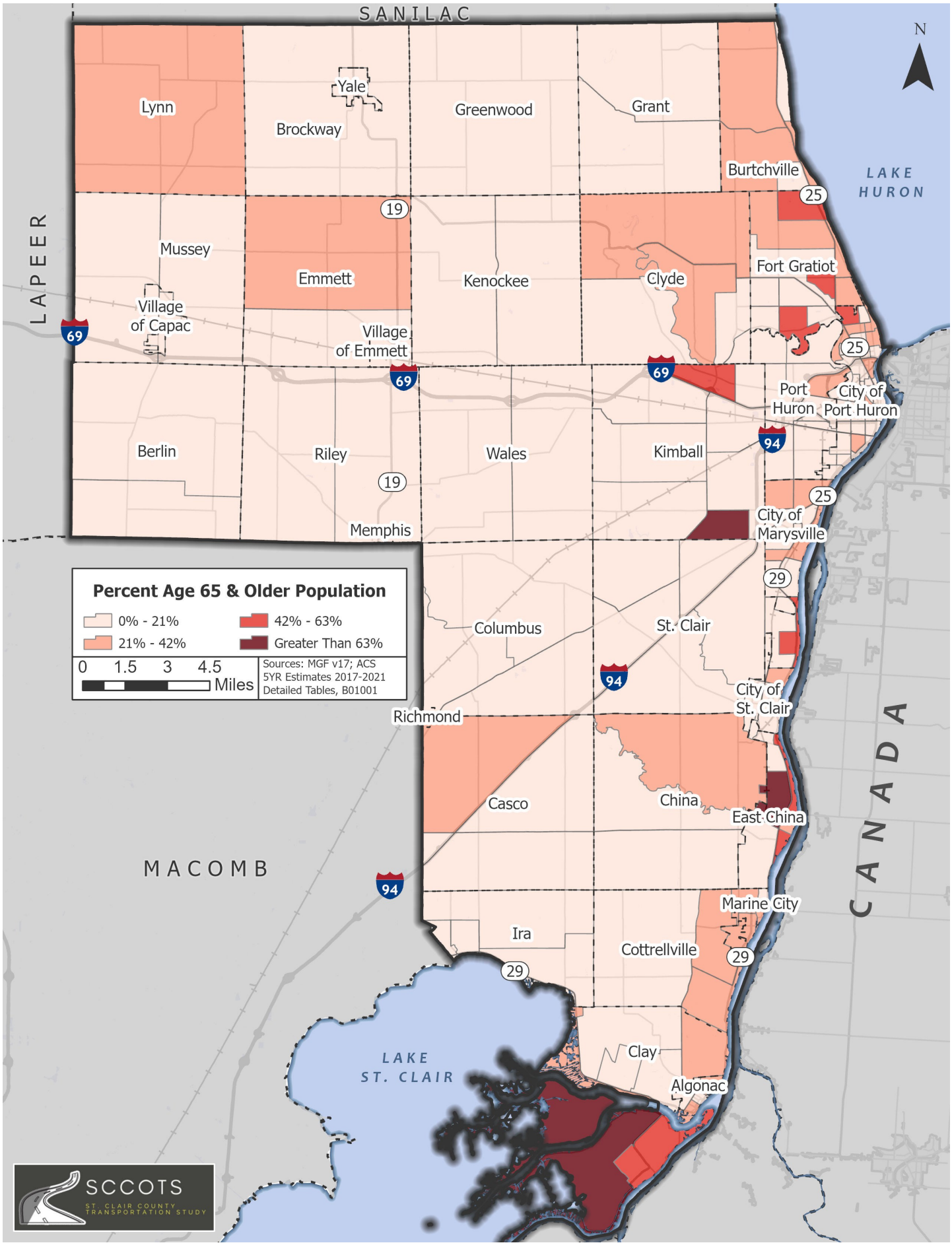
Kimball
Memphis
City of Marysville
Columbus
St. Clair
City of St. Clair
Richmond
Casco
China
East China
Marine City
Ira
Cottrellville
Clay
Algonac
69
19
25
94
29
Percent Low Income Households
0% - 11.5%
11.5%- 23%
23% - 34.5%
Greater Than 34.5%
0 1.5 3 4.5
Miles
Sources: MGF v17; ACS 5YR Estimates 2017-2021 Detailed Tables, B17017
SCCOTS
ST CLAIR COUNTY TRANSPORTATION STUDY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Richmond
Casco
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East China
Marine City
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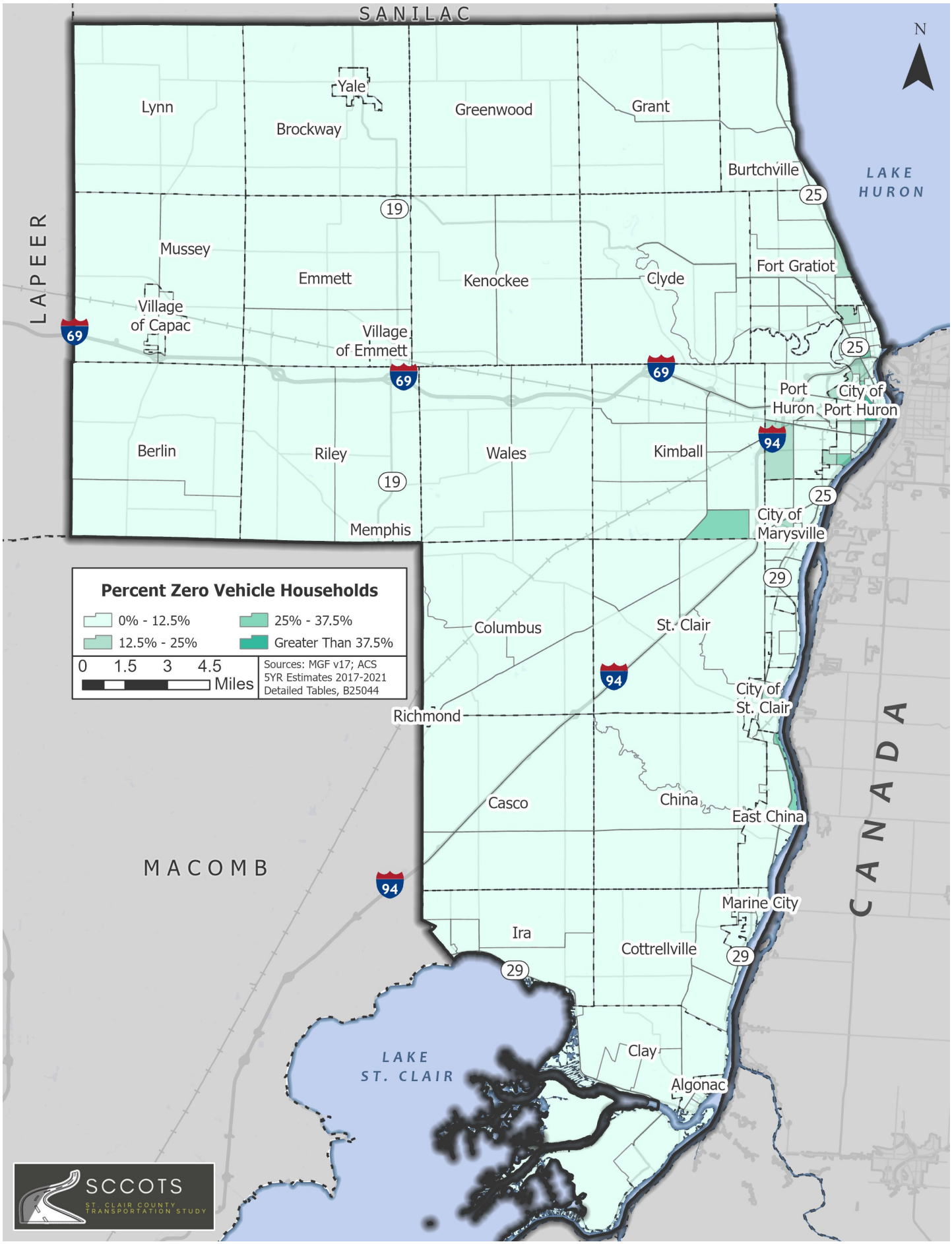
Cottrellville
Clay
Algonac
19
25
69
94
29
Percent Age 65 & Older Population
0% - 21%
21% - 42%
42% - 63%
Greater Than 63%
0 1.5 3 4.5
Miles
Sources: MGF v17; ACS 5YR Estimates 2017-2021 Detailed Tables, B01001
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY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Columbus
St. Clair
City of St. Clair
Richmond
Casco
China
East China
Marine City
Ira
Cottrellville
Clay
Algonac
19
25
69
94
29
Percent Zero Vehicle Households
0% - 12.5%
12.5% - 25%
25% - 37.5%
Greater Than 37.5%
0 1.5 3 4.5
Miles
Sources: MGF v17; ACS 5YR Estimates 2017-2021 Detailed Tables, B25044
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

populations are disproportionately high, and
- Involved in identifying mitigation and enhancement measures associated with a particular project.

These requirements apply to projects that receive federal funding or require a type of federal permit. The roadway and transit projects identified and programmed in the 2050 Long Range Transportation Plan must address the principles relating to Environmental Justice. Specifically, the plan must identify, address, minimize, mitigate, and (preferably) avoid disproportionately high and adverse human health or environmental effects of its programs and policies.

Transportation projects have short- and long-term effects on communities. These impacts can be positive or beneficial, such as improving travel options, creating safety outcomes and providing congestion relief or travel time reduction. Projects may also have negative effects, burdens or adverse effects. Adverse effects encompass the totality of significant individual or cumulative human health or environmental effects, including interrelated social and economic effects that may include, but are not limited to:

- Adverse employment effects.
- Vibration, pollution and contamination.
- Bodily impairment, infirmity, illness or death.
- Destruction or disruption of a community's economic vitality, facilities, services and man-made or natural resources.
- Destruction or diminution of aesthetic values.
- Displacement of persons, businesses, farms or nonprofit organizations.
- Increased traffic congestion or isolation, exclusion or separation of minority populations within a community.

METHODOLOGY

St. Clair County's Approach to Environmental Justice

Neither Title VI of the Civil Rights Act nor Executive Order #12898 provides specific guidance to evaluate EJ within a region's transportation planning process. Therefore, SCCOTS must devise their own methods for ensuring that EJ population groups are geographically identified and EJ issues are represented in transportation planning and the decision making process. In consideration of the EJ policies identified above, St. Clair County developed a baseline Environmental Justice Analysis as an initial step toward better identifying the locations and concentrations of the underserved populations in the SCCOTS planning area. Datasets were assembled as a reference point inventory of demographic attributes for four populations, Minority, Low-Income (below poverty line), Senior (Elderly 65+) and Zero-car households.

Figure 3.13

EJ Population in the County, State and Nation	St. Clair County	Michigan	United States
Total Population	160,257	10,057,921	331,097,593
Minority Population	15,514	2,663,781	136,211,129
Minority Concentration	9.68%	26.48%	41.14%
Senior Population	31,019	1,786,825	54,737,648
Senior Concentration	19.36%	17.77%	16.53%
Population for which Poverty Status has been determined	158,320	9,845,242	323,275,448
Low-Income Population	18,761	1,293,164	40,521,584
Poverty Concentration	11.85%	13.13%	12.53%
Occupied Housing Units	65,989	4,009,253	125,736,353
Zero Vehicle Available	3,706	287,851	10,474,870
Zero Vehicle Concentration	5.62%	7.18%	8.33%

Source: U.S. Census

Identifying Geographic Areas for Analysis

An EJ analysis considers disproportionate impacts. Therefore, two areas must be defined to facilitate comparison: the area actually affected for each alternative and a larger regional area that serves as a basis for comparison and includes the actual area affected. Groups of EJ populations could occur as interconnected neighborhoods within a municipality or could encompass a broad area which is comprised of minority or low-income populations but have no specific concentrations of EJ residents.

When identifying impacted population groups, the scale of geography selected is crucial because it must provide detailed information about the population characteristics within an impacted area. The different size scales may provide altered demographic profiles, allowing for the potential of distorting the impacted area analysis. St. Clair County has chosen to use data at the Census Tract scale, but intends to scale down to the Transportation Analysis Zone (TAZ), block group or block level for a more detailed project-level assessment or when the impacts require a high degree of demographic resolution

It is essential to alter the geographic boundaries for analysis contingent upon the nature of the proposed action or plan. St. Clair County should establish the study area boundaries carefully so as not to inaccurately distort the representation of minority and low-income individuals in the affected population. The County should also revise the boundaries if ensuing data collection and public involvement demonstrate a need. As a FHWA funding recipient, the County should work closely with their FHWA representative to establish appropriate units of geographic analysis.

Where are the Disadvantaged Populations?

Define and Identify Environmental Justice Indicators: The first step of the environmental justice analysis is to identify the concentrations of populations that fall into the categories of low-income and minority populations. These are defined as:

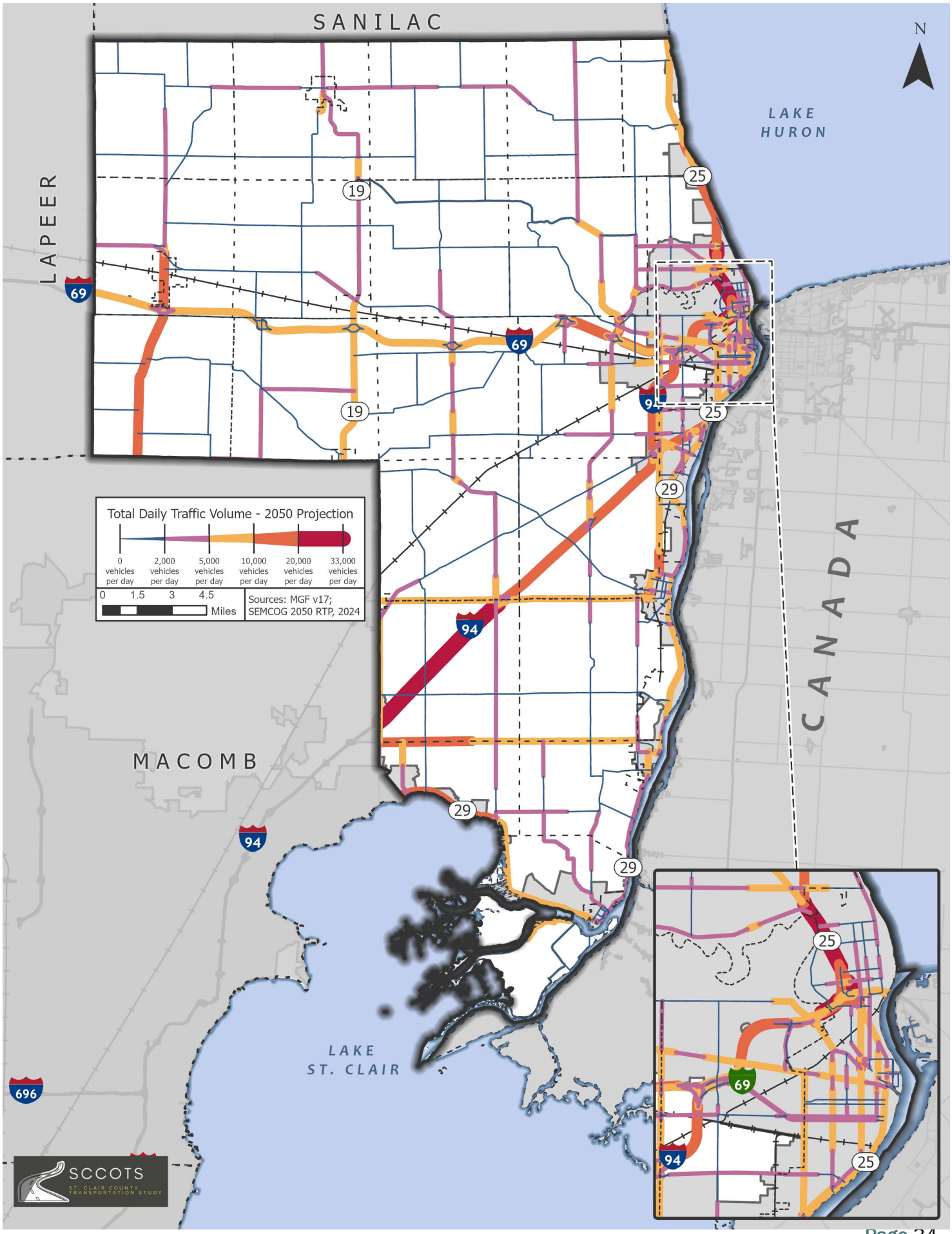
- Minority population — Any identifiable minority group(s) who live in a geographic proximity. This includes people who are Black/African-American, Hispanic or Latino, Asian American, American Indian and Alaskan Native, and Native Hawaiian and other Pacific Islander.
- Low-income population — The U.S. Census Bureau's poverty threshold is calculated annually by using the poverty guidelines of the U.S. Department of Health and Human Services (HHS). Annual poverty threshold is set by household size. Families and individual's total income that falls below the determined poverty threshold are considered living in poverty. In Michigan, the 2018 threshold is $12,140 for a one person household.

While not included in the identification of EJ populations, St. Clair County looks at some additional EJ indicators. These indicators were chosen on the basis that when a person falls into these categories are just as likely to be vulnerable to disproportionate health, environmental, social, and economic impacts as minorities and low-income populations. By assessing these other disadvantaged populations who are also at risk to encounter deficiencies resulting from transportation decisions, St. Clair County is expanding the focus and only enhancing their assessment. These additional indicators include:

- Older adult populations — Individuals aged 65 and over.
- Zero -car households — Households where no cars, vans, pickup or panel trucks of one-ton capacity or less are owned and available for the use of household members.

Locating these disadvantaged populations is necessary for conducting effective public participation and for understanding the distribution of benefits and burdens of transportation plans and projects. There is no universally accepted practice for identifying communities with higher concentrations of households which may need special consideration.

Determine Data Sources: The next step is to decide on the level of detail required for spatially identifying population groups and identifying data sources to use to conduct a demographic profile. It is recommended that a GIS demographic inventory is conducted to identify the distribution and concentrations of disadvantaged groups. Simultaneously along with following the identification of EJ communities using traditional data, SCCOTS should be reaching out into the community to test the validity of their data and assumptions with a field review and direct public involvement. Engage leaders and representatives of demographic groups to help identify target populations. If feasible, verify results through field visits and community consultation. Visiting the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Total Daily Traffic Volume - 2050 Projection
0 vehicles per day
2,000 vehicles per day
5,000 vehicles per day
10,000 vehicles per day
20,000 vehicles per day
33,000 vehicles per day
0 1.5 3 4.5 Miles
Sources: MGF v17; SEMCOG 2050 RTP, 2024
19
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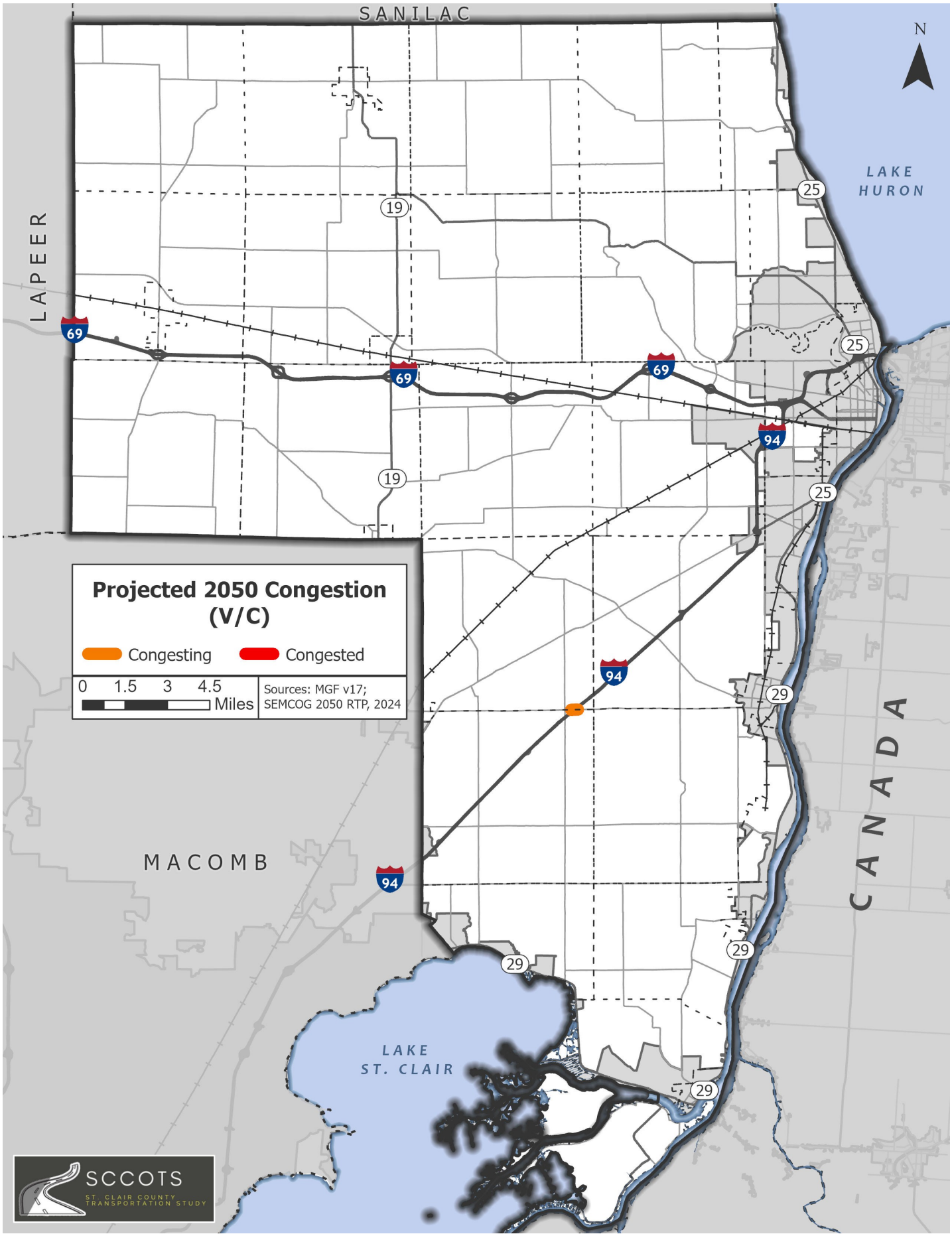
696
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY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Projected 2050 Congestion (V/C)
Congesting
Congested
0 1.5 3 4.5
Miles
Sources: MGF v17; SEMCOG 2050 RTP, 2024
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

community and performing a walking or windshield survey, can help determine the true physical boundaries of what are considered to be low-income and minority communities.

MDOT recommends using U.S. Census data to identify EJ populations. Counties and census tracts are usually utilized for statewide planning; census tracts, census block groups and Traffic Analysis Zones (TAZs) are used for metropolitan planning; and census block groups, census blocks, or individual households are typically used for project development. For the purpose of this initial assessment to be used as a starting point and a planning tool within the LRTP, an overview of strategies, techniques for identification, outreach, and analysis of effects, all data was obtained from the U.S. Census Bureau's 2012-2016 American Community Survey (ACS) 5-Year Estimates data set to identify the EJ indicators. The data was obtained for four different Census Bureau geographies: census tracts, county, state and the nation. The resulting EJ population concentrations at the county, state and national level are depicted in Figure 3.13.

H. Operations, Technology, and Future Travel Options

Travel Demand Managment

Travel Demand Management (TDM) strategies focus on changing travel behavior in order to reduce traffic during congested periods. Managing demand provides travel choices such as work location, route, time, and mode.

Source: FHWA

Strategies include:

- Park and Ride Facilities
- Ridesharing programs/incentives, vanpool, and
- Projects and programs that encourages bicycle and pedestrian choices

There are a number of initiatives and programs that can implement these strategies.

Parking

Parking management can shift some automobile travel to alternative modes and can help improve access by creating more cluster, multi-modal land use patterns. Some examples of parking management strategies which influence travel demand include:

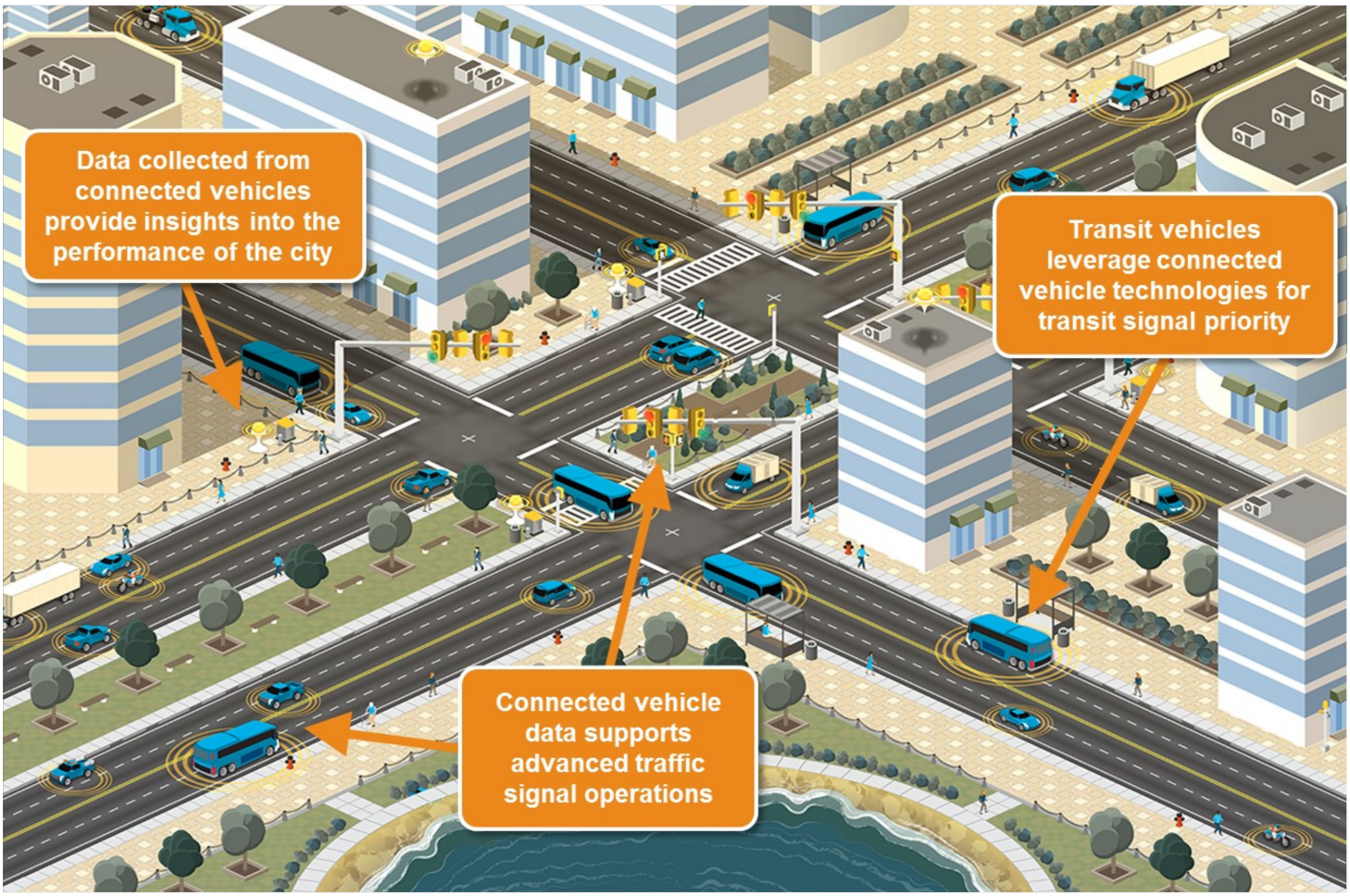
- Creating a greater opportunity for shared parking by encouraging compact mixed-use development and improving walking and cycling conditions
- Pricing parking to reflect the cost of providing parking
- Providing a parking “cash out” or other financial incentive to employees to use alternative modes
- Renting or selling parking facilities separate from building space
- Providing better user information and marketing relating to parking availability and price

Telecommuting and Flexible Work Hours

St. Clair County will continue to promote and support flexible schedules and telecommuting programs through Administration. By allowing employees to work from home or utilize flexible schedules, employers can help to reduce demand on the transportation system during peak hours, effectively increasing the efficiency of the system.

Land Use Strategies

Pedestrian-oriented, mixed use development patterns can support a reduction in transportation demand on the countywide and regional roadway system by allowing people to use transit, bike or walk for some trips and by supporting shorter trips. St Clair County is working with local agencies to support the emergence



Source: FHWA

Tesla Charging Station at the Blue Water Convention Center

of mixed use development in the more densely populated community centers.

Conngestion Managment

SEMCOG develops and implements a Congestion Management Process (CMP) to improve mobility in the region. Congestion is the traffic level at which a roadway becomes saturated and unable to support intended volumes of travelers. Congestion levels are most severe during time periods when there are more reasons to travel, in places where there is a greater density of activity, and on roads where there are fewer alternative routes. Congestion can unpredictably delay travelers, increase the risk of vehicular crashes, and contribute to degrading regional air quality. CMP information helps SEMCOG and its regional partners develop policies for managing congestion and projects that mitigate congestion. The CMP has three basic steps:

- Monitor and evaluate transportation system performance,

- Identify congestion problems, and
- Evaluate and recommend mitigation strategies.

In managing congestion, the CMP draws from congestion mitigation strategies that promote pooled travel options (carpool, vanpool, transit, biking, walking), emphasize improving how roads operate (ITS, access management), and increasing roadway capacity when other management strategies are not effective.

Map 9 and Map 10 show the existing traffic counts and areas of congestion in St. Clair County. The areas of higher Average Daily Traffic (ADT) and that show congestion are in the urbanized areas of congestion in St. Clair County. The areas of higher Average Daily Traffic (ADT) and that show congestion are in the urbanized areas, majority in Port Huron and Fort Gratiot Township. Some of the roads with the highest traffic counts include:

- M-25
- M-29
- Pinegrove
- I-94/I-69
- Water Street

Intelligent Transportation Systems (ITS)

Fulfilling the commitment to make roadways safer and more efficient is no longer as simple as building new roads or expanding existing ones. These traditional methods are very expensive and sometimes carry adverse environmental and/or social impacts. Furthermore, congestion deficiencies are only one of many concerns that need to be addressed. Travelers throughout the Southeast Michigan region need accurate, up-to-date, and relevant road condition information in order to make the best decision for their trip.

The benefits of ITS are significant. ITS can address a multitude of transportation issues while improving operations and maintaining safety in a cost effective manner. For example:

- There are reduced crashes and fatalities when vehicles are equipped with ITS components.
- The flow of traffic from one area to another can be optimized when using ITS applications.
- ITS traffic management systems can utilize permanent vehicle detection technologies in coordination with closed circuit television cameras (CCTV) to monitor the traffic conditions on the roadway.
- Fewer traffic stops and less congestion will translate into reduced fuel emissions.

In summary the benefits of utilizing ITS systems include:

- Reducing delay and congestion
- Reducing incident response time
- Reducing travel time and variability in travel time
- Improving available traveler information
- Informing travelers of current weather and pavement conditions
- Reducing the number of crashes and secondary crashes
- Reducing emissions and fuel consumption
- Improving roadway capacity
- Improving traffic flow and travel speed

Connected and Autonomous Vehicles

Connected and autonomous vehicle technology will transform transportation systems over the coming decades, with major implications for the planning and design of communities. Autonomous vehicles, also known as driverless or self-driving cars, have been sharing streets and roads for years.

According to the American Planning Association,

> *"The widespread deployment of autonomous vehicles for cities and metropolitan regions will change the way we design our public rights-of-way. Sensors will allow autonomous vehicles to travel closer together than human-controlled vehicles, reducing the necessary pavement width and freeing up space for wider sidewalks, bike lanes, and other amenities. Local zoning codes will need to address requirements for passenger loading and unloading, and parking needs will change drastically if a shared use model is employed. As cities transition away from ordinances that now require large amounts of land to be used for parking and circulation, they will need to determine how best to make use of that "extra" land through new approaches to land use and zoning. "*

Connected and autonomous vehicles will require new infrastructure that will rely on sensors to be located

Figure 3.14

PASER Categories			
Quality	Rating	Treatment (Asphalt)	Treatment (PCC)
Excellent	9-10	No maintenance required	No maintenance required
Good	7-8	Crack sealing and Minor patching	Routine maintenance
Fair	5-6	Preservation Treatments (non-structural)	Surface repairs, partial-depth patching
Poor	3-4	Structural renewal (overlay)	Extensive slab or joint rehabilitation
Failed	1-2	Reconstruction	Reconstruction

Figure 3.15

St. Clair County PASER Ratings			
Year	Quality	Rating	Percentage
2022	Excellent	9-10	5.2%
2022	Good	7-8	17.1%
2022	Fair	5-6	18.1%
2022	Poor	3-4	44.3%
2022	Failed	1-2	15.4%
2023	Excellent	9-10	17.0%
2023	Good	7-8	20.6%
2023	Fair	5-6	27.1%
2023	Poor	3-4	29.9%
2023	Failed	1-2	9.7%

on structures and other infrastructure. Sensors will allow vehicles to "talk" to one another, as well as to the surrounding infrastructure. This technology will feed into a larger ecosystem known as a "Smart City." Large amounts of data will be transferred between vehicles and infrastructure and this data will be able to provide planners, engineers, and decision makers with new insight as to how a transportation network, and the overall community, is functioning.

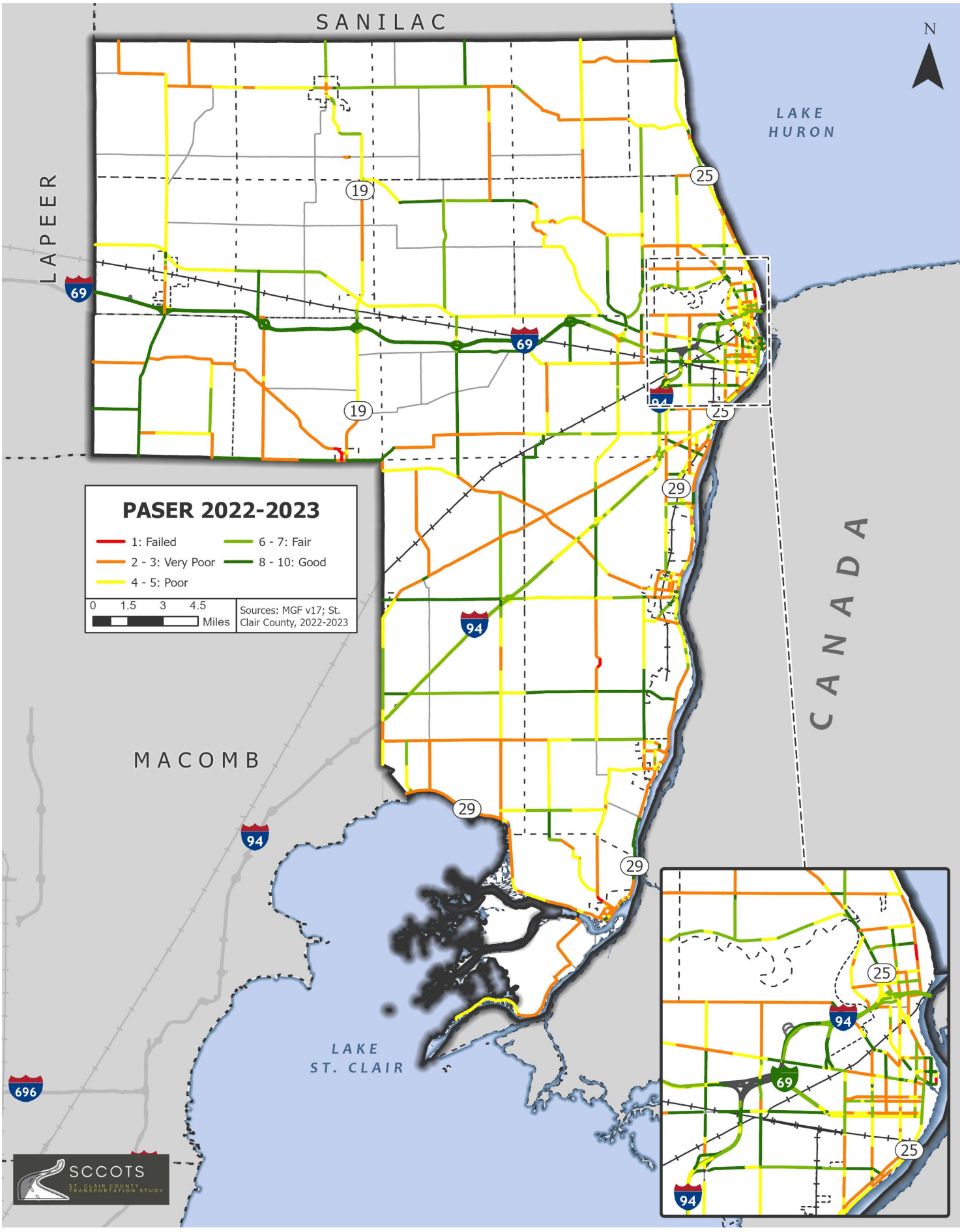
From safety, cost, energy/fuel conservation, advancement of technology, and traffic efficiency to drivers who are informed of weather, road conditions, construction, and emergencies. Connectivity provides many opportunities to improve on-road, roadside, and planning activities that are all connected by the ability to collect, process, and manage big data. Using Dedicated Short Range Communication, Wi-Fi, and satellite connections to connect vehicles to infrastructure, vehicles, and pedestrians will provide numerous opportunities for economic development and transportation improvements.

In addition to connected and autonomous vehicles, other innovations and technology will also impact how people travel and interact with the built environment, including:

Shared-Use Mobility Services

The Shared-Use Mobility Center defines shared-use mobility as transportation services and resources that are shared among users, either concurrently or one after another. This includes public transit; taxis and limos; bike sharing; car sharing; ride sharing; ride sourcing or ride-hailing; ride-splitting; scooter sharing (now often grouped with bike sharing under the heading of "micromobility"); shuttle services and "microtransit;" as well as other options. This includes services such as Lyft and Uber that can be accessed via smartphone. Advances in technology have made sharing transportation options efficient and easy. Automobile manufacturers, rental car companies, and transit agencies have developed new solutions and mobile applications designed to alter routes, fill empty seats, collect fares and share real-time arrival and

Poor Road Surface Rating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LAPEER
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LAKE HURON
LAKE ST. CLAIR
CANADA
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PASER 2022-2023
1: Failed
2 - 3: Very Poor
4 - 5: Poor
6 - 7: Fair
8 - 10: Good
0 1.5 3 4.5
Miles
Sources: MGF v17; St. Clair County, 2022-2023
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SCCOTS
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departure information. These types of services provide people with additional transportation options, reduce traffic congestion, and provide first and last mile options.

Electric Vehicles

Community partners should look into creating an "Electric Avenue" along the M-25 corridor through Marysville and Port Huron connecting to the Blue Water Bridge. This would equip the corridor with electric vehicle charging infrastructure that leverages the smart grid and provide needed infrastructure and resources to drivers of electric vehicles coming into the country or leaving the country via the Blue Water Bridge, as well as our residents who already have or are considering an electric vehicle. Moreover, this would create additional economic development opportunities within the County.

Data and Technology

A data rich and connected "Smart City" provides the ideal opportunity to develop deep learning and automation alternatives to promote autonomous functionality, increased safety solutions, improved resource management and maximized energy efficiency in real world environments.

Connectivity must be secure, stable, and sufficient to support initial automation development phases. A connected automation environment will be established to provide\ the necessary infrastructure to support different sensing technologies that can collect, store, and support transfer of data.

Exploring different technology solutions at the infrastructure and vehicle levels will be among initial activities to support studies and deep learning that can be used to compare performance characteristics, limitations, quality, durability, and cost effectiveness comparisons. Consideration of acquisition, installation, maintenance, user reliability, processing, data handling, storage, and communication will be among other critical elements of evaluation.

Specific research opportunities of connected vehicle and infrastructure technology to model and test traffic flow efficiency, safety improvements, homeland security improvements related to commercial freight and transport crossing the Blue Water Bridge, providing additional mobility between downtown assets, improving safety and efficiency of school buses and public transit, and reducing congestion and emissions from idling vehicles at known choke points (i.e. rail crossings, drawbridges, etc.)

Land Use and Infrastructure

Intelligent, sensor-based infrastructure will ultimately be deployed over time to collect data that will ultimately be used to improve system efficiencies, public safety, and overall mobility. Connected and autonomous vehicles and shared-mobility services will have a profound impact on how we plan our communities. According to Professor Jonathan Levine at the University of Michigan,

> *"if we do not address land use, there will be an ultimate impediment to access to transportation for consumers and constituents. Two examples of this impediment include parking and zoning. In many cities, when a new residential or commercial building is constructed, there must be a minimum number of parking spots attached. This requirement of parking increases housing costs in the area. Furthermore, when zoning laws encourage low density development, that density is eventually capped and cannot increase."*

> *"What autonomous vehicles (AVs) could potentially do is encourage infill development in the cities, reducing their outward expansion making their per-capita environmental footprints smaller. The benefits are not restricted to cities; employing AVs to operate in coordination with public transit to encourage transit-oriented development can make suburbs more attractive to live in."*

According to a Florida State University Study *("Envisioning Florida's Future: Transportation and Land Use in an Automated Vehicle World"*) there are strong indicators that AVs will require narrower ROWs and travel lanes, influence the location, form, and amount of parking, impact the mobility of bicyclists

and pedestrians, declutter urban environments through reduced signalization and signage, and provide redevelopment opportunities on now unnecessary parking lots and excess ROW.

I. System Preservation

System preservation refers to a collection of activities aimed at preserving investments in the regional transportation system. It is the sum of all activities undertaken to provide undertaken to provide and maintain serviceable roadways, transit facilities, bicycle and pedestrian facilities, and other elements of the transportation system. An effective system preservation program encompasses a full range of maintenance strategies, as well as rehabilitation treatments and reconstruction, with the goal of enhancing system performance (ride quality, safety, service life, etc) in a cost- effective and efficient manner.

Pavement Maintenance, Rehabilitation, and Reconstruction

Most agencies involved in the preservation of our regional roadway system recognize that effectively maintaining this investment requires an approach that looks at the needs of the system as a whole rather than incrementally reacting to major deficiencies.

Maintenance consists of cost-effective treatments to an existing roadway system that preserve the system or maintain or improve the functional condition of the system. Maintenance may be proactive in the case of preventative or routine maintenance or reactive in the case of corrective maintenance.

St Clair Highway Bridge Reconstruction in China Township

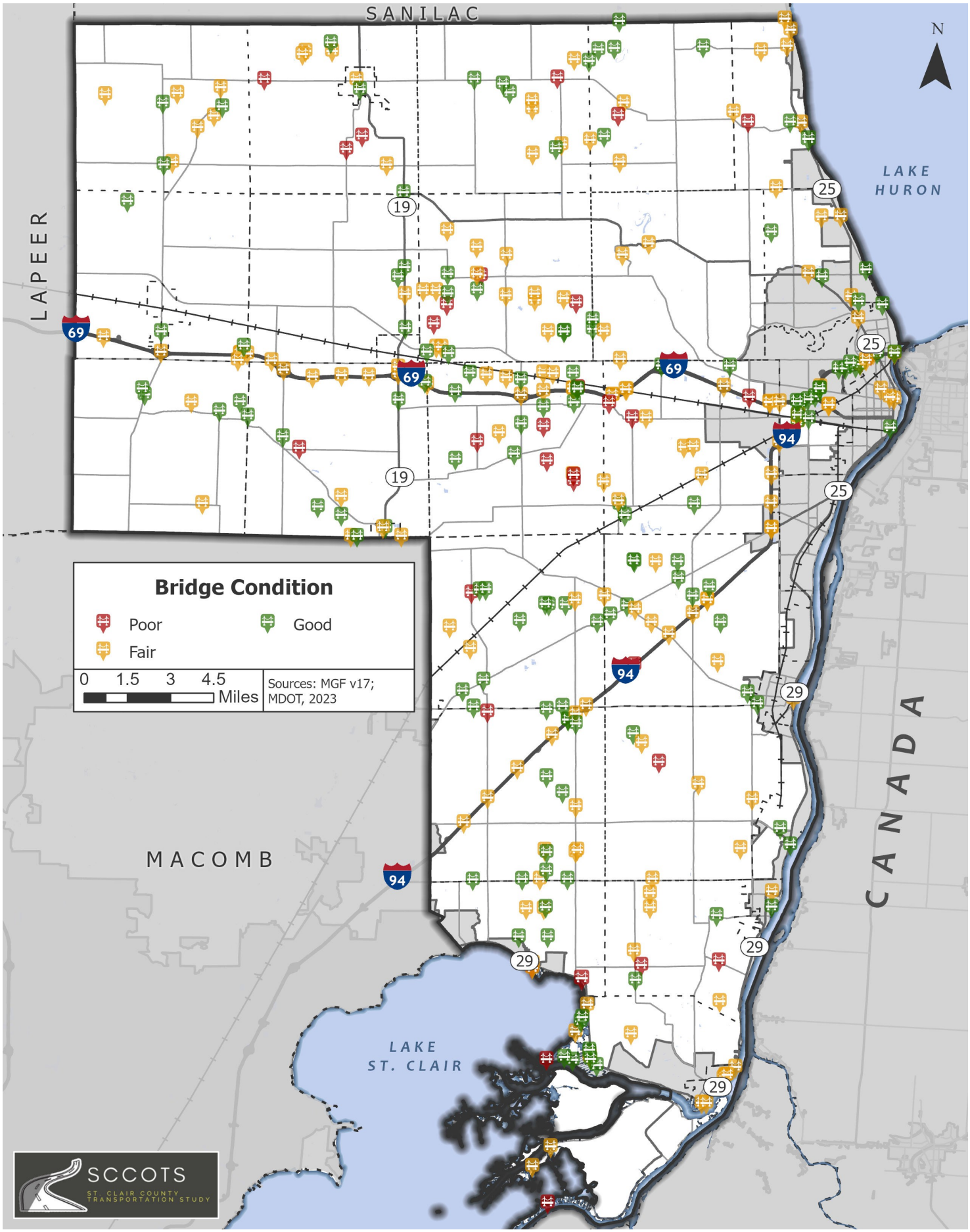
Rehabilitation consists of structural enhancements that extend the service life of an existing pavement and/or improve its load carrying capacity. Rehabilitation techniques include restoration treatments and structural overlays.

Reconstruction is the replacement of the entire pavement structure by the placement of the equivalent or increased pavement structure. Reconstruction usually requires the complete removal and replacement of the existing pavement structure.

Preventative maintenance and other pavement preservation techniques can be applied strategically throughout a

Figure 3.16

St. Clair County Bridge Ratings			
Year	Good	Fair	Poor
2018	135	156	36
2019	141	156	29
2020	140	162	25
2021	139	160	28
2022	134	165	29


SANILAC
LAPEER
MACOMB
LAKE HURON
LAKE ST. CLAIR
CANADA
N
Bridge Condition
Poor
Fair
Good
0 1.5 3 4.5
Miles
Sources: MGF v17; MDOT, 2023
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

roadway's life to help cost-effectively extend the design life of the facility and manage the costs of full roadway rehabilitation and reconstruction. However, assuming roadways have a 40-year design life, approximately 62.5% of the existing regional roadways system will need to be rehabilitated or reconstructed in the next 25 years.

Pavement Surface Evaluation and Rating (PASER)

The Michigan Transportation Asset Management Council has selected the PASER rating system as the statewide standard of pavement condition reporting. Each year, St. Clair County staff and MDOT staff rate half of the Federal-Aid roads in the county. In 2023, 340 miles of road in the western half of the county were rated. And in 2022, 336 miles of road in the eastern half of the county were rated.

The PASER scale is a 1-10 rating system for road pavement condition developed by the University of Wisconsin-Madison Transportation Information Center. PASER uses visual inspection to evaluate pavement surface conditions. When assessed correctly, PASER ratings provide a basis for comparing the quality of roadway segments. The PASER assessment method does not require measurements of individual distresses, and thus PASER ratings cannot be disaggregated into measurements of specific distress types. The advantage to this method is that roads may be assessed quickly, possibly even by "windshield survey." A primary disadvantage is that because PASER ratings cannot be disaggregated into component distress data, the metric cannot be used in mechanistic-empirical transportation asset management programs.

Numerical PASER ratings are translatable to condition categories and prescribed treatment options, as shown below .

Bridge Maintenance, Rehabilitation, and Replacement

Recent and past events where bridge collapses have caused injury and loss of life have highlighted the face that inspection and maintenance of our nation's bridges is of critical importance. In partnership with State DOT's, the Federal Highway Administration maintains a National Bridge Inventory (NBI) covering just under 600,000 of the Nation's bridges located on public roads, including Interstate Highways, U.S. Highways, State, and county roads, as well as publicly-accessible bridges on Federal lands. The NBI does not apply to railroad and pedestrian bridges.

Each State is required to conduct periodic inspections of all bridges subject to the NBI and to report data to the FHWA. Based on inspection, bridges may be classified as:

- Structurally deficient- Indicates a bridge with a structure that is in poor condition or a bridge with a low load rating that is in need of replacement
- Functionally obsolete- Indicates a bridge that is too narrow or provides too little clearance to meet modern engineering standards

Bridges classified as structurally deficient or functionally obsolete are prioritized for replacement or rehabilitation using state and federal funding allocated for bridge replacements. However, the funding available for bridge

Part 4
Implementing the Plan

A. Performance Measures

Transportation Performance Management (TPM) is a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Figure 4.1 provides an overview of the planning rule framework for TPM, FHWA established target setting process, and required performance measures. This chapter serves the role of the System Performance Report for the SCCOTS Long Range Transportation Plan.

Planning Rule Framework

The FAST Act requires state departments of transportation (DOTs), transit agencies, and metropolitan planning organizations (MPOs) to conduct performance-based planning by tracking performance measures and establishing data-driven targets to improve those measures in a coordinated process to ensure consistency.

The Federal Highway Administration (FHWA) organized the many performance-related provisions within the FAST Act for recipients of federal-aid highway funding into six elements: National goals or programs to focus the federal-aid highway program on specific areas of performance; Establishment of measures by FHWA to assess performance and condition in order to carry out performance-based federal-aid highway programs; Establishment of targets for each of the measures to document expectations of future performance; Development of strategic and/or tactical plans to identify strategies and investments that will address performance needs; Development of reports that would document progress toward the achievement of targets, including the effectiveness of federal-aid highway investments; and requirements developed by FHWA to use to achieve or make significant progress toward achieving targets established for performance.

The FAST Act also furthers several important goals with respect to public transportation, including safety, state of good repair, performance, and program efficiency. The FAST Act gives the Federal Transit Administration (FTA) significant new authority to strengthen the safety of public transportation systems throughout the United States. The FAST Act also put new emphasis on restoring and replacing aging public transportation infrastructure by establishing a new needs-based formula program and new asset management requirements.

Under this framework, FHWA and FTA have established a set of rulemakings for implementation of Performance-Based Planning and Programming (PBPP). FHWA published three Performance Measures (PM) rules that established performance measures to monitor the performance of safety (PM 1), bridge and pavement conditions (PM 2), and system performance (PM 3) while the FTA published rules to monitor Transit Asset Management (TAM) and develop Public Transportation Agency Safety Plans (PTASP). The rules indicate how State DOTs, MPOs, and transit agencies should set targets, report progress, and integrate performance management into their Long Range Transportation Plans (LRTPs) and Transportation Improvement Programs (TIPs).

The performance measures and standards are based on national goals and aligned to various program and policy areas including the National Highway Performance Program (NHPP), Highway Safety Improvement Program (HSIP), the Congestion Mitigation and Air Quality Improvement Program (CMAQ), and the National Freight Policy.

Target Setting Options

According to the USDOT, all state DOTS and transit agencies must set targets for the established performance measures within one year of respective

final rule implementation, and all MPOs including SEMCOG must either: 1) establish their own quantifiable targets for their metropolitan planning, or 2) support the statewide/regional targets as established by the state DOT or transit agency, no later than 180 days after the state adopts its targets. To date, SEMCOG has decided to support all applicable performance targets established by MDOT and the regional transit agencies, except for Safety. Figure 4.2 provides a summary of all applicable performance measures in the SEMOOG MPO region, established targets for those measures.

PM 1 Safety

The first of the performance measure rules issued by FHWA became effective on April 14, 2016, establishing five measures to assess the condition of road safety:

- Number of Fatalities.
- Rate of Fatalities: fatalities per million vehicle miles traveled (MVMT).
- Number of Serious Injuries.
- Rate of Serious Injuries: serious injuries per MVMT.
- Number of Non-Motorized Fatalities and Non-Motorized Serious Injuries.

Figure 4.1

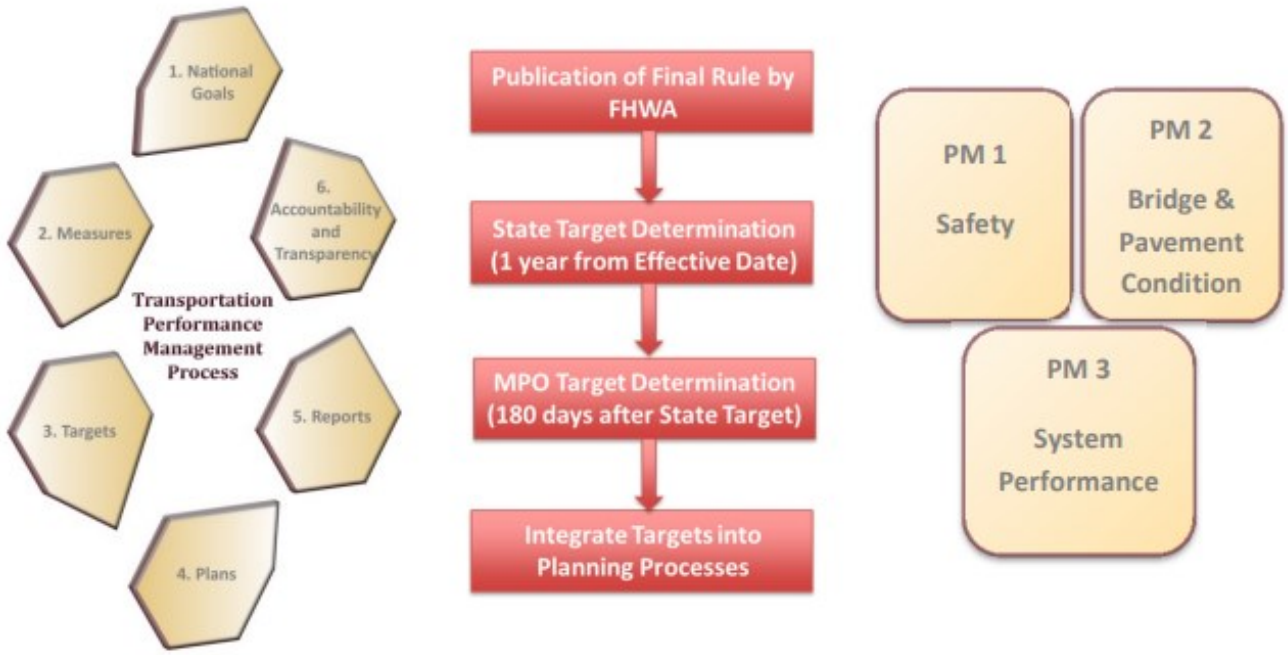


Figure 4.2

	Target Areas	Performance Measurers	Network	Baseline (2018-2022)	Target Adopted (2020-2024)	
PM 1	Safety	Number of Fatalities	All Public Roads	410.4	406.4	
		Rate of Fatalities		0.976	0.956	
		Number of Serious Injuries		2,126.80	2,108.80	
		Rate of Serious Injuries		5.029	5.009	
		Number of Non-motorized Fatalities and Serious Injuries		376	366	
					2- Year Target	4- Year Target
PM 2	Pavement Condition	% of Interstate System in Good Condition	Interstate System	70.40%	59.20%	56.70%
		% of Interstate System in Poor Condition		1.80%	5.00%	5.00%
		% of non-Interstate System in Good Condition	NHS Non-Interstate System	41.60%	33.10%	33.10%
		% of non-Interstate System in Poor Condition		8.90%	10.00%	10.00%
	Bridge Condtion	% of NHS bridges by deck area in Good Condition	NHS	21.80%	15.20%	12.80%
		% of NHS bridges by deck area in Poor Condition		7.00%	6.80%	5.80%
PM 3	NHS Travel Time Realibility	% of person- Miles traveled on the interstate system that are reliable	Interstate System	97.1	85	85
		% of person- Miles traveled on the non-interstate system that are reliable	NHS Non-Interstate System	94.4	80	80
	Freight	Truck Travel Time Reliability (TTTR) Index	Interstate System	1.31	1..6	1.6

Figure 4.3

Mode of Transit	Fatalities (total)	Fatalities (per 100 thousand VRM)	Injuries (total)	Injuries (per 100 thousand VRM)	Safety Events (Incidents, Accidents, Occurences)	Safety Events (per 100 thousand VRM)	System Reliability
Fixed Route	0	0	0	0	7	0.006	48,120
Demand Response/Paratransit	0	0	0	0	18	0.046	180,000
Commuter Bus	0	0	0	0	0	0	No failures

Figure 4.4

Blue Water Area Transportation Commission (BWATC)
Transit Asset Management (TAM) Plan

David McElroy, Accountable Executive

Introduction

The Blue Water Area Transportation Commission (BWATC) provides transit services to communities throughout St. Clair County, Michigan. These communities include the cities of Port Huron and Marysville and the townships of Port Huron, Fort Gratiot and Burtchville. BWATC operates a combination of fixed route, demand response and commuter bus services.

Performance Targets and Measures

Asset Category- Performance Measure

Revenue Vehicles

	Asset Class	2024 Target	2025 Target	2026 Target	2027 Target	2028 Target
Age - % of revenue vehicles within an asset class that have met or exceeded their Useful Life Benchmark (ULB)	BU - Bus	20%	20%	20%	20%	20%
	CU - Cutaway Bus	20%	20%	20%	20%	20%
	TB - Trolley Bus	20%	20%	20%	20%	20%

Equipment

	Asset Class	2024 Target	2025 Target	2026 Target	2027 Target	2028 Target
Age - % of vehicles that have met or exceeded their Useful Life Benchmark (ULB)	Trucks and other Rubber Tire Vehicles	40%	40%	0%	0%	40%
	Maintenance Shop equipment	30%	10%	10%	10%	20%
	Fueling equipment	22%	33%	22%	22%	22%

Facilities

	Asset Class	2024 Target	2025 Target	2026 Target	2027 Target	2028 Target
Condition - % of Facilities with a condition rating below 3.0 on the FTA Transit Economic Requirements Model (TERM) Scale	Admin/Maintenance Facility	0%	0%	0%	0%	0%
	Passenger Facilities	0%	0%	0%	0%	0%
	Fueling Facilitates - 2021 Lapeer	0%	0%	0%	0%	0%
	Fueling Facilities - Remote	0%	0%	0%	0%	0%

BWATC sets targets based upon the review of current operational needs as well as current and future funding limits. BWATC also takes into account anticipated levels of transit service.

The Michigan Department of Transportation (MDOT) establishes annual statewide safety targets after consultation and coordination with regional planning organizations throughout the State. In the past, SEMCOG's elected leadership has adopted the State's annual targets while also encouraging MDOT to establish more aspirational targets.

In January 2023, SEMCOG's Executive Committee adopted regional safety targets for the first time, which were developed in coordination with SEMCOG's Transportation Safety Task Force, Transportation Safety Action Committee, Transportation Coordinating Council, and other regional stakeholders. SEMCOG's desire is to set regional safety targets that are both data driven and aspirational, with the long-term goal of zero deaths and serious injuries by 2050. Details regarding the establishment of the safety targets can be found in the Southeast Michigan Transportation Safety Plan.

First, the baseline for each measure was determined using the average of the last five years of available data, 2017-2021. Data from the Fatalities Analysis Report System was used for fatality related measures. The State of Michigan crash database was used for serious injury related measures. Vehicle Miles Traveled (VMT) was calculated using data from the Highway Performance Monitoring System. This is consistent with federal guidelines for establishing baseline values.

Next, to keep initial future projections realistic and achievable, an initial reduction number for 2022 and 2023 was determined for each measure based on the annual change in five-year rolling averages from 2015 to 2019. Since we aspire to have reductions for each measure, only years with a reduction in the rolling average were considered. Crash data from 2020 and 2021 were excluded, as those years were highly influenced by the COVID-19 pandemic. SEMCOG's future projections for travel demand and other forecasting currently exclude COVID data, so

the same approach was used for safety target projections.

The median reduction number from 2015 to 2019 was selected as the projected 2022 and 2023 reduction number for each measure. In cases of an even number of years with reductions, the lower of the two middle numbers was used. Reduction numbers were rounded to the nearest whole number for fatalities and serious injuries. For rates, reduction numbers were rounded to the hundredths place. After the two initial reduction numbers were set, the annual reduction needed to be increased to reach zero by 2050. A consistent year-over-year percent increase in the reduction number was calculated for each performance measure, rounded to the nearest half of a percent. The following tables and charts show these values for each performance measure. (www.semcog.org)

PM 2 Pavement and Bridge Conditions

The second of the performance measures rules issued by FHWA became effective on May 20, 2017, establishing measures to assess the condition of pavements and bridges on the National Highway System (NHS) that is further subdivided into the Interstate system and the non-Interstate NHS. States are required to establish 2-year and 4-year targets for PM2 measures over a four-year performance period. Two-year targets reflect the anticipated performance level at the midpoint of each performance period, while 4-year targets reflect it for the end of the performance period. SEMCOG is only required to either establish or support MDOT's 4-year targets.

Pavement Conditions

There are four performance measures to evaluate pavement conditions on the NHS:

- Percentage of pavements on the Interstate system in good condition.
- Percentage of pavements on the Interstate system in poor condition.
- Percentage of pavements on the non-Interstate NHS in good condition.
- Percentage of pavements on the non-Interstate NHS in poor condition.

The federal pavement performance measure uses a combination of the International Roughness Index (IRI), percent cracking, percent rutting, and percent faulting to indicate pavement condition.

The IRI is an automated road profiling system that measures the variation of a road's surface. While SEMCOG and Michigan use the Pavement Surface Evaluation and Rating (PASER) road condition rating system as a tool to indicate a road's structural integrity, other states use many other rating systems to track pavement conditions. IRI allows condition ratings to be both automated and comparable across states.

This performance measure applies to both the federal interstate system and the rest of the National Highway System (NHS), which includes principal arterials and other roads that are important to the nation's economy, defense, and mobility.

Bridge Conditions

Bridge condition ratings are based on three bridge elements: the deck, the superstructure that supports the deck, and the substructure. The overall bridge condition rating is based on the worst rating across the three elements. Bridges are inspected on a regular basis with bridges rated good or fair inspected every other year and bridges rated poor inspected every year.

MDOT used the National Bridge Inventory (NBI) data to assess condition of bridges on the interstate and non-

interstate NHS to establish targets against two performance measures:

- Percentage of bridges on the NHS in good condition.
- Percentage of bridges on the NHS in poor condition.

The majority of the bridges can be classified as being in either good or fair condition. In 2022, three bridges were rated as being in poor condition.

PM 3 System Performance

The third of the three performance measures rules issued by FHWA became effective on May, 20 2017, establishing measures to assess the performance of the NHS and freight movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program (CMAQ). States are required to establish 2-year and 4-year targets for PM 3 measures for a four-year performance period. SEMCOG has chosen to support MDOT's 4-year targets for all applicable PM3 measures. Travel Time Reliability on the NHS FHWA established two performance measures to assess travel time reliability on the NHS:

- Percent of Person-Miles Traveled on the Interstate that are Reliable.
- Percent of Person-Miles Traveled on the non-Interstate NHS that are Reliable.

The two measures shown above express the percent of person-miles traveled on roads that are reliable. These measures attempt to instruct travelers how often they can expect to travel in reliable conditions. A road is considered reliable when the difference between normal travel times (50th percentile) and congested travel times (80th percentile) is below 50 percent. In other words, a road segment that takes one minute to travel under normal conditions would be considered reliable if the time it takes to travel under congested conditions is less than one and a half minutes.

Freight Travel Time Reliability on the Interstate System

FHWA established the following freight reliability performance measure:

- Truck Travel Time Reliability (TTTR) Index. This measure seeks to assess how reliable the interstate network is for trucks by calculating a ratio called TTTR.

The ratio of the congested period travel time to the normal period travel time, weighted by the length of the Interstate segment, for the entire Interstate system in the state.

Transit Asset Management

FTA's Transit Asset Management (TAM) rule became effective on October 1, 2016. This rule applies to all recipients and subrecipients of federal transit funding that own, operate, or manage public transportation capital assets. The purpose of the TAM is to help achieve and maintain a state of good repair (SGR) for the nation's public transportation assets. It requires transit agencies to establish a system to monitor and manage public transportation assets to improve safety and increase reliability and performance, and to establish performance targets for four national performance measures:

- Rolling Stock: % of vehicles that have met or exceeded their Useful Life Benchmark (ULB).
- Equipment: % of vehicles that have met or exceeded their ULB. Infrastructure: % of track segments with performance restriction.
- Facilities: % of facilities in an asset class, rated < 3 on the Transit Economic Requirements Model (TERM) scale.

*I*n coordination with MDOT's Office of Passenger Transportation and Blue Water Area Transit they adopted a resolution in June 2017 in support of the targets established in the TAM Plan.

Section 5310 Transit Asset Management Plan
BWATC has developed this regional Transit Asset Management (TAM) Plan in accordance with the guidelines established by the FTA. Specifically, CFR 625.25 requires that all TAM plans include:

- An inventory of the number and type of capital assets.
- A condition assessment of those inventoried assets for which a provider has direct capital responsibility.
- A description of analytical processes or decision-support tools used to estimate capital investment needs over time.
- A project-based prioritization of investments.

Following the above process, BWATC developed 2 targets following FTA guidance based on 2018 baseline inventory data: Useful Life Benchmark (USB) and State of Good Repair (SGR). Two separate targets were chosen because while many vehicles exceed their FTA recommended life benchmarks due to low mileage and good maintenance practices, the vehicles are generally within a state of good repair. Figure 4.4 shows those targets.

Public Transportation Agency Safety Plan

In July 2018, FTA published the Public Transit Agency Safety Plan (PTASP) Final Rule, which requires certain operators of public transportation systems that receive federal funds under FTA's Urbanized Area Formula Grants and all rail transit systems to develop safety plans that include the processes and procedures to implement Safety Management Systems (SMS). Its purpose is to improve public transportation safety by guiding transit agencies to more effectively and proactively manage safety risks in their systems. Transit agencies are required to set performance targets for each of the performance measures as identified in the most recent National Public Transportation Safety Plan (NSP):

- System reliability: mean distance between major mechanical failures.

- Safety events: number and rate per total vehicle revenue miles by mode.
- Fatalities: number and rate per total vehicle revenue miles by mode.
- Injuries: number and rate per total vehicle revenue miles by mode.

B. PROJECTS

The selected projects for FY 2024-2026 are included in this plan, as well as an Illustrative list for FY 2027-2050. This list was compiled by the agencies / municipalities that sit on the SCCOTS Technical Committee; Blue Water Transit Commission, St Clair County Road Commission, City of Port Huron, City of Marysville, City of St. Clair, City of Memphis, and Village of Capac. This list includes both transit and road projects. The funding mechanisms/targets are also included through 2050.

Fiscally constrained Project List

This list serves as a guide for transportation investments and planning resources within St. Clair County over a 25-year time horizon. The lists are organized into categories and funding sources.

Roadway Projects:

- These projects are designed to increase the overall network through road rehabilitation and reconstruction. Some of these projects might include a bicycle, transit, pedestrian, or freight component.

Public Transit Projects:

- These projects are designed to support and expand transit throughout St. Clair County.

They are categorized by the following:

- Short term: 2024-2026
- Medium term: 2027-2030
- Long Term: 2031-2040
- Distant: 2041-2050

Year: Identifies the year the project will be funded.
Sponsor: Identifies the jurisdiction and/or agency responsible for the project.
Project Type: Identifies the type of project to receive funding, i.e. roadway, non-motorized, bridge, transit capital/operating.
Project Name: Identifies the project.
Limits: Identifies the extent and location of each project.
Fund Source: Identifies the federal fund source.
Project Cost: Identifies and the estimated cost for construction

Pictures/
Images/graphics

ROADWAY PROJECTS AND NEEDS

Urban Area Projects

2024-2026- Projects Programmed in the TIP

ID	Agency	Road Name	Project Limits	Project Type	Total Cost Estimate
1	Marysville	Ravenswood Rd	Michigan Rd to Gratiot Ave	Rehabilitation	$1,160,697
2	SCCRC	Griswold Rd	Allen Rd to Taylor Rd	Resurfacing	$581,332
3	SCCRC	Krafft Rd	M-136 to Parker Rd	Reconstruction	$862,296
4	SCCRC	Keewahdin Rd	M-136 to M-25	Resurfacing	$237,928
5	SCCRC	Palms Rd	Broadbridge to Marine City Highway	Resurfacing	$650,255
6	Port Huron	Lapeer Ave	16th St to 24th St	Reconstruction	$1,523,000
7	SCCRC	Church Rd	M-29 to Marine City Highway	Resurfacing	$376,465
8	SCCRC	Davis Rd	Range to M-29	Resurfacing	$135,070
9	St. Clair	Fred Moore Hwy	Henry to 17th St	Reconstruction	$474,000
10	SCCRC	Krafft Rd	Parker to State	Reconstruction	$1,248,060
	Blue Water Transit	N/A	Countywide	Operating/Capital Projects	$24,215,749

2026-2030

ID	Agency	Road Name	Project Limits	Project Type	Total Cost Estimate
17	Algonac	Liberty	St. Clair River Drive to State St	Resurfacing	$375,000
18	Algonac	St. Clair River Drive	Pointe Tremble Drive to Edgewater St	Resurfacing	$480,000
19	Algonac	State St	Pointe Tremble Drive to Summer St	Resurfacing	$475,000
20	Marysville	Michigan Ave	Ravenswood Rd to Gratiot Ave	Resurfacing	$1,370,000
21	Marysville	Michigan Ave	Gratiot Ave to Cuttle Rd	Resurfacing	$1,750,000
22	Marysville	6th St	Range Rd to Michigan Ave	Resurfacing	$600,000
23	Marysville	Delaware Ave	Gratiot Ave to Huron Ave	Resurfacing	$505,000
24	Port Huron	7th St	Water St to Wall St	Resurfacing	$174,000
25	Port Huron	Holland Ave	Pine Grove to Gratiot	Resurfacing	$422,000
26	Port Huron	Water St	13th St to 10th St	Reconstruction	$2,793,000
27	St. Clair	Fred Moore Hwy	7th St to 12 St	Reconstruction	$712,000
28	St. Clair	Clinton Avenue	6th St to Whiting St	Resurfacing	$513,000
29	St. Clair	Clinton Avenue	Carney Dr to Western City Limits	Resurfacing	$496,000
30	SCCRC	King Road	Marine City Hwy to Fred Moore Hwy	Rehabilitation	$1,400,000
31	SCCRC	Krafft Road	Gratiot Ave to Campbell Rd	Reconstruction	$3,650,000
32	SCCRC	Keewhahdin Road	M-136 to Lakeshore	Rehabilitation	$2,330,000
33	SCCRC	West Water Street	Range to City of Port Huron	Reconstruction	$3,500,000
34	SCCRC	Dove Street	24th to Range Rd	Rehabilitation	$675,000
35	SCCRC	Gratiot Road	Mayer Rd to I-94	Reconstruction	$7,000,000
36	SCCRC	Wadhams Road	I-94 to Yager Rd	Rehabilitation	$810,000
	Various	Various	Various	Various	TBD
	Blue Water Area Transit	N/A	Countywide	Operating/Capital Projects	$29,227,180

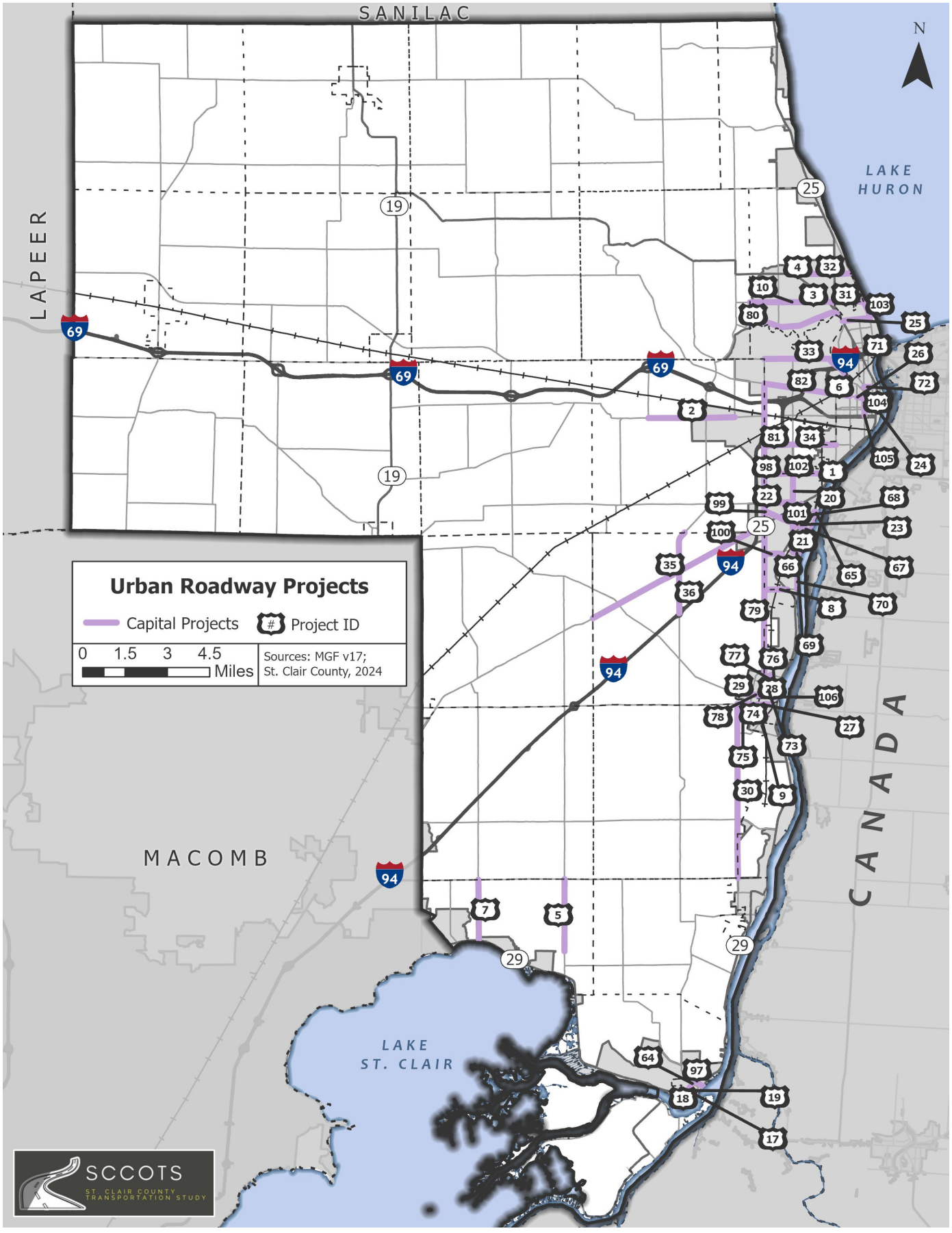
2031-2040

ID	Agency	Road Name	Project Limits	Project Type	Total Cost Estimate
64	Algonac	State Road	Summer St to Smith St	Resurfacing	$285,000
65	Marysville	River Road	Busha Hwy to Huron Ave	Resurfacing	$505,000
66	Marysville	River Road	Huron Ave to Mack Ave	Resurfacing	$1,400,000
67	Marysville	Huron Blvd	Busha Hwy to River Rd	Rehabilitation	$605,000
68	Marysville	Collard Drive	Michigan Rd to Delaware Rd	Resurfacing	$215,000
69	Marysville	Cuttle Road	Busha Hwy to River Rd	Resurfacing	$875,000
70	Marysville	River Road	Mack Ave to Davis Rd	Rehabilitation	$495,000
71	Port Huron	Stone Street	Garfield to Elmwood	Reconstruction	$2,584,000
72	Port Huron	Glenwood	10th to St. Clair	Reconstruction	$2,211,000
73	St. Clair	9th Street	Clinton Ave to Vine St	Resurfacing	$634,000
74	St. Clair	St. Clair Highway	Oak St to Palmer St	Resurfacing	$487,000
75	St. Clair	Fred Moore Highway	Western City Limits to Carney Dr	Resurfacing	$479,000
76	St. Clair	Vine Street	9th St to Riverside Ave	Resurfacing	$639,000
77	St. Clair	9th Street	Vine St to Brown St	Resurfacing	$517,000
78	St. Clair	Clinton Ave	Whiting Ave to Carney Dr	Resurfacing	$419,000
79	SCCRC	Range Road	Brown Rd to Gratiot Ave	Rehabilitation	$1,350,000
80	SCCRC	North River Road	Campbell to M-25	Reconstruction	$4,500,000
81	SCCRC	Range Road	Gratiot to Lapeer	Rehabilitation	$2,200,000
82	SCCRC	Lapeer Road	Range to 24th	Rehabilitation	$1,350,000
	Various	Various	Various	Various	TBD
	Blue Water Area Transit	N/A	Countywide	Operating/Capital Projects	$84,047,335

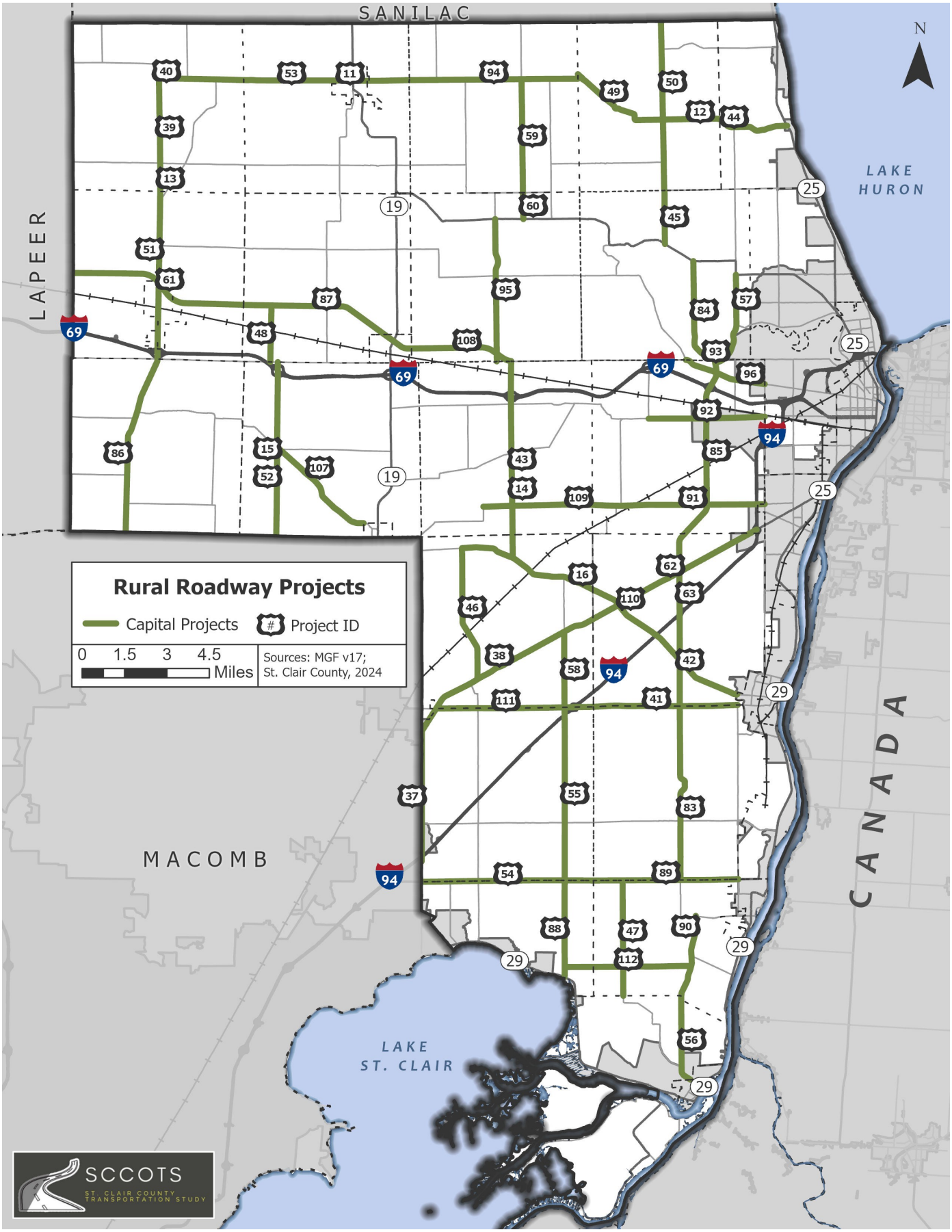
2041-2050

ID	Agency	Road Name	Project Limits	Project Type	Total Cost Estimate
97	Algonac	Smith Street	St. Clair River Dr to City Limits	Resurfacing	$675,000
98	Marysville	Ravenswood Road	Range Rd to Michigan Rd	Resurfacing	$1,275,000
99	Marysville	Huron Blvd	Range Rd to Gratiot Ave	Resurfacing	$1,045,000
100	Marysville	Cuttle Road	Range Rd to Busha Hwy	Resurfacing	$1,280,000
101	Marysville	Huron Blvd	Gratiot Ave to Busha Hwy	Resurfacing	$1,350,000
102	Marysville	Ravenswood Rd	Michigan Rd to Gratiot Ave	Resurfacing	$2,100,000
103	Port Huron	Gratiot	Krafft to Holland	Reconstruction	$5,172,000
104	Port Huron	10th	Lapeer to Court	Reconstruction	$6,562,000
105	Port Huron	10th	Court to Griswold	Reconstruction	$6,618,000
106	St. Clair	Clinton Ave	3rd St to 6th St	Reconstruction	$677,000
	Various	Various	Various	Various	TBD
	Blue Water Area Transit	N/A	Countywide	Operating/Capital Projects	$102,453,230

MAP _____


SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
Urban Roadway Projects
Capital Projects
Project ID
0 1.5 3 4.5
Miles
Sources: MGF v17;
St. Clair County, 2024
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

MAP _____


SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
Rural Roadway Projects
Capital Projects
Project ID
0 1.5 3 4.5
Miles
Sources: MGF v17;
St. Clair County, 2024
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

Rural Area Projects

2024-2026- Projects Programmed in the TIP

ID	Agency	Road Name	Project Limits	Project Type	Total Cost Estimate
11	Yale	Park Ave	Main St to School Drive	Resurfacing	$246,333
12	SCCRC	Burtch Rd	Wildcat Rd to North Rd	Resurfacing	$455,170
13	SCCRC	S. Main St	Downey Rd to Yale Rd	Resurfacing	$615,274
14	SCCRC	Wales Center Rd	Rattle Run Rd to I-69	Resurfacing	$370,085
15	SCCRC	Riley Center Rd	Bordman Rd to Burt Rd	Resurfacing	$925,620
16	SCCRC	Rattle Run Rd	Wadhams to Wale Center Rd	Resurfacing	$1,338,750

2026-2030

ID	Agency	Road Name	Project Limits	Project Type	Total Cost Estimate
37	SCCRC	Countyline Road	Springborn to Gratiot	Rehabilitation	$980,000
38	SCCRC	Columbus	Countyline to Mayer	Reconstruction	$5,500,000
39	SCCRC	Capac Road	Bowers to Dudley	Rehabilitation	$950,000
40	SCCRC	Yale Road	Capac Rd to Miller Rd	Rehabilitation	$640,000
41	SCCRC	Fred Moore Hwy	I-94 to King Rd	Rehabilitation	$1,400,000
42	SCCRC	Wadhams Road	I-94 to Fred Moore Hwy	Reconstruction	$2,750,000
43	SCCRC	Wales Center Road	Lapeer Rd to Rattle Run Rd	Reconstruction	$5,500,00
44	SCCRC	Burtch Road	Babcock to M-25	Reconstruction	$2,520,000
45	SCCRC	Wildcat Road	Metcalf to M-136	Rehabilitation	$470,000
46	SCCRC	Bauman Road	Dolan to Gratiot	Rehabilitation	$1,600,000
47	SCCRC	Starville Road	Marine City Hwy to Genaw	Reconstruction	$4,040,000
48	SCCRC	Breen Road	Burt Rd to Bryce Road	Reconstruction	$2,000,000
49	SCCRC	Comstock/Burtch	Cribbins Rd to Babcock	Reconstruction	$6,050,000
50	SCCRC	Wildcat Road	Fisher Rd to Metcalf	Rehabilitation	$1,400,000
51	SCCRC	Capac Rd	Burt to Bowers	Rehabilitation	$1,200,000
52	SCCRC	Riley Center Road	Bordman Rd to Burt Rd	Reconstruction	$6,100,000
53	SCCRC	Yale Road	Miller Rd to Cork Rd	Rehabilitation	$1,650,000
54	SCCRC	Marine City Highway	Countyline to Mayer Rd	Reconstruction	$4,800,000
55	SCCRC	Palms Road	Marine City Hwy to Division Rd	Reconstruction	$4,310,000
56	SCCRC	Marsh Road	Genaw to City of Algonac	Reconstruction	$4,080,000
57	SCCRC	North Road	Lightle to M-136	Reconstruction	$2,900,000
58	SCCRC	Palms Road	Division Rd to Gratiot Ave	Rehabilitation	$680,000
59	SCCRC	Fargo Road	Metcalf Rd to Yale Rd	Reconstruction	$4,700,000
60	SCCRC	Fargo Road	M-136 to Metcalf Rd	Reconstruction	$1,200,000
61	SCCRC	Imlay City/Downey/Bryce	Cade Rd to Miller Rd	Rehabilitation	$1,600,000
62	SCCRC	Gratiot Road	Mayer Rd to I-94	Reconstruction	$7,000,000
63	SCCRC	Wadhams Road	I-94 to Yager Rd	Rehabilitation	$810,000

2031-2040

ID	Agency	Road Name	Project Limits	Project Type	Total Cost Estimate
83	SCCRC	Indian Trail	Fred Moore to Marine City Hwy	Reconstruction	$4,400,000
84	SCCRC	Vincent Road	M-136 to North River	Rehabilitation	$1,200,000
85	SCCRC	Wadhams Road	Yager to Vincent	Rehabilitation	$1,800,000
86	SCCRC	Capac Road	Burt to Macomb Co	Rehabilitation	$1,900,000
87	SCCRC	Bryce/Dunnigan	Miller to Stapleton	Rehabilitation	$1,900,000
88	SCCRC	Palms Road	Marine City Hwy to M-29	Reconstruction	$3,300,000
89	SCCRC	Marine City Highway	Mayer Rd to King	Reconstruction	$6,200,000
90	SCCRC	Marsh Road	Chartier to Genaw	Reconstruction	$4,900,000
91	SCCRC	Smiths Creek Road	Richman to Range	Rehabilitation	$1,800,000
92	SCCRC	Griswold Road	Dunlap to Range	Rehabilitation	$1,380,000
93	SCCRC	North River Road	Wadhams to Lightle	Reconstruction	$3,280,000
94	SCCRC	Yale Road	Cork to Cribbins	Reconstruction	$9,850,000
95	SCCRC	Kilgore Road	Lapeer to M-136	Reconstruction	$9,500,000
96	SCCRC	Lapeer Road	Abbottsford to Range	Rehabilitation	$1,350,000

2041-2050

ID	Agency	Road Name	Project Limits	Project Type	Total Cost Estimate
107	SSCRC	Belle River Road	Riley Center Rd to Memphis City Limits	Reconstruction	$10,500,000
108	SCCRC	Lapeer Road	Stapleton to Wales Center	Rehabilitation	$2,100,000
109	SCCRC	Smiths Creek Road	Fitz to Richman	Rehabilitation	$3,000,000
110	SCCRC	Rattle Run Road	Bauman Rd to St. Clair City Limits	Rehabilitation	$7,050,000
111	SCCRC	Division Road	Gratiot Ave to I-94	Rehabilitation	$3,460,000
112	SCCRC	Shea Road	Palms to Marsh	Rehabilitation	$13,150,000

C. FUNDING TARGETS: ROAD INFRASTRUCTURE

Road Construction			
	2024	2025	2026
STP-Urban	$1,812,195	$1,847,450	$1,884,406
STP-Rural	$1,195,060	$1,220,000	$1,275,000
Cat D (STP– Flex)	$74,398	$76,448	$78,783
Cat D (State)	$204,194	$130,000	$131,317
Local Match	$658,000	$658,000	$675,000
	$3,869,449	*$3,931,898*	*$4,044,506*

Road Construction			
	2027-2030	2031-2040	2041-2050
STP (Urban, Rural, Flex)	$12,520,399	$34,317,925	$37,908,340
Cat D (State)	$538,705	$1,445,728	$1,599,040
Local Match	$2,611,821	$7,152,731	$7,901,476
	$15,670,925	*$42,916,384*	*$47,408,856*

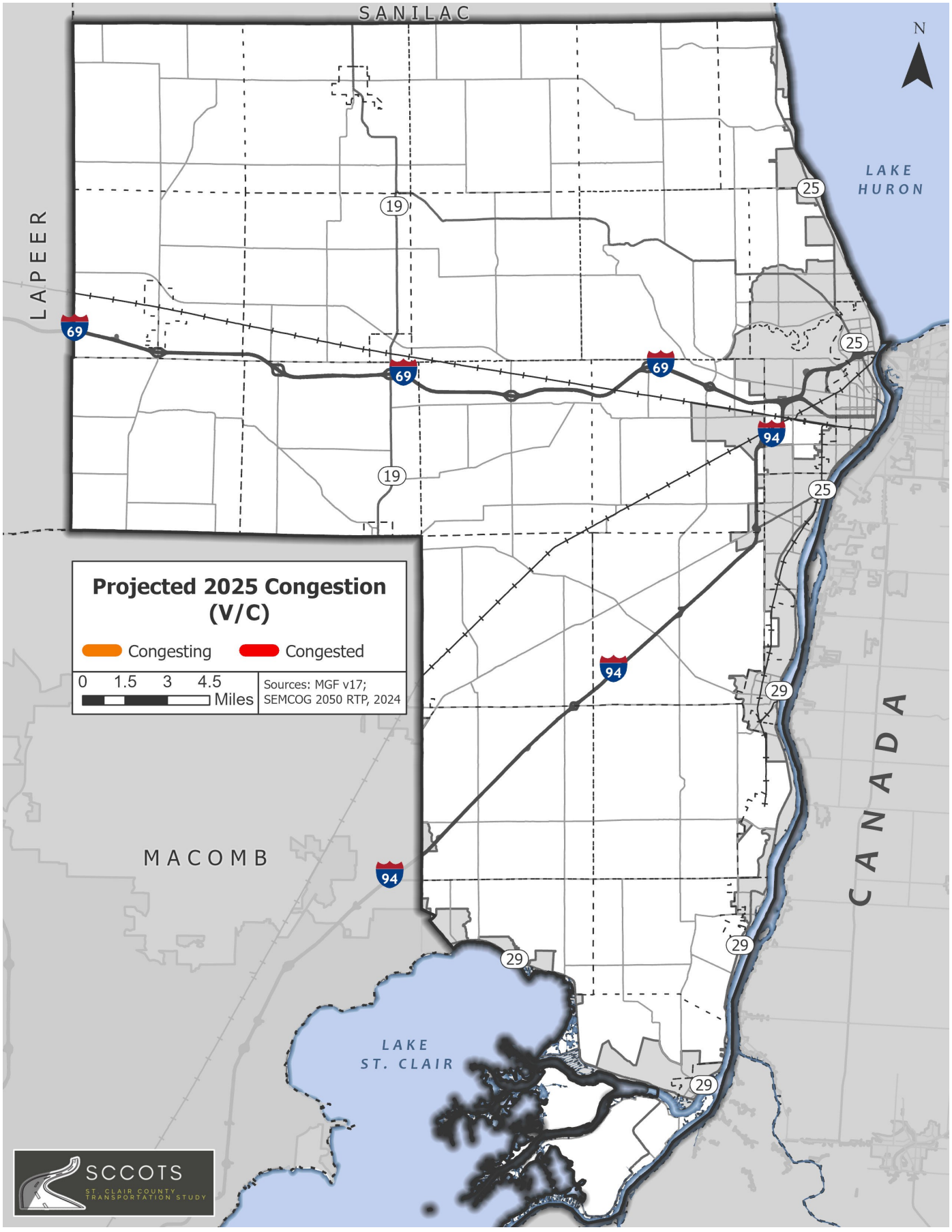
D. Funding Targets: Transit

Operating/Capital			
	2024	2025	2026
Federal 5307	$2,480,762	$2,530,378	$2,580,985
Federal 5311	$597,904	$734,453	$749,142
Federal 5339	$225,149	$229,652	$234,245
CMAQ/CRP	$2,445,579		$7,286,960
State CTF	$1,891,473	$3,360,371	$3,430,662
Local Match	$645,576	$2,573,260	$2,621,641
	$8,286,443	*$9,428,114*	*$16,903,635*

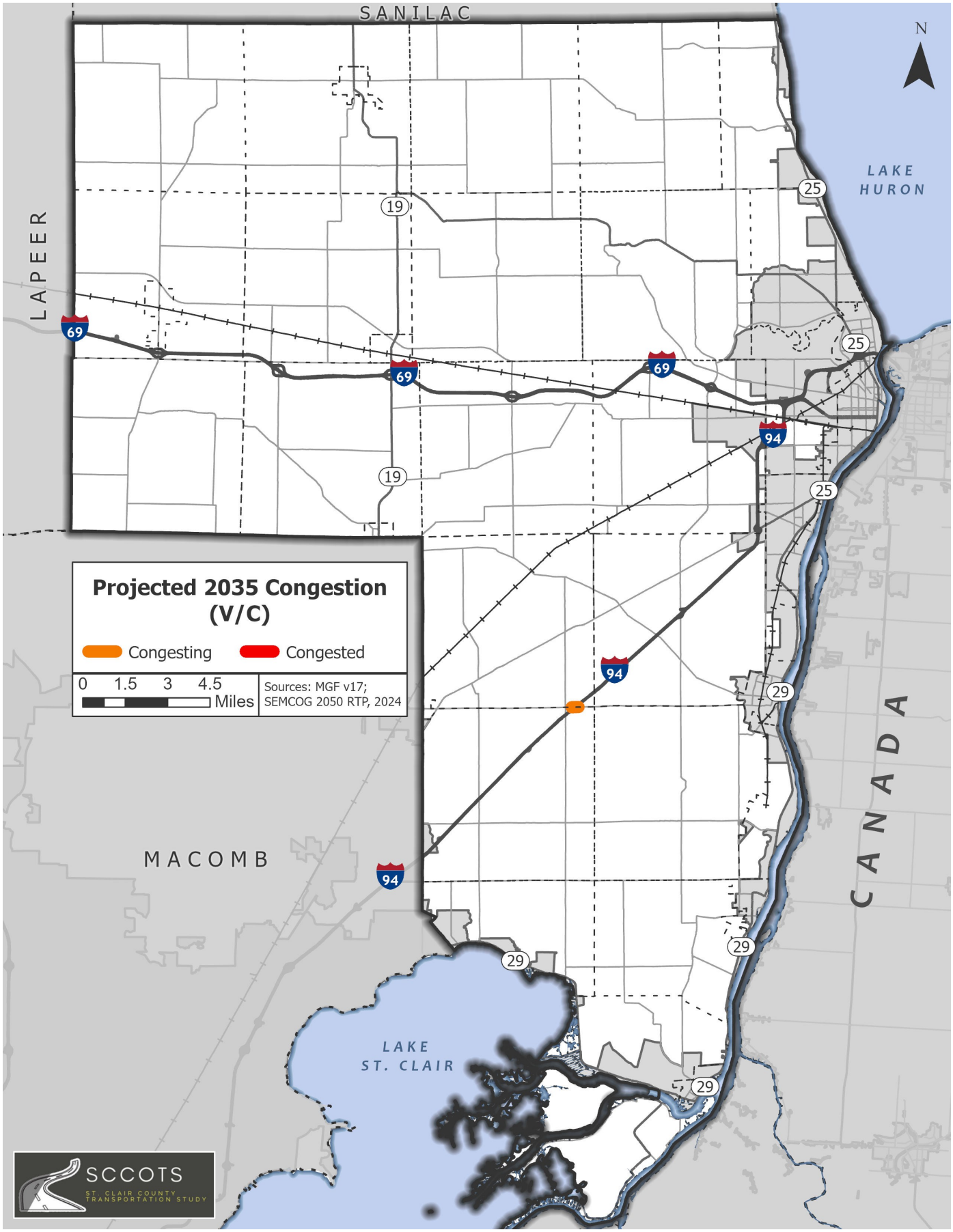
Operating/Capital			
	2027-2030	2031-2040	2041-2050
Federal 5307	$13,829,148	$39,767,883	$48,476,825
Federal 5339	$1,255,107	$3,609,255	$4,399,664
State CTF	$9,717,598	$27,944,474	$34,064,157
Local Match	$4,425,327	$12,725,723	$15,512,584
	$29,227,180	*$84,047,335*	*$102,453,230*

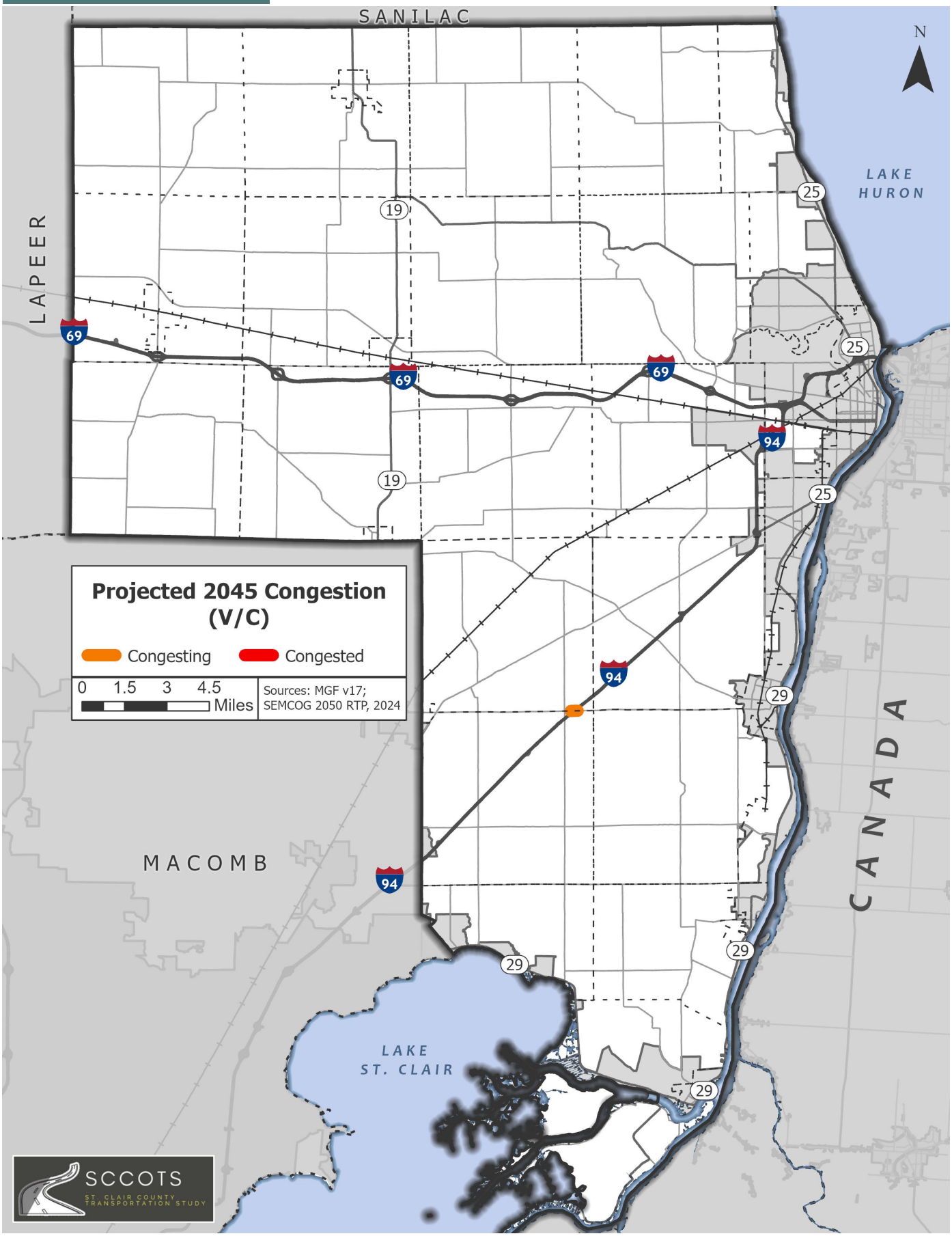
Photo Courtesy of the City of Port Huron

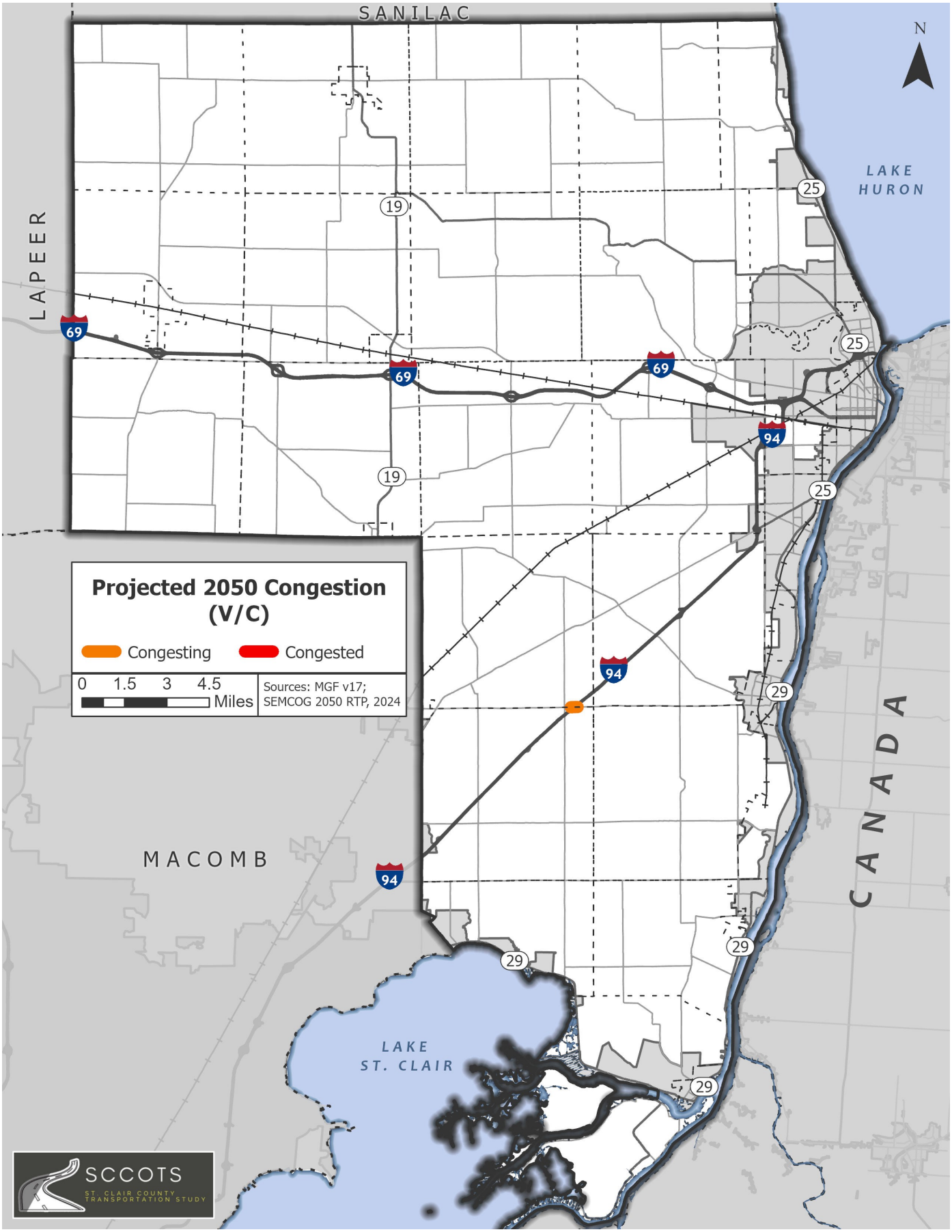
Map Appendix

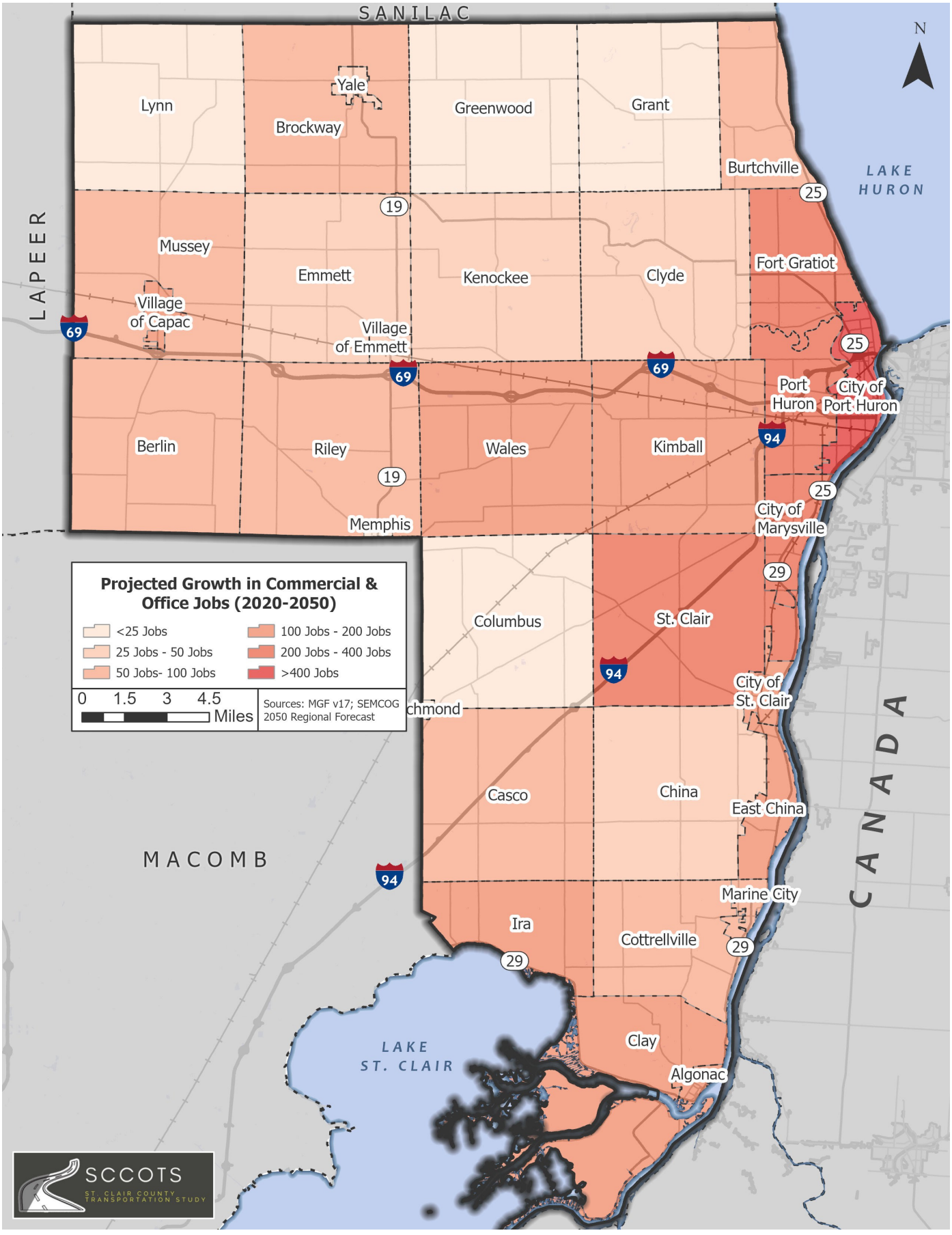


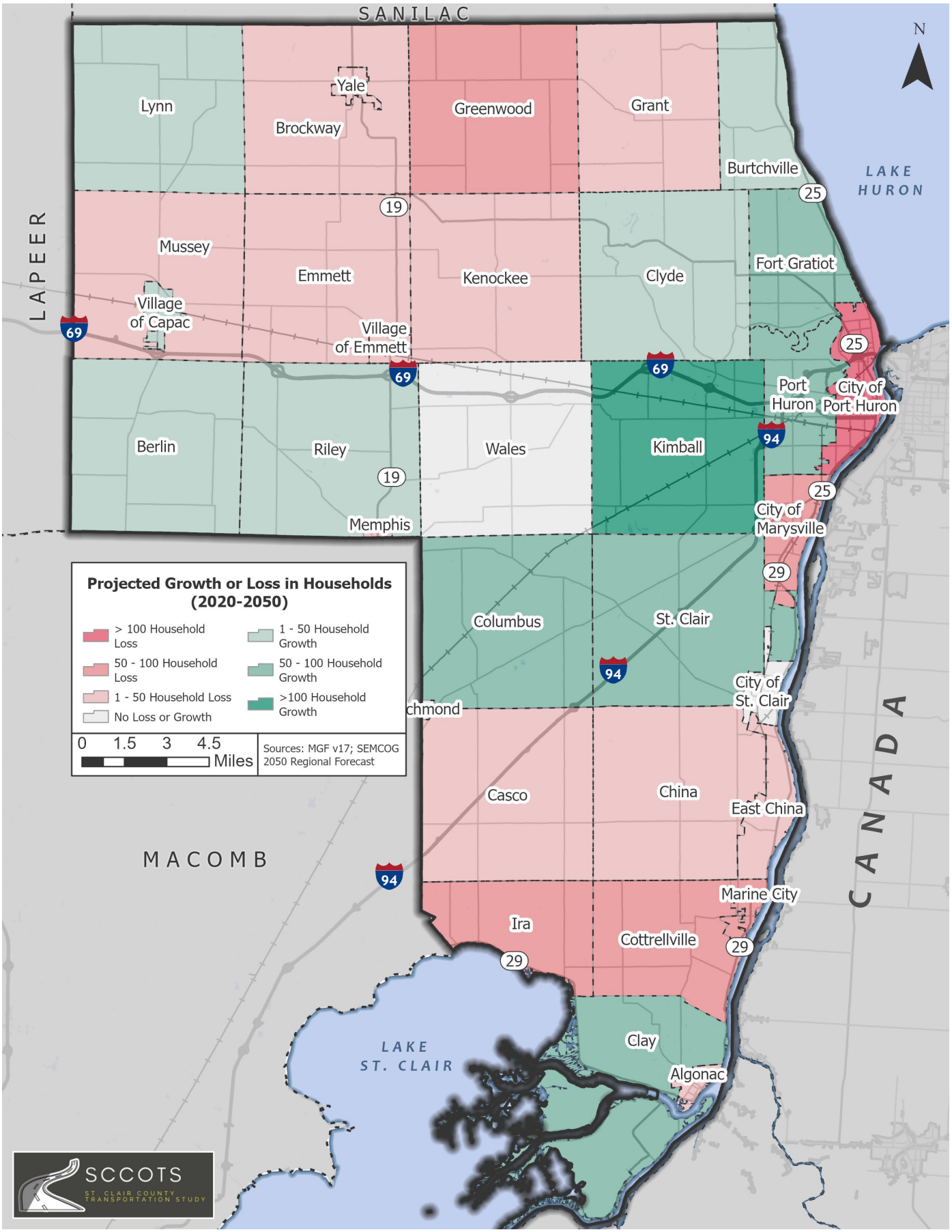
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

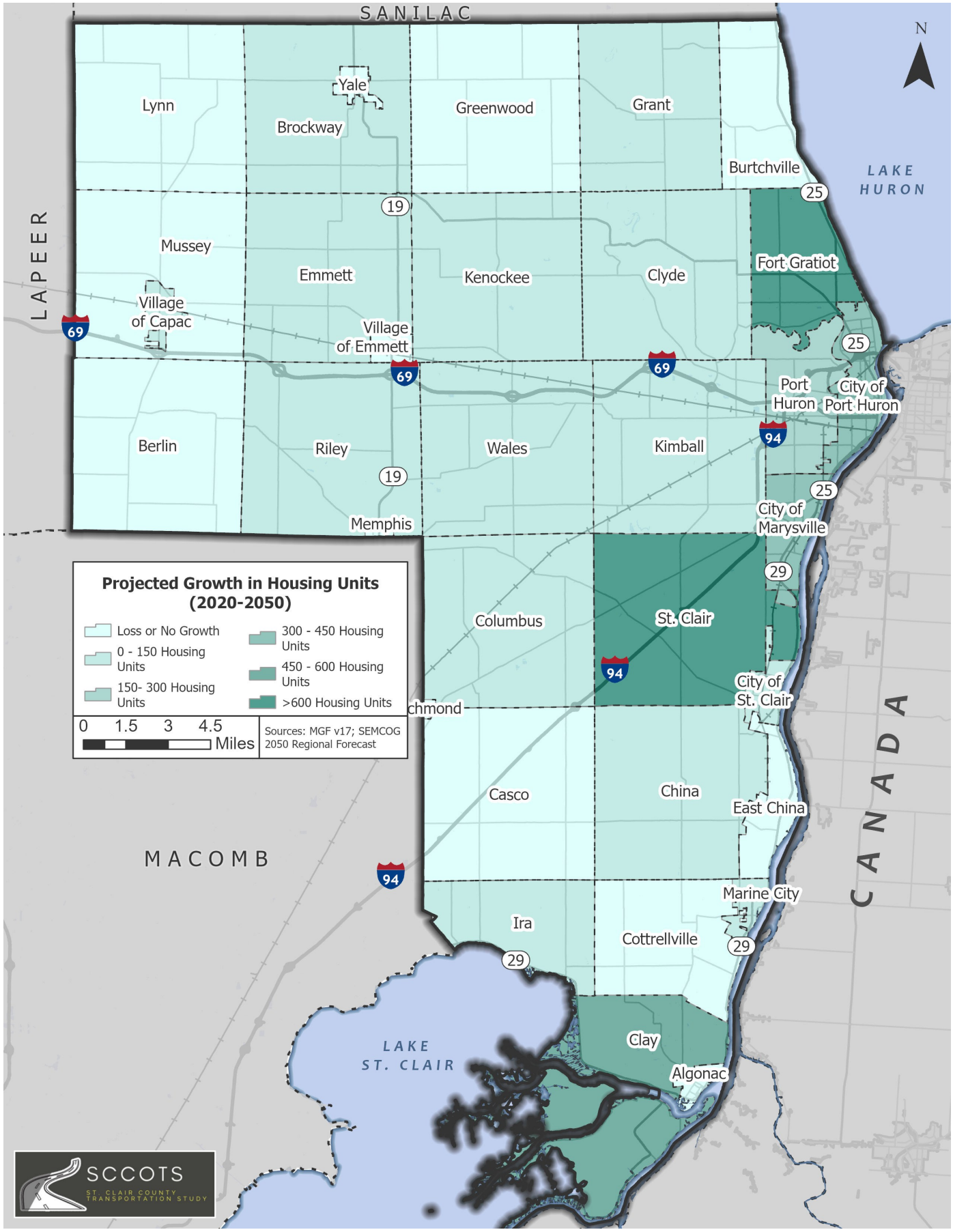

SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
Projected 2035 Congestion (V/C)
Congesting
Congested
0 1.5 3 4.5
Miles
Sources: MGF v17; SEMCOG 2050 RTP, 2024
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY


SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
19
25
69
94
29
Projected 2045 Congestion (V/C)
Congesting
Congested
0 1.5 3 4.5
Miles
Sources: MGF v17; SEMCOG 2050 RTP, 2024


SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
Projected 2050 Congestion (V/C)
Congesting
Congested
0 1.5 3 4.5
Miles
Sources: MGF v17; SEMCOG 2050 RTP, 2024
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY


SANILAC
N
Lynn
Yale
Brockway
Greenwood
Grant
Burtchville
LAKE HURON
LAPEER
Mussey
Emmett
Kenockee
Clyde
Fort Gratiot
Village of Capac
Village of Emmett
Port Huron
City of Port Huron
Berlin
Riley
Wales
Kimball
Memphis
City of Marysville
Projected Growth in Commercial & Office Jobs (2020-2050)
<25 Jobs
25 Jobs - 50 Jobs
50 Jobs- 100 Jobs
100 Jobs - 200 Jobs
200 Jobs - 400 Jobs
>400 Jobs
0 1.5 3 4.5 Miles
Sources: MGF v17; SEMCOG 2050 Regional Forecast
Columbus
St. Clair
City of St. Clair
Casco
China
East China
MACOMB
CANADA
Marine City
Ira
Cottrellville
Clay
Algonac
LAKE ST. CLAIR
19
25
69
94
29


SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
Lynn
Yale
Brockway
Greenwood
Grant
Burtchville
Mussey
Emmett
Kenockee
Clyde
Fort Gratiot
Village of Capac
Village of Emmett
Port Huron
City of Port Huron
Berlin
Riley
Wales
Kimball
City of Marysville
Memphis
Columbus
St. Clair
City of St. Clair
Casco
China
East China
Marine City
Ira
Cottrellville
Clay
Algonac
19
25
69
94
29
Projected Growth or Loss in Households (2020-2050)
> 100 Household Loss
50 - 100 Household Loss
1 - 50 Household Loss
No Loss or Growth
1 - 50 Household Growth
50 - 100 Household Growth
>100 Household Growth
0 1.5 3 4.5 Miles
Sources: MGF v17; SEMCOG 2050 Regional Forecast
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY


SANILAC
LAPEER
MACOMB
CANADA
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LAKE ST. CLAIR
N
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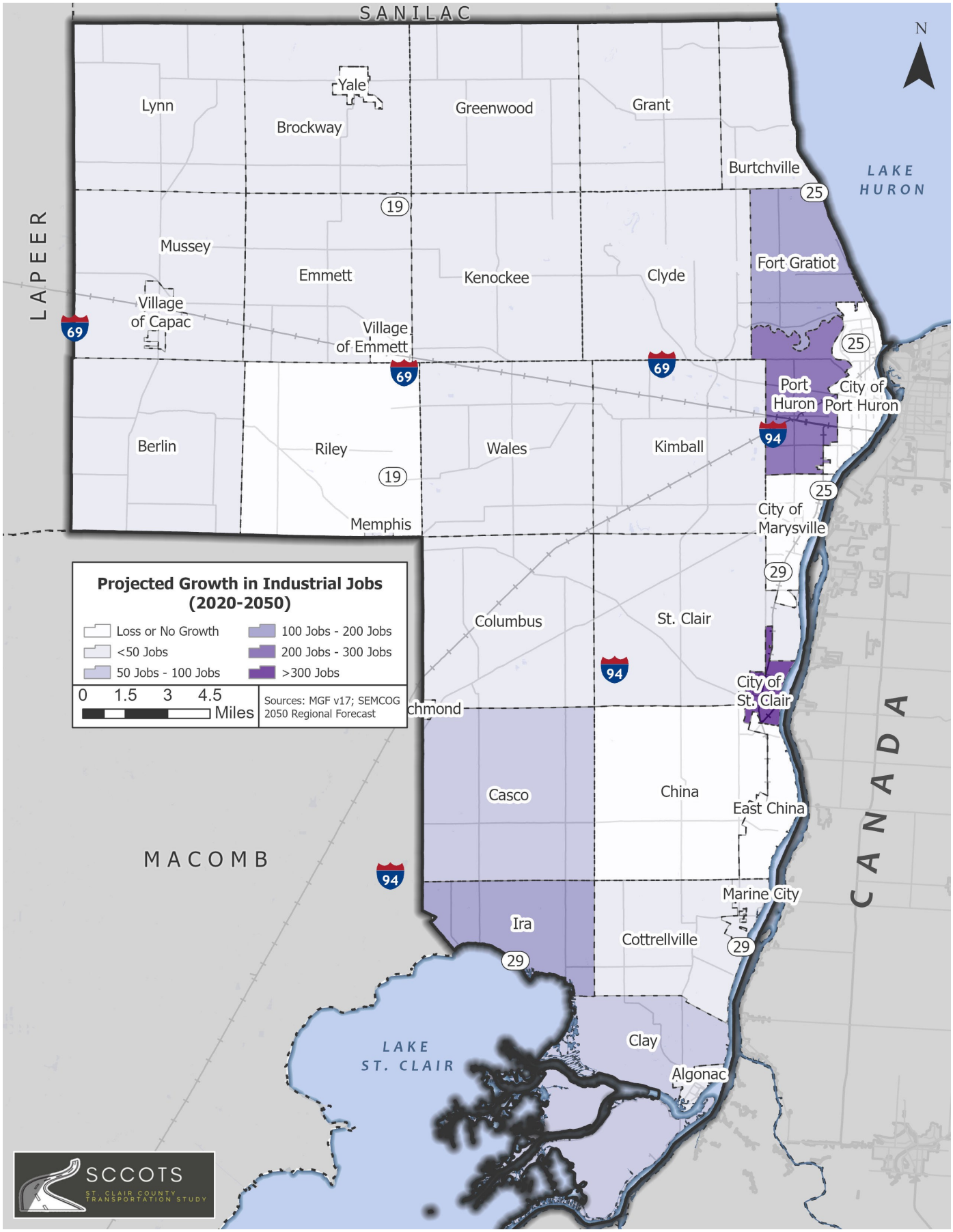
Yale
Brockway
Greenwood
Grant
Burtchville
Mussey
Emmett
Kenockee
Clyde
Fort Gratiot
Village of Capac
Village of Emmett
Port Huron
City of Port Huron
Berlin
Riley
Wales
Kimball
Memphis
City of Marysville
Columbus
St. Clair
City of St. Clair
Casco
China
East China
Marine City
Ira
Cottrellville
Clay
Algonac
19
25
69
94
29
Projected Growth in Housing Units (2020-2050)
Loss or No Growth
0 - 150 Housing Units
150- 300 Housing Units
300 - 450 Housing Units
450 - 600 Housing Units
>600 Housing Units
0 1.5 3 4.5 Miles
Sources: MGF v17; SEMCOG 2050 Regional Forecast


SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
Lynn
Yale
Brockway
Greenwood
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Burtchville
Mussey
Emmett
Kenockee
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Fort Gratiot
Village of Capac
Village of Emmett
Port Huron
City of Port Huron
Berlin
Riley
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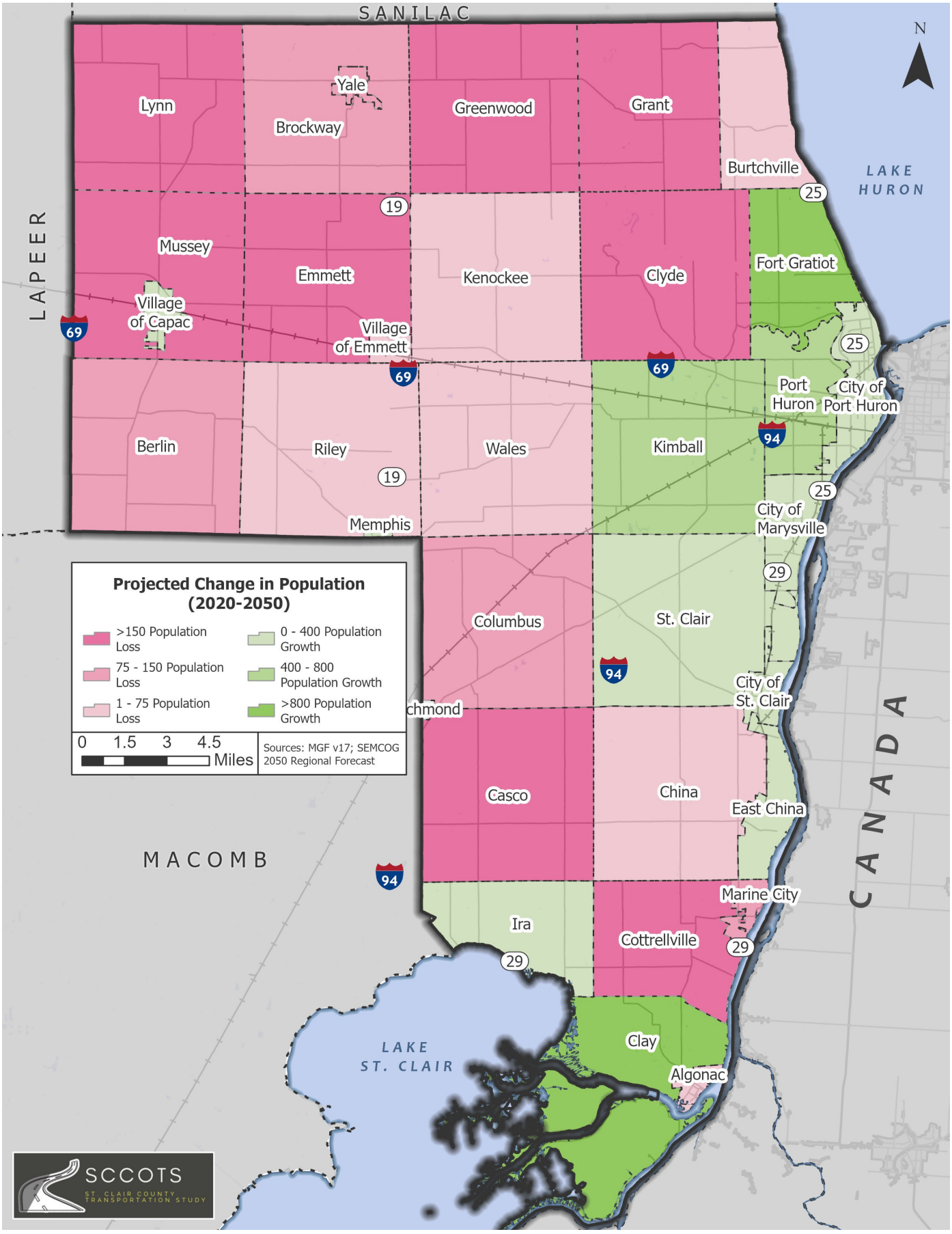
Kimball
Memphis
City of Marysville
Columbus
St. Clair
City of St. Clair
Casco
China
East China
Marine City
Ira
Cottrellville
Clay
Algonac
19
25
69
94
29
Projected Growth in Industrial Jobs (2020-2050)
Loss or No Growth
<50 Jobs
50 Jobs - 100 Jobs
100 Jobs - 200 Jobs
200 Jobs - 300 Jobs
>300 Jobs
0 1.5 3 4.5
Miles
Sources: MGF v17; SEMCOG 2050 Regional Forecast
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY


SANILAC
LAPEER
MACOMB
CANADA
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LAKE HURON
LAKE ST. CLAIR
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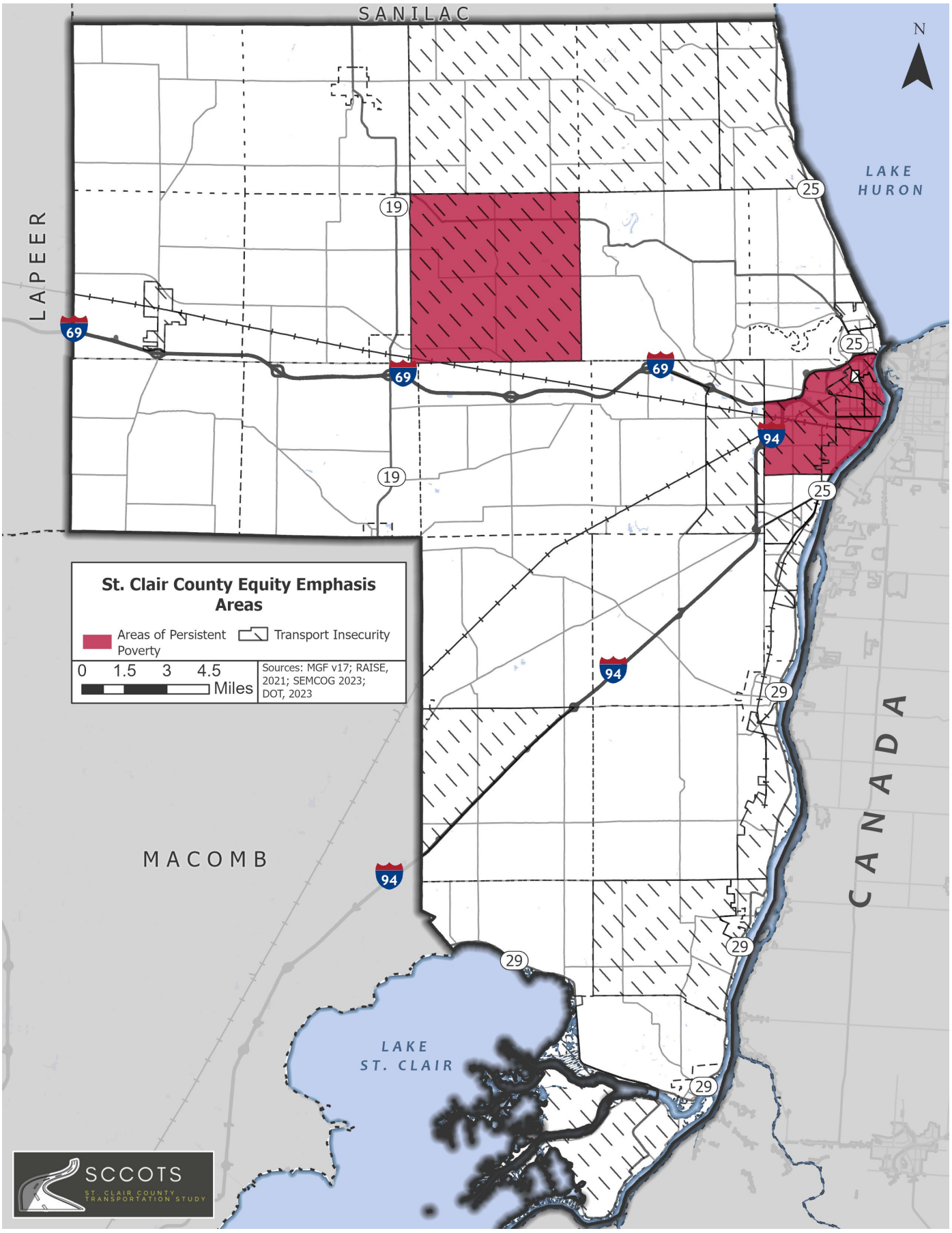
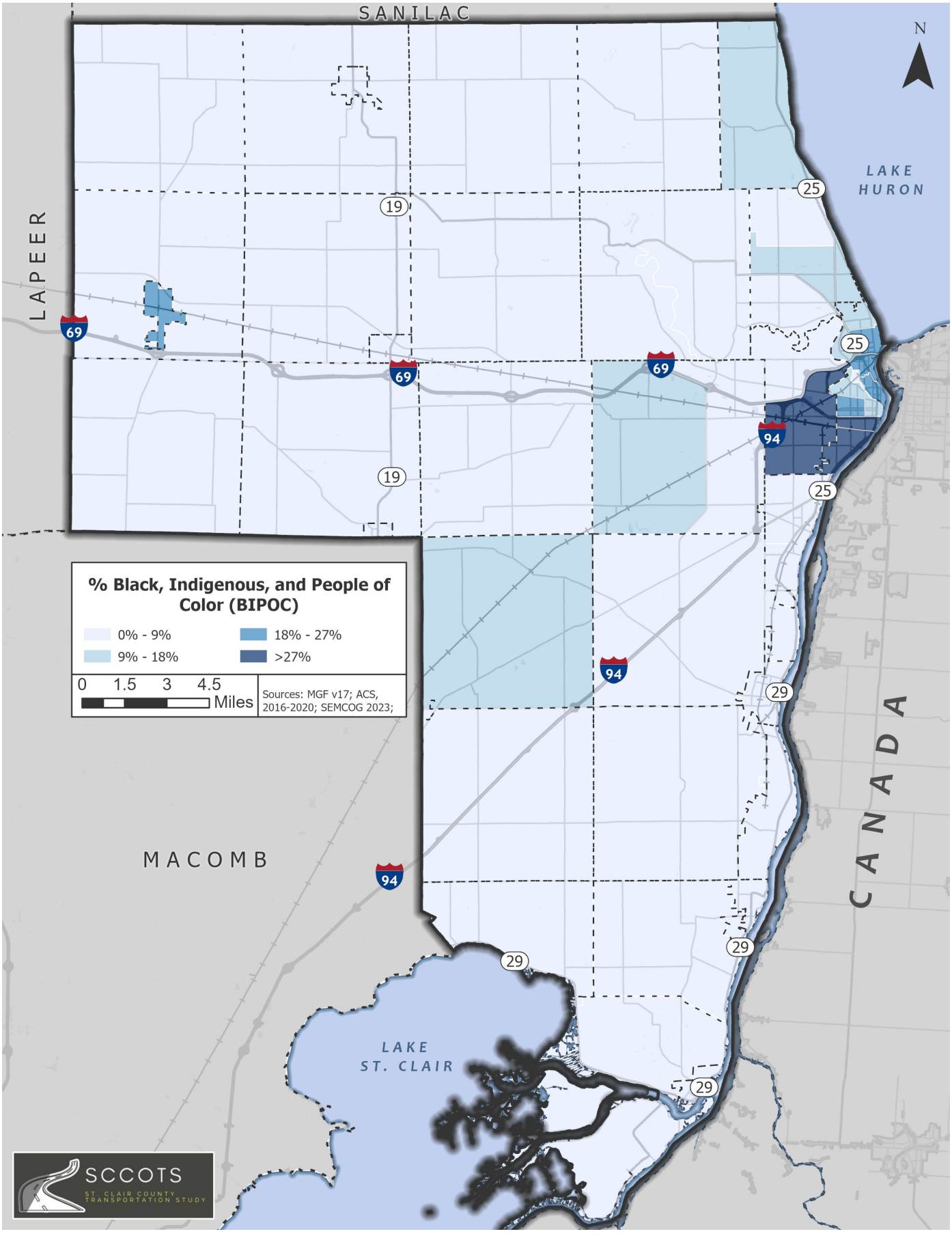
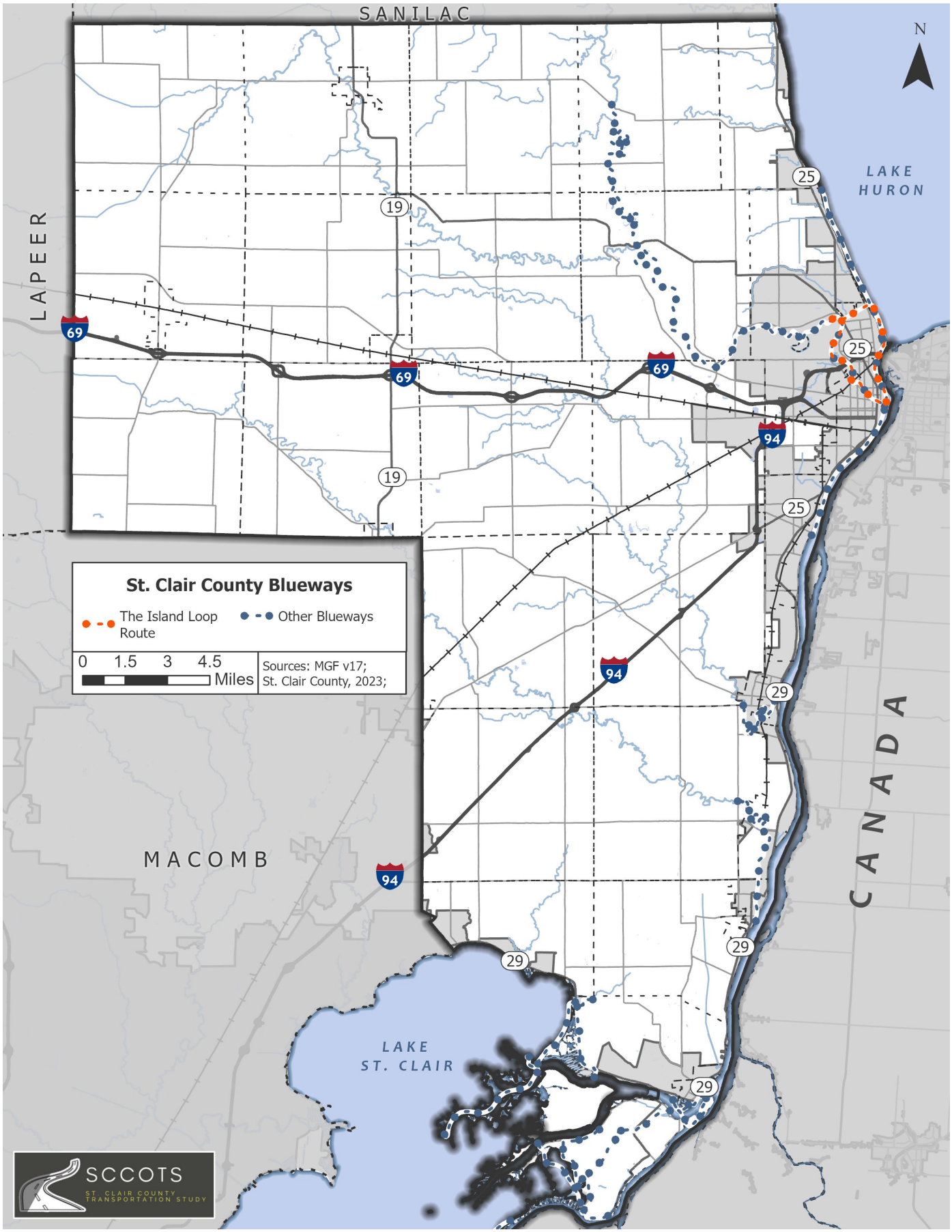
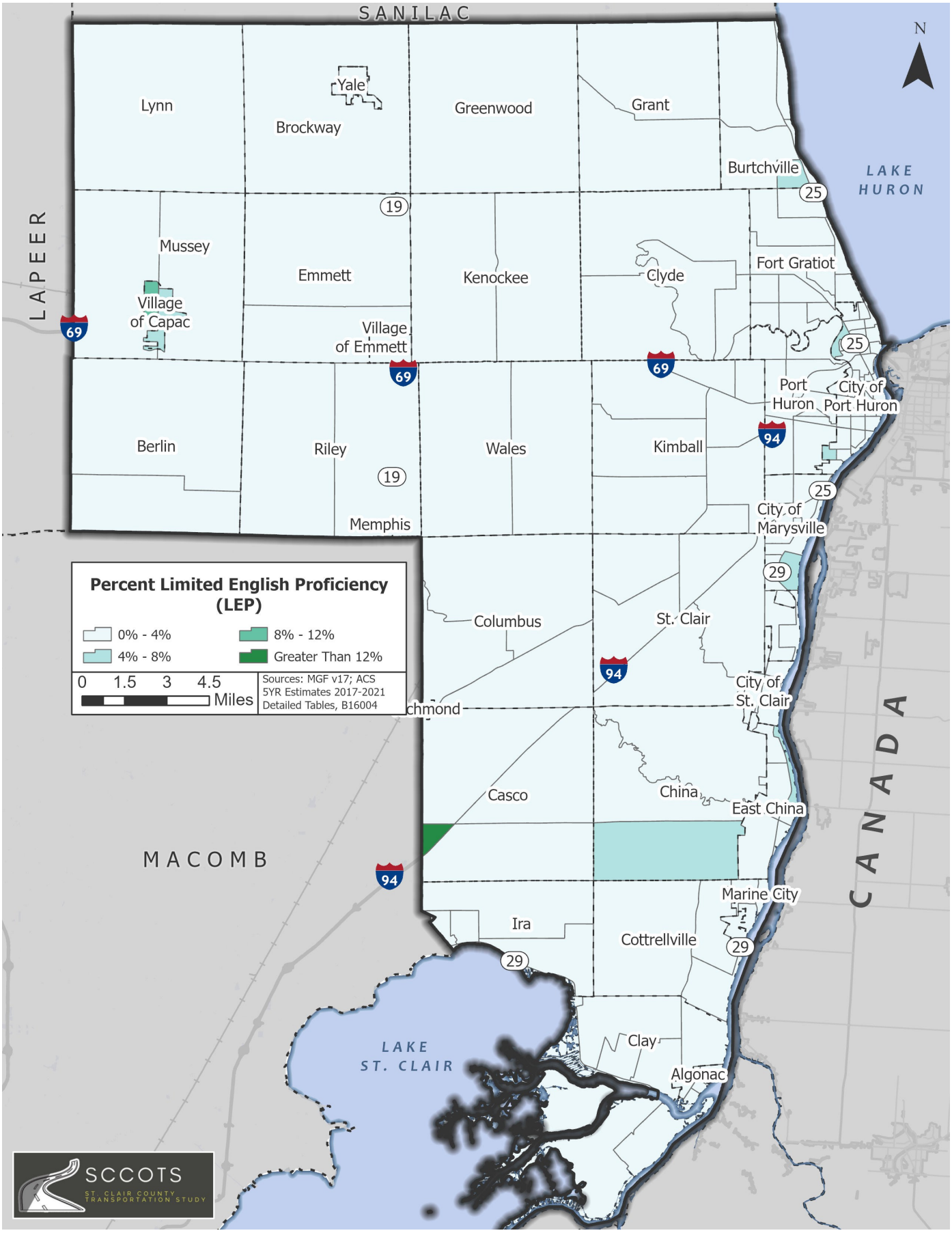
Yale
Brockway
Greenwood
Grant
Burtchville
Mussey
Emmett
Kenockee
Clyde
Fort Gratiot
Village of Capac
Village of Emmett
Port Huron
City of Port Huron
Berlin
Riley
Wales
Kimball
Memphis
City of Marysville
Columbus
St. Clair
City of St. Clair
Casco
China
East China
Marine City
Ira
Cottrellville
Clay
Algonac
19
25
69
94
29
Projected Change in Population (2020-2050)
>150 Population Loss
75 - 150 Population Loss
1 - 75 Population Loss
0 - 400 Population Growth
400 - 800 Population Growth
>800 Population Growth
0 1.5 3 4.5 Miles
Sources: MGF v17; SEMCOG 2050 Regional Forecast


SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
St. Clair County Equity Emphasis Areas
Areas of Persistent Poverty
Transport Insecurity
0 1.5 3 4.5 Miles
Sources: MGF v17; RAISE, 2021; SEMCOG 2023; DOT, 2023
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY



SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY


SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
St. Clair County Blueways
The Island Loop Route
Other Blueways
0 1.5 3 4.5 Miles
Sources: MGF v17; St. Clair County, 2023;
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY


SANILAC
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CANADA
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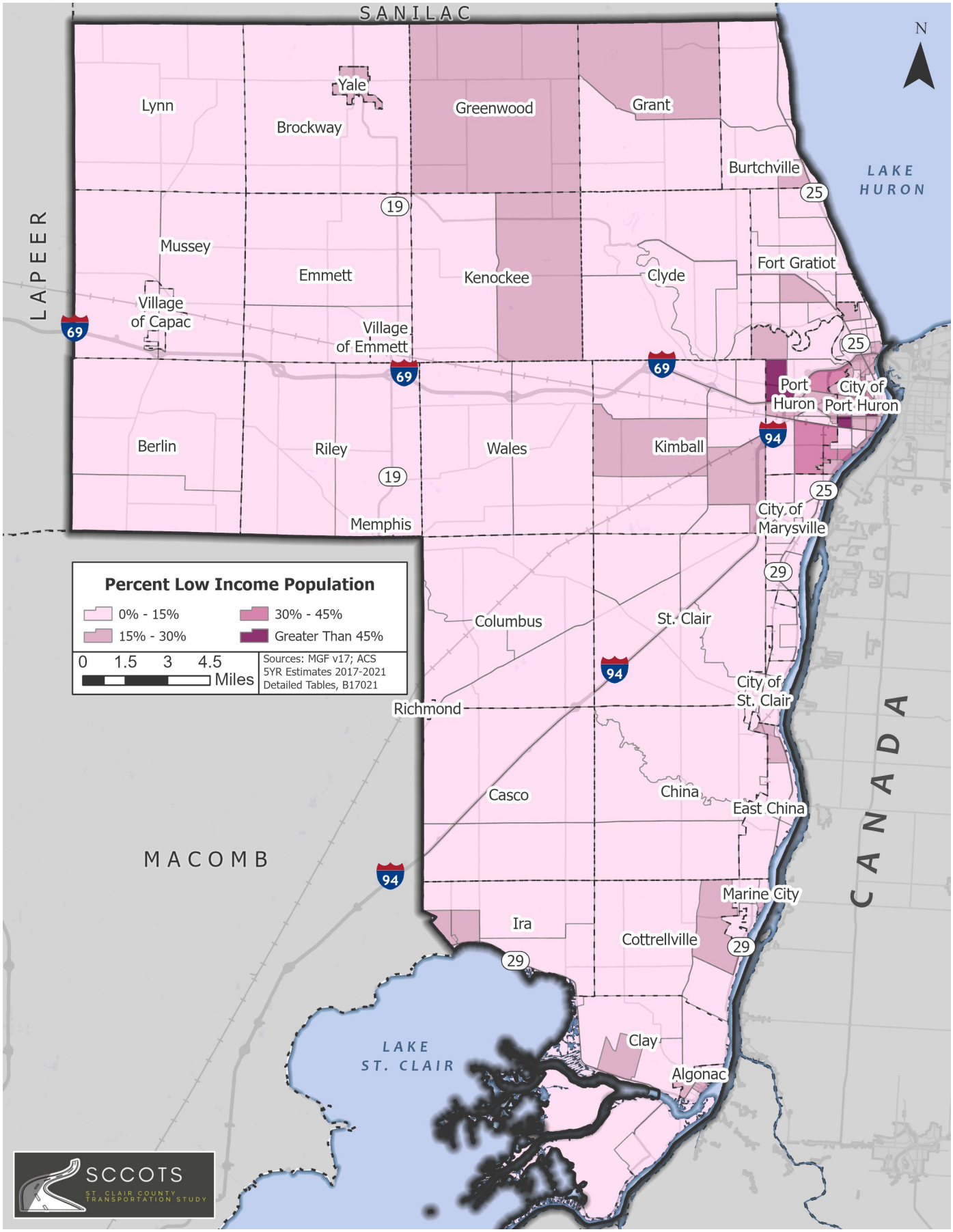
Brockway
Greenwood
Grant
Burtchville
Mussey
Village of Capac
Emmett
Village of Emmett
Kenockee
Clyde
Fort Gratiot
Port Huron
City of Port Huron
Berlin
Riley
Memphis
Wales
Kimball
City of Marysville
Columbus
St. Clair
City of St. Clair
Casco
China
East China
Marine City
Ira
Cottrellville
Clay
Algonac
69
19
25
94
29
Percent Limited English Proficiency (LEP)
0% - 4%
4% - 8%
8% - 12%
Greater Than 12%
0 1.5 3 4.5
Miles
Sources: MGF v17; ACS 5YR Estimates 2017-2021 Detailed Tables, B16004


SANILAC
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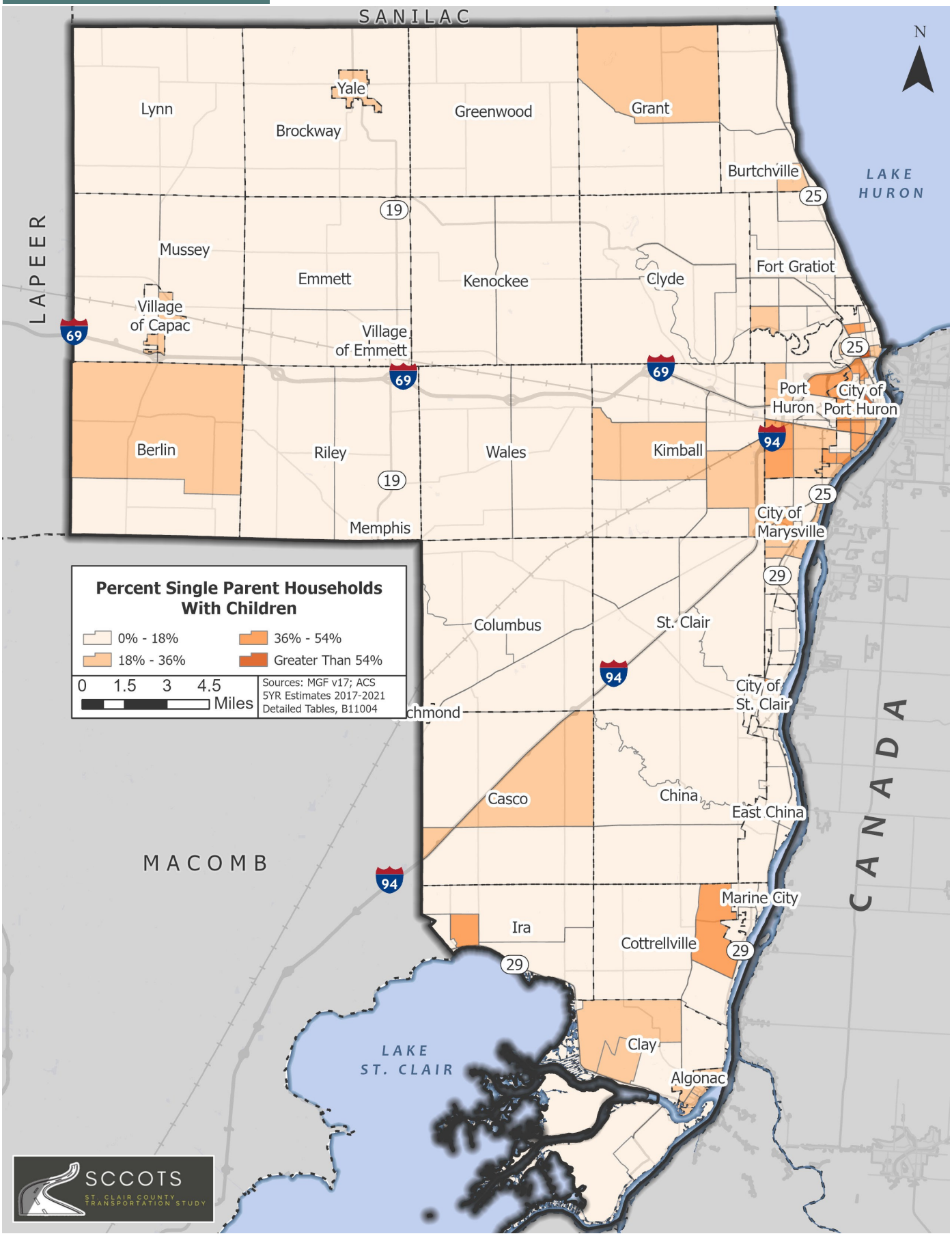
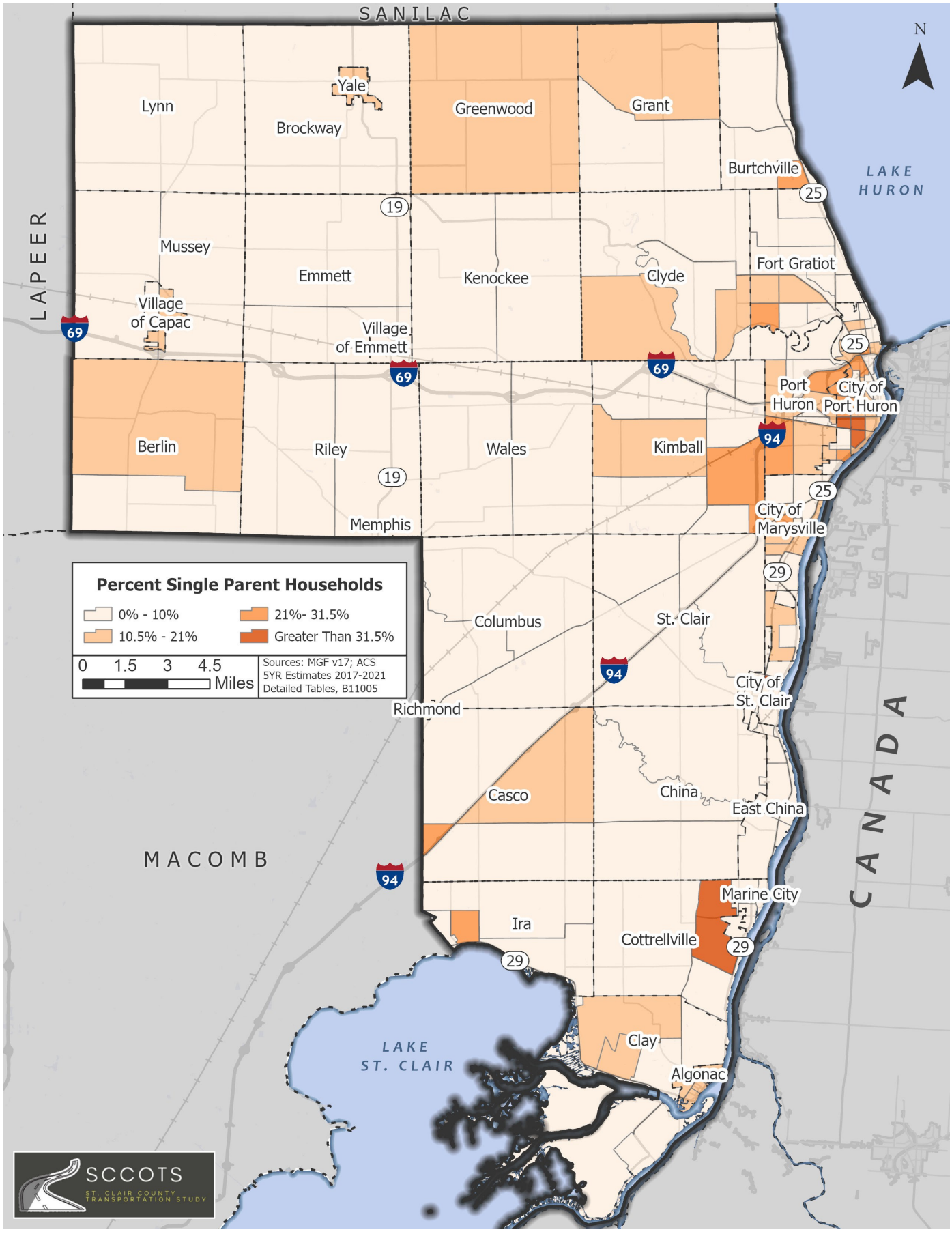
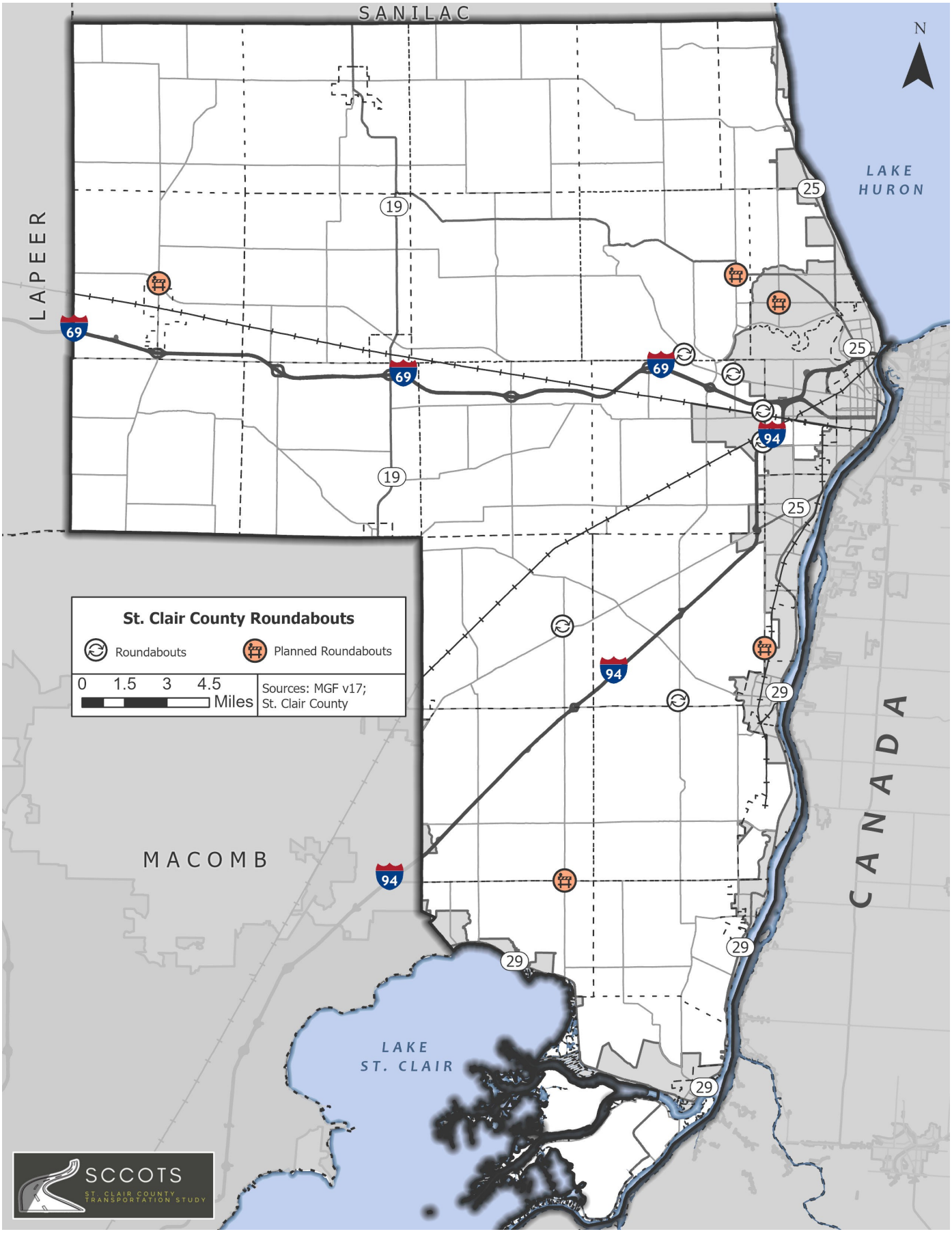
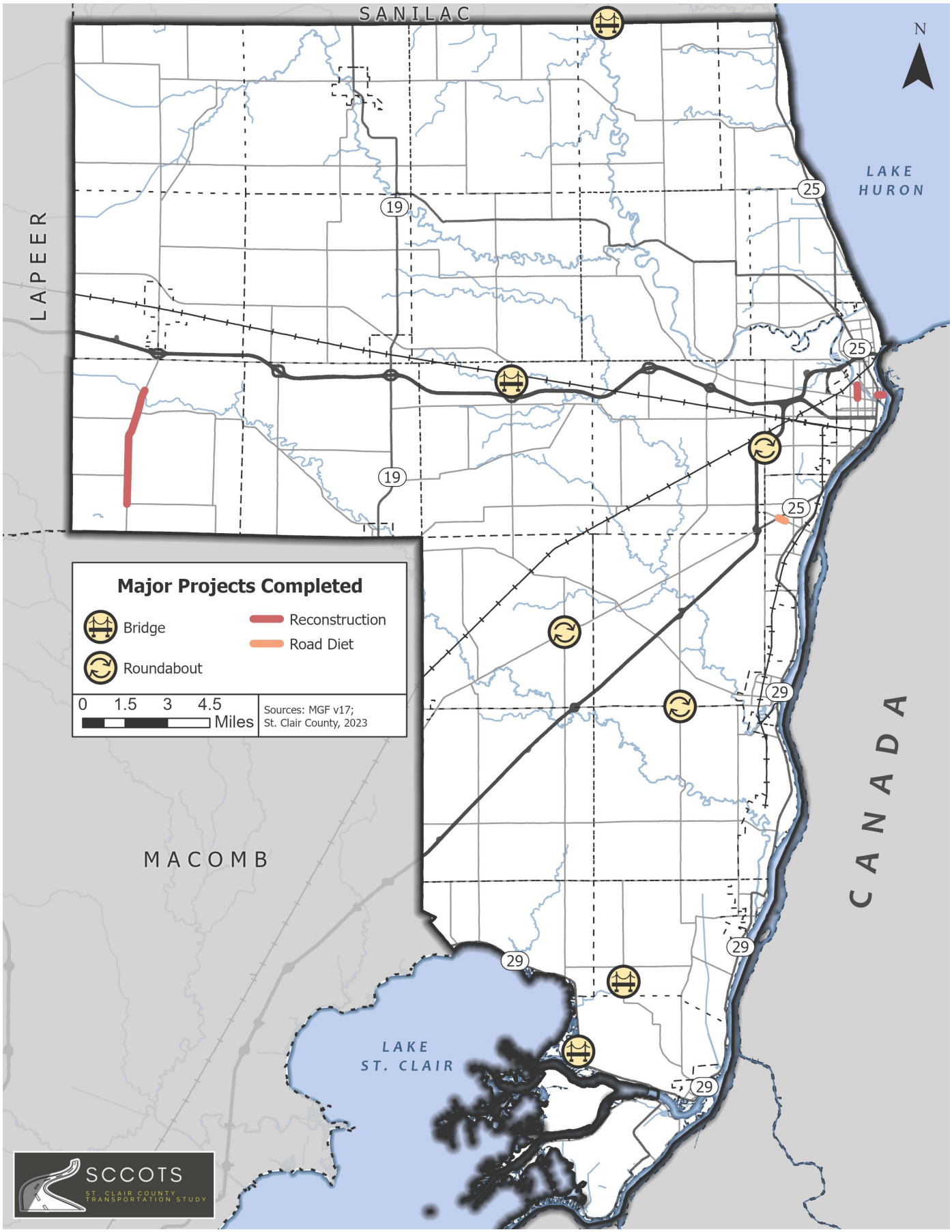
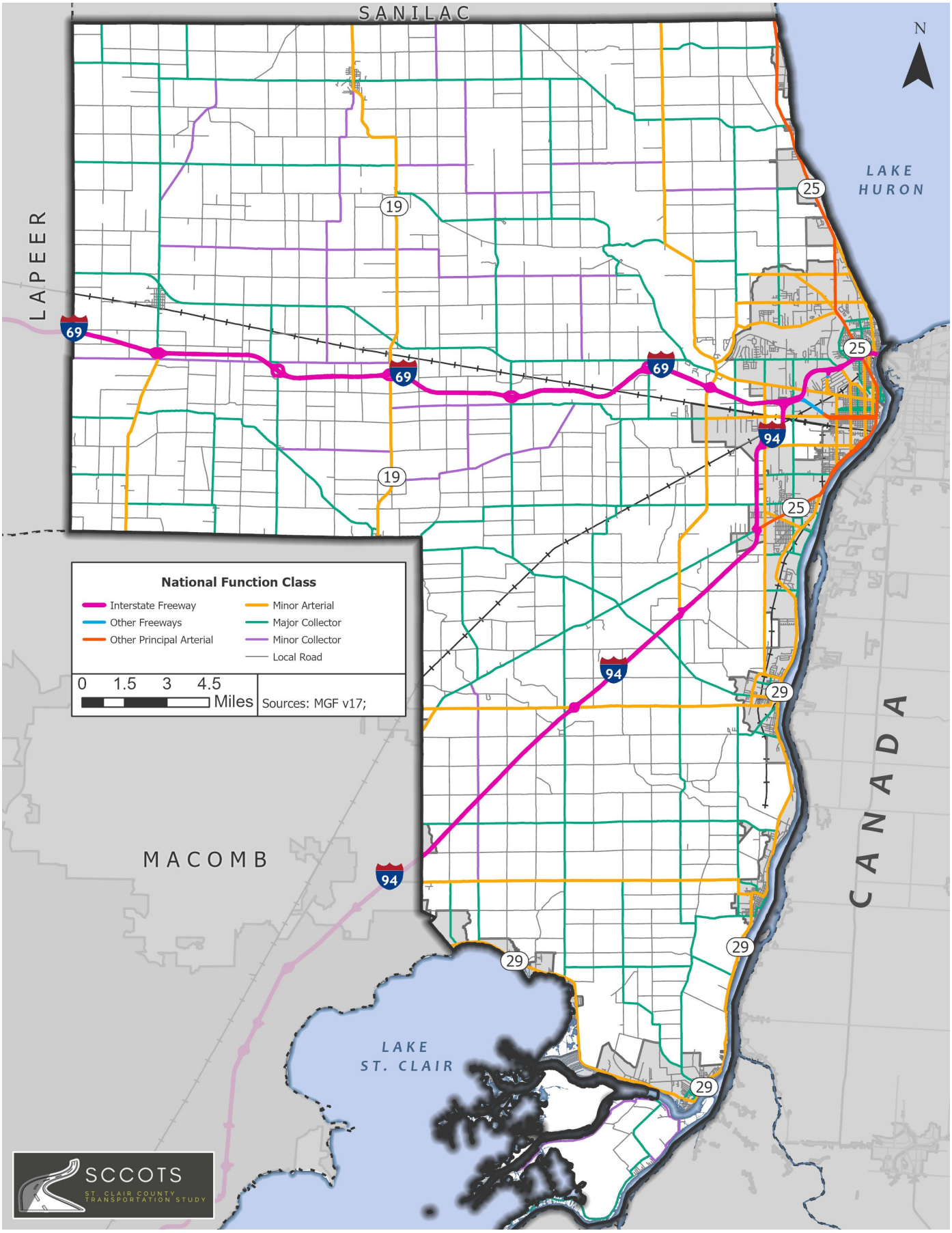
Yale
Brockway
Greenwood
Grant
Burtchville
Mussey
Emmett
Kenockee
Clyde
Fort Gratiot
Village of Capac
Village of Emmett
Port Huron
City of Port Huron
Berlin
Riley
Wales
Kimball
Memphis
City of Marysville
Columbus
St. Clair
City of St. Clair
Richmond
Casco
China
East China
Marine City
Ira
Cottrellville
Clay
Algonac
69
19
25
94
29
Percent Low Income Population
0% - 15%
15% - 30%
30% - 45%
Greater Than 45%
0 1.5 3 4.5
Miles
Sources: MGF v17; ACS 5YR Estimates 2017-2021 Detailed Tables, B17021
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

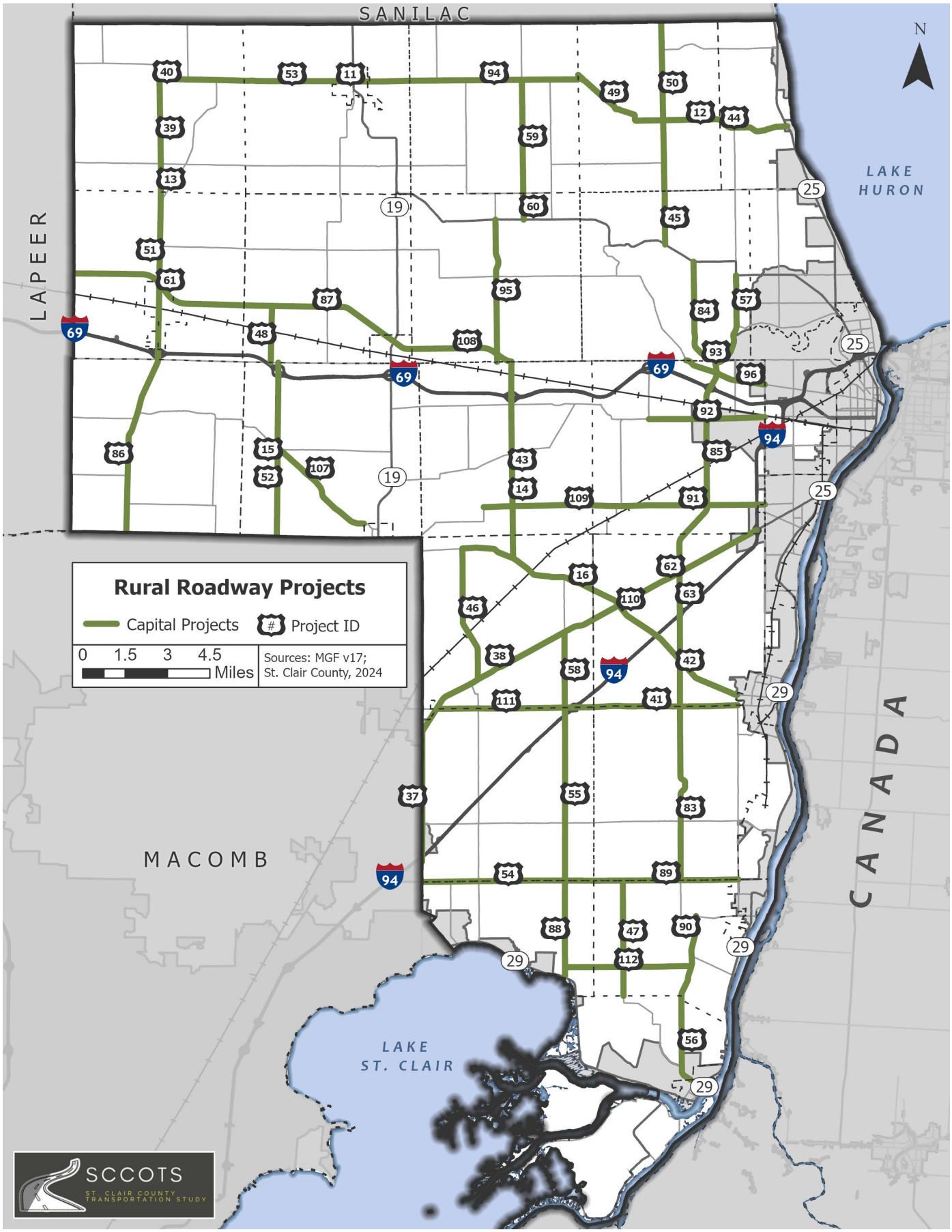

SANILAC
N
Lynn
Yale
Brockway
Greenwood
Grant
Burtchville
LAKE HURON
LAPEER
Mussey
Emmett
Kenockee
Clyde
Fort Gratiot
Village of Capac
Village of Emmett
Port Huron
City of Port Huron
Berlin
Riley
Wales
Kimball
Memphis
City of Marysville
Percent Single Parent Households With Children
0% - 18%
18% - 36%
36% - 54%
Greater Than 54%
0 1.5 3 4.5 Miles
Sources: MGF v17; ACS 5YR Estimates 2017-2021 Detailed Tables, B11004
Columbus
St. Clair
City of St. Clair
Casco
China
East China
MACOMB
CANADA
Marine City
Ira
Cottrellville
LAKE ST. CLAIR
Clay
Algonac

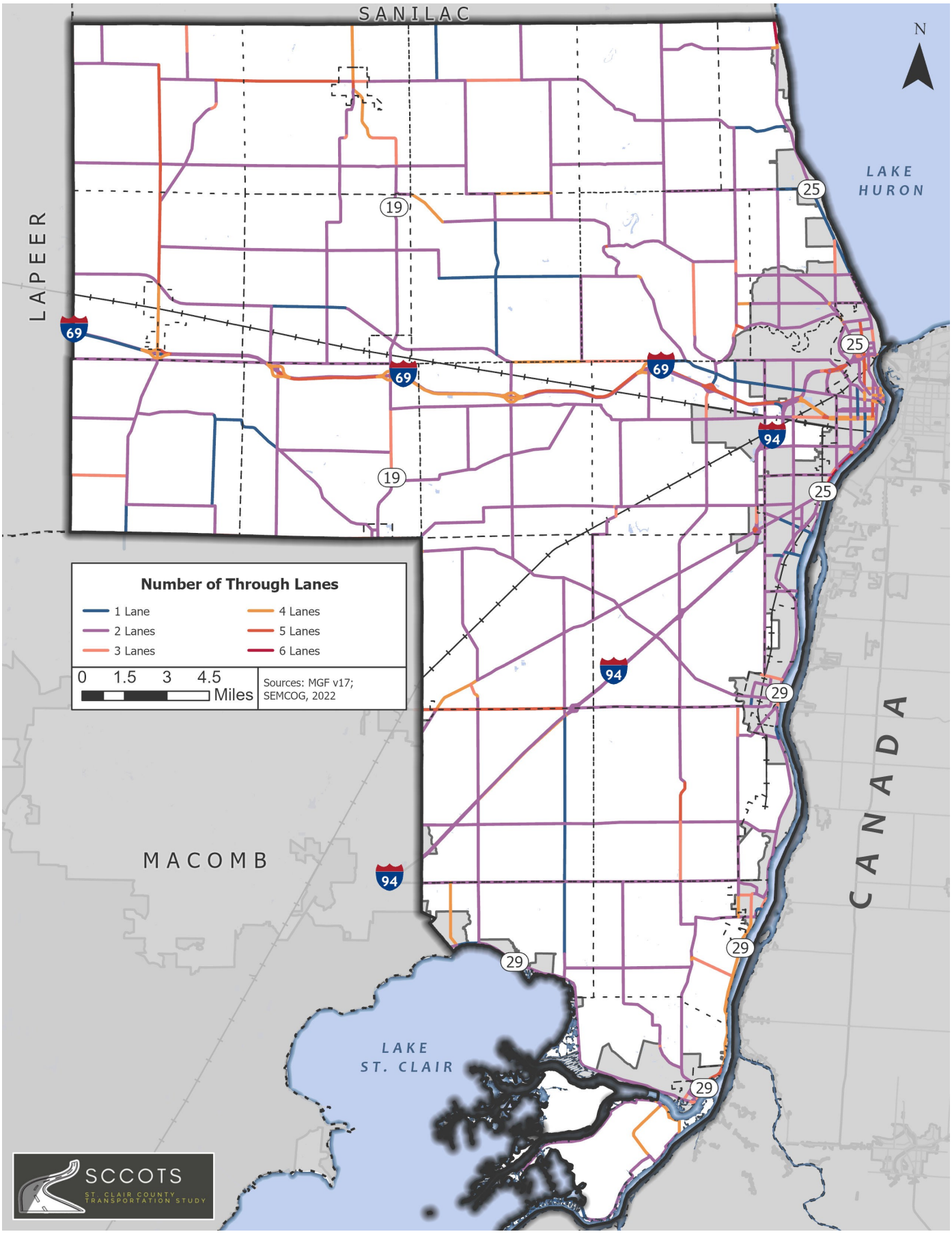

SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
Lynn
Yale
Brockway
Greenwood
Grant
Burtchville
Mussey
Emmett
Kenockee
Clyde
Fort Gratiot
Village of Capac
Village of Emmett
Berlin
Riley
Wales
Kimball
Port Huron
City of Port Huron
Memphis
City of Marysville
Columbus
St. Clair
City of St. Clair
Richmond
Casco
China
East China
Marine City
Ira
Cottrellville
Clay
Algonac
19
25
69
94
29
Percent Single Parent Households
0% - 10%
10.5% - 21%
21%- 31.5%
Greater Than 31.5%
0 1.5 3 4.5
Miles
Sources: MGF v17; ACS 5YR Estimates 2017-2021 Detailed Tables, B11005
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY


SANILAC
N
LAKE HURON
LAPEER
MACOMB
CANADA
LAKE ST. CLAIR
19
25
69
94
29
St. Clair County Roundabouts
Roundabouts
Planned Roundabouts
0 1.5 3 4.5
Miles
Sources: MGF v17; St. Clair County

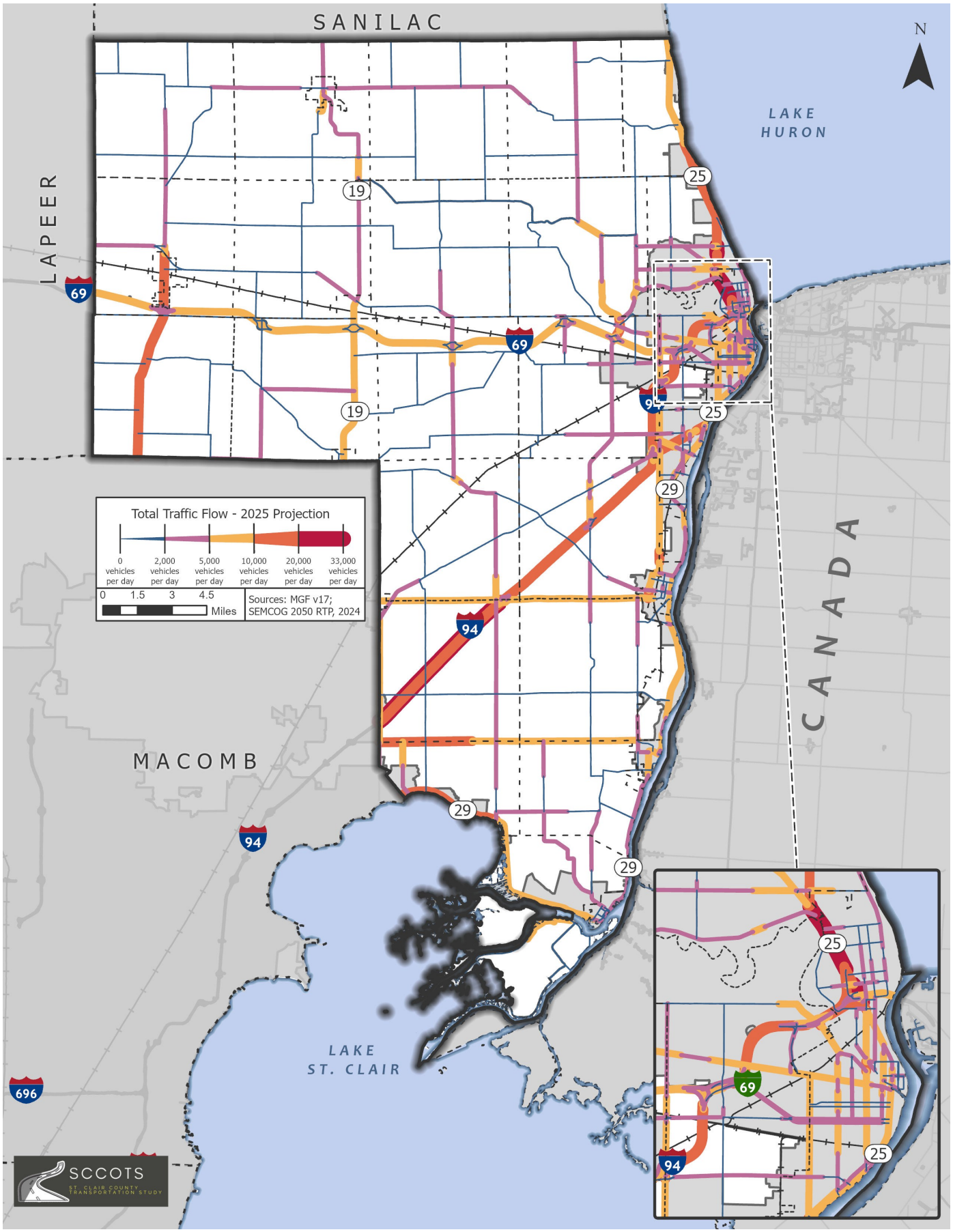

SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
19
25
29
Major Projects Completed
Bridge
Roundabout
Reconstruction
Road Diet
0 1.5 3 4.5
Miles
Sources: MGF v17;
St. Clair County, 2023
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

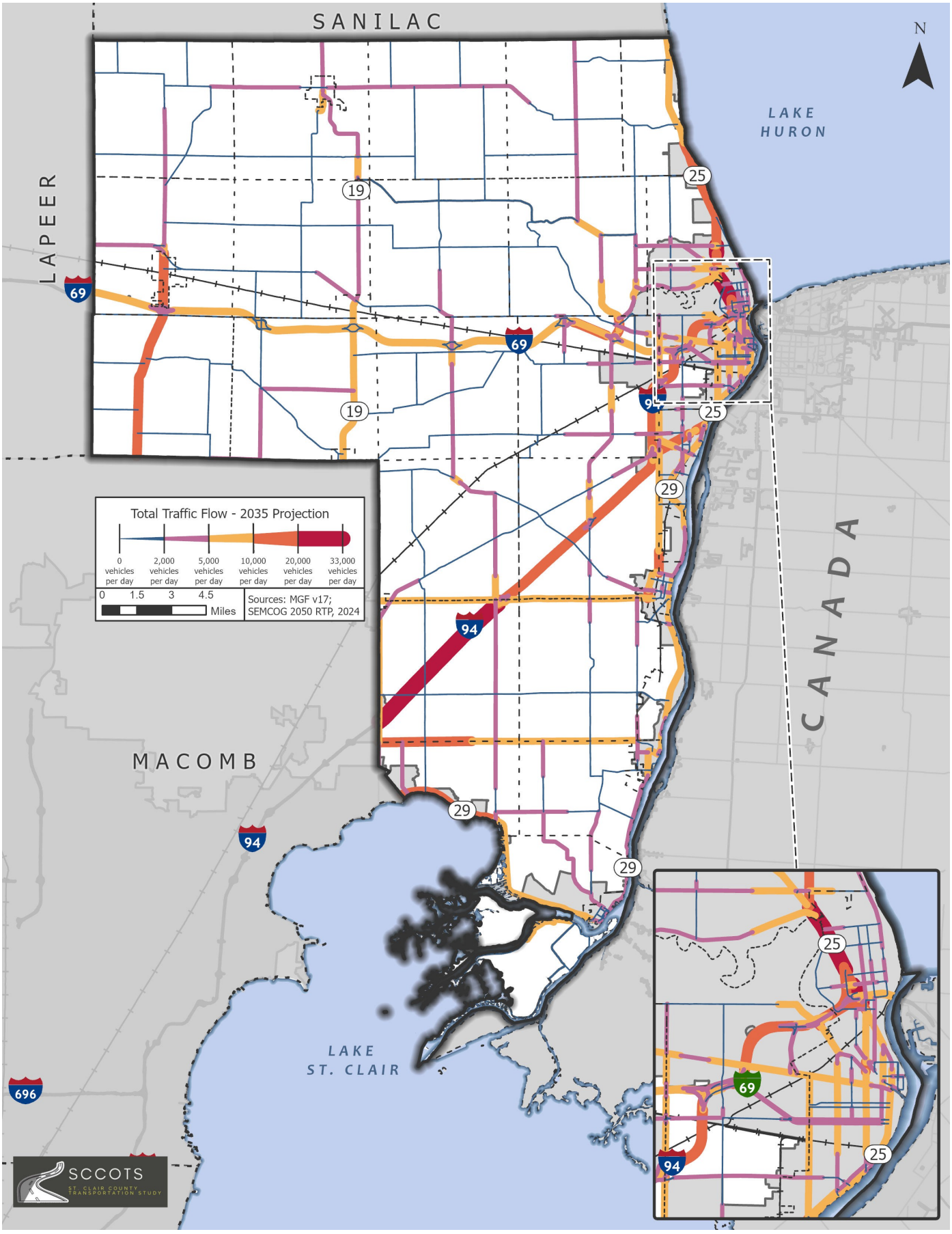

SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
69
19
25
94
29
National Function Class
Interstate Freeway
Other Freeways
Other Principal Arterial
Minor Arterial
Major Collector
Minor Collector
Local Road
0 1.5 3 4.5
Miles
Sources: MGF v17;

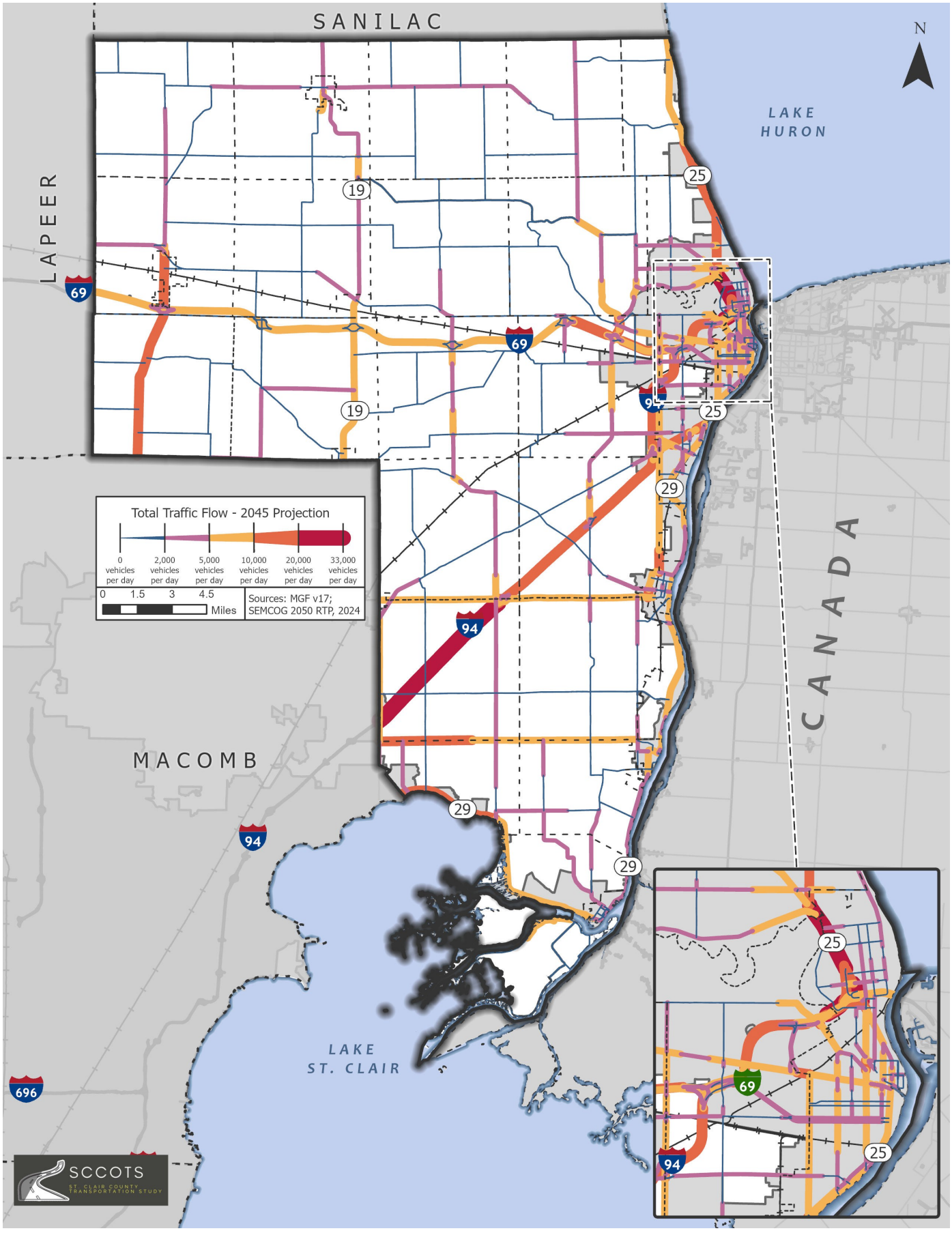

SANILAC
LAPEER
LAKE HURON
CANADA
MACOMB
LAKE ST. CLAIR
N
Rural Roadway Projects
Capital Projects
Project ID
0 1.5 3 4.5 Miles
Sources: MGF v17; St. Clair County, 2024
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

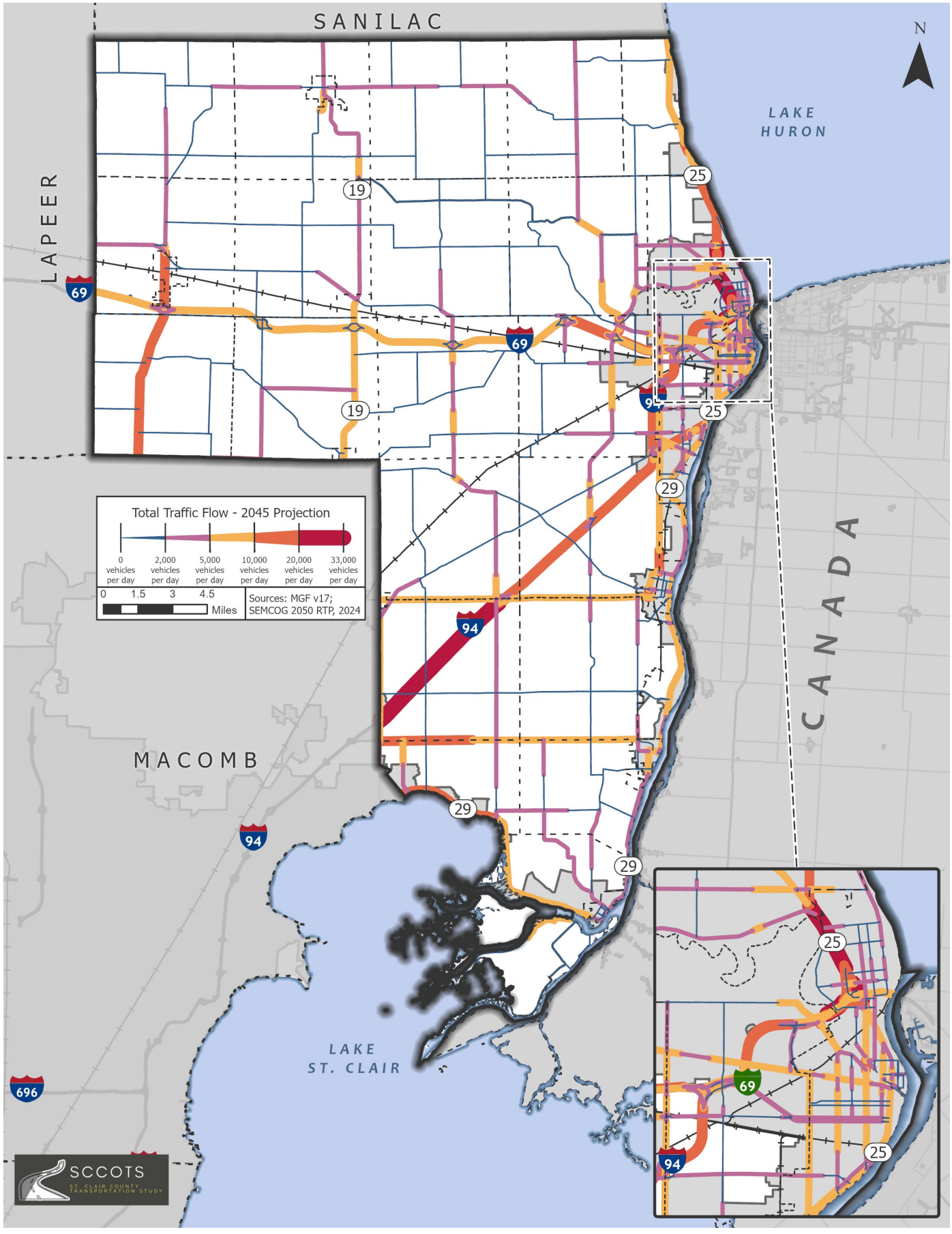


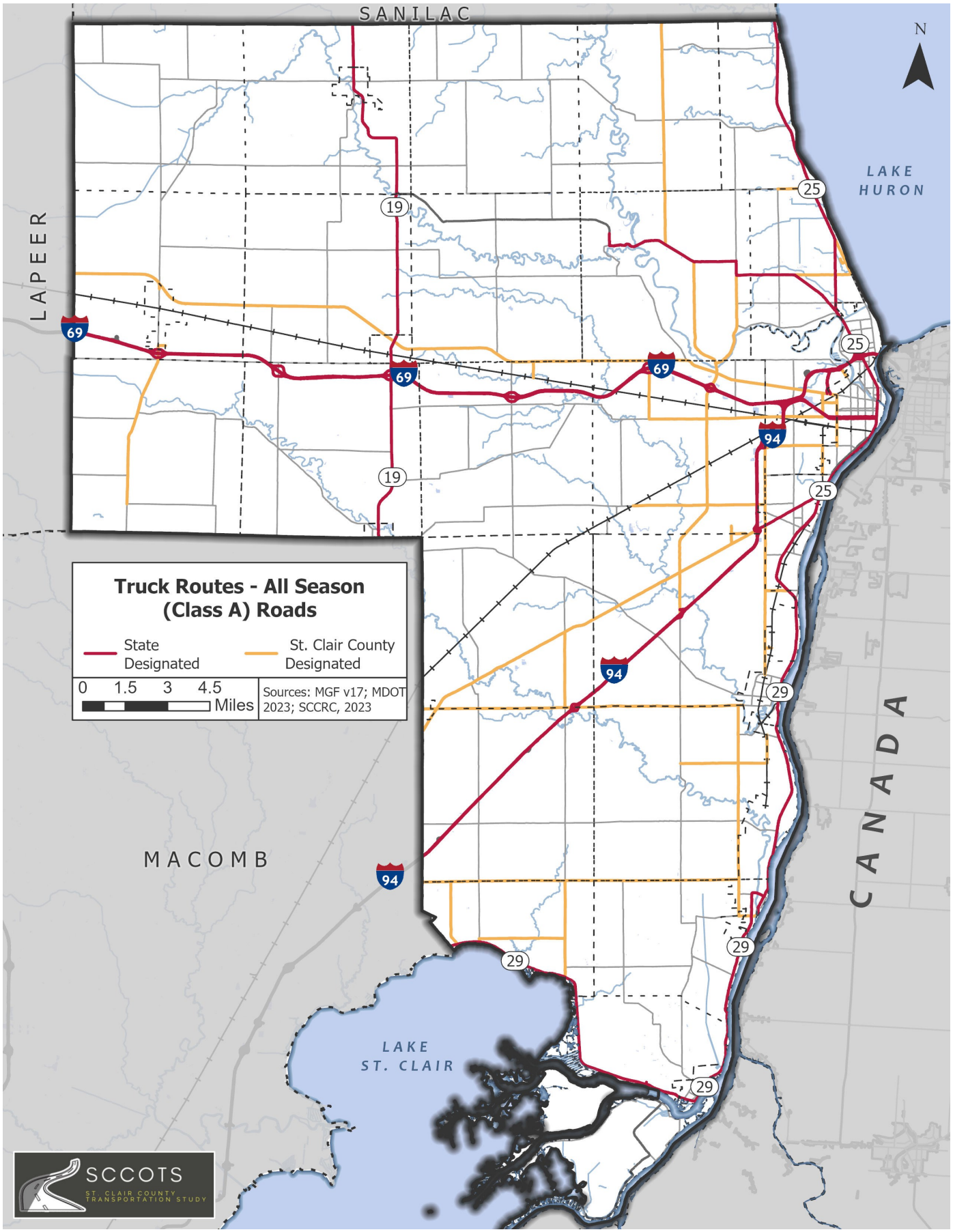
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY

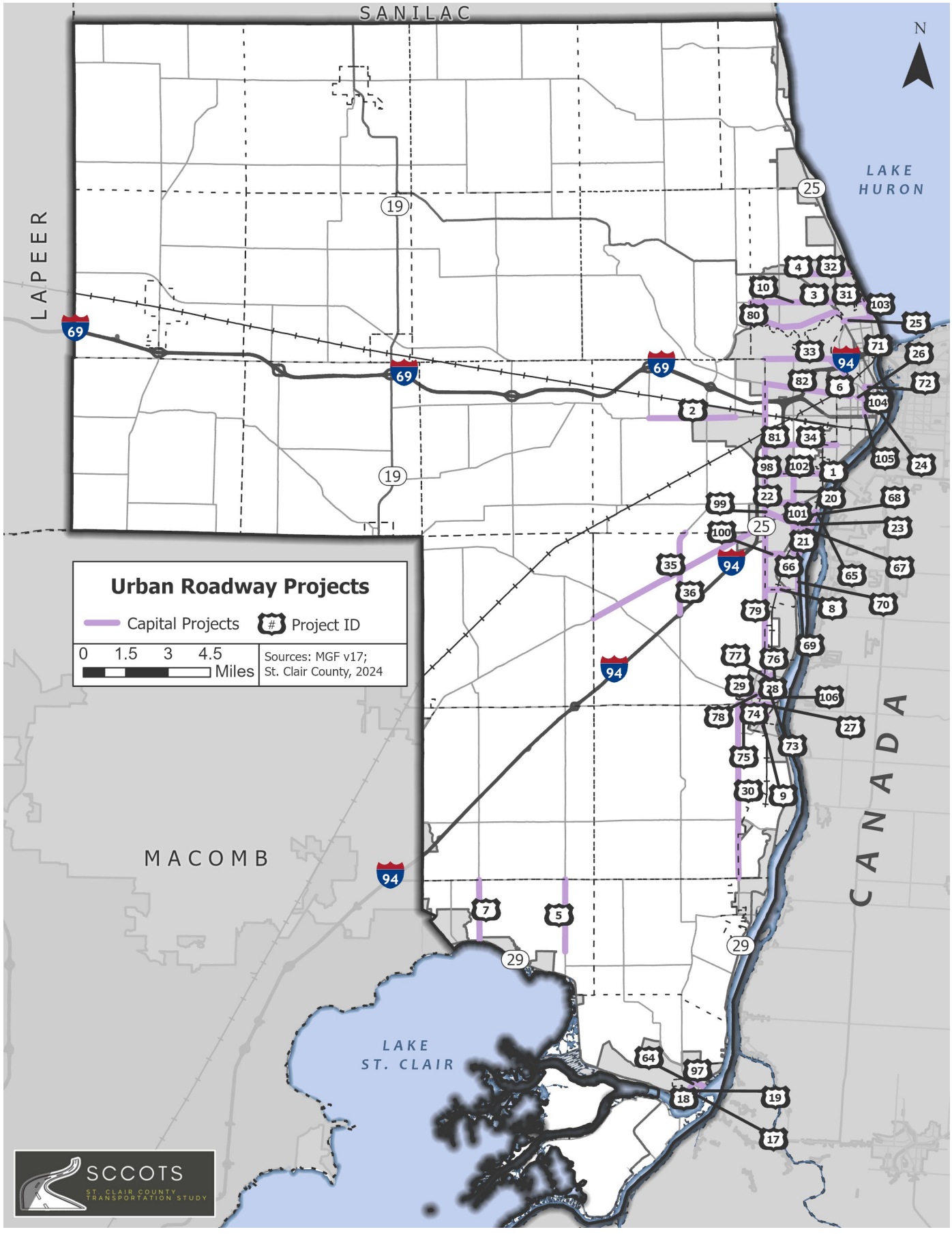

SANILAC
LAPEER
LAKE HURON
CANADA
MACOMB
LAKE ST. CLAIR
N
Total Traffic Flow - 2025 Projection
0 vehicles per day
2,000 vehicles per day
5,000 vehicles per day
10,000 vehicles per day
20,000 vehicles per day
33,000 vehicles per day
0 1.5 3 4.5
Miles
Sources: MGF v17; SEMCOG 2050 RTP, 2024
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY


SANILAC
LAPEER
LAKE HURON
CANADA
MACOMB
LAKE ST. CLAIR
N
Total Traffic Flow - 2035 Projection
0 vehicles per day
2,000 vehicles per day
5,000 vehicles per day
10,000 vehicles per day
20,000 vehicles per day
33,000 vehicles per day
0 1.5 3 4.5 Miles
Sources: MGF v17; SEMCOG 2050 RTP, 2024
19
25
69
94
29
696


SANILAC
LAPEER
LAKE HURON
CANADA
MACOMB
LAKE ST. CLAIR
N
Total Traffic Flow - 2045 Projection
0 vehicles per day
2,000 vehicles per day
5,000 vehicles per day
10,000 vehicles per day
20,000 vehicles per day
33,000 vehicles per day
0 1.5 3 4.5 Miles
Sources: MGF v17; SEMCOG 2050 RTP, 2024
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY


SANILAC
LAPEER
LAKE HURON
MACOMB
CANADA
LAKE ST. CLAIR
N
Total Traffic Flow - 2045 Projection
0 vehicles per day
2,000 vehicles per day
5,000 vehicles per day
10,000 vehicles per day
20,000 vehicles per day
33,000 vehicles per day
0 1.5 3 4.5 Miles
Sources: MGF v17; SEMCOG 2050 RTP, 2024
69
19
25
94
29
696


SANILAC
LAPEER
MACOMB
LAKE HURON
LAKE ST. CLAIR
CANADA
N
Truck Routes - All Season (Class A) Roads
State Designated
St. Clair County Designated
0 1.5 3 4.5 Miles
Sources: MGF v17; MDOT 2023; SCCRC, 2023
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY


SANILAC
LAPEER
MACOMB
CANADA
LAKE HURON
LAKE ST. CLAIR
N
Urban Roadway Projects
Capital Projects
Project ID
0 1.5 3 4.5
Miles
Sources: MGF v17; St. Clair County, 2024
SCCOTS
ST. CLAIR COUNTY TRANSPORTATION STUDY